Under this heading will appear the text of proposed rules and changes. The notice of proposed rulemaking is required to contain an explanation of any new rule or any change in an existing rule and the reasons therefor. This is set out in the Purpose section with each rule. Also required is a citation to the legal authority to make rules. This appears following the text of the rule, after the word "Authority."

Entirely new rules are printed without any special symbology under the heading of the proposed rule. If an existing rule is to be amended or rescinded, it will have a heading of proposed amendment or proposed rescission. Rules which are proposed to be amended will have new matter printed in boldface type and matter to be deleted placed in brackets.

An important function of the *Missouri Register* is to solicit and encourage public participation in the rulemaking process. The law provides that for every proposed rule, amendment, or rescission there must be a notice that anyone may comment on the proposed action. This comment may take different forms.

If an agency is required by statute to hold a public hearing before making any new rules, then a Notice of Public Hearing will appear following the text of the rule. Hearing dates must be at least thirty (30) days after publication of the notice in the *Missouri Register.* If no hearing is planned or required, the agency must give a Notice to Submit Comments. This allows anyone to file statements in support of or in opposition to the proposed action with the agency within a specified time, no less than thirty (30) days after publication of the notice in the *Missouri Register*.

An agency may hold a public hearing on a rule even though not required by law to hold one. If an agency allows comments to be received following the hearing date, the close of comments date will be used as the beginning day in the ninety (90)-day-count necessary for the filing of the order of rulemaking.

If an agency decides to hold a public hearing after planning not to, it must withdraw the earlier notice and file a new notice of proposed rulemaking and schedule a hearing for a date not less than thirty (30) days from the date of publication of the new notice.

Proposed Amendment Text Reminder:
Boldface text indicates new matter.
[Bracketed text indicates matter being deleted.]

Title 4—DEPARTMENT OF ECONOMIC DEVELOPMENT
Division 240—Public Service Commission
Chapter 4—Standards of Conduct

PROPOSED AMENDMENT

4 CSR 240-4.020 Ex Parte and Extra-Record Communications. The commission is amending subsections (1)(G), (1)(I), and (2)(A), section (8), paragraphs (10)(A)1., (10)(A)5., (10)(A)6., (10)(A)7., and (10)(A)9., sections (13) and (14), subsections (14)(A), (14)(B), and (14)(C), and section (15); adding a new subsection (10)(B); renumbering subsections (10)(B) through (10)(E) and sections (12) through (16); and deleting section (11).

PURPOSE: To reflect the commission's experience in complying with the 2010 revision of the rule and to improve the operation of the rule.

(1) Definitions.

(G) Ex parte communication—Any communication outside of the contested case hearing process between the commission, a commissioner, a member of the technical advisory staff, or the presiding officer assigned to the proceeding and any party or anticipated party, or the agent or representative of a party or anticipated party, regarding any substantive issue. Ex parte communications shall not include a communication regarding general regulatory policy allowed under section 386.210.4, RSMo, communications listed in section *[(3)]***(10)** of this rule, or communications that are de minimis or immaterial.

(I) Finally *[adjudicated]* **determined**—A decision of the commission in a contested case **in which all applications for rehearing and reconsideration are decided and** which is no longer *[subject to appeal]* **an active case before the commission**.

(2) Any regulated entity that intends to file a case likely to be a contested case shall file a notice with the secretary of the commission a minimum of sixty (60) days prior to filing such case. Such notice shall detail the type of case and issues likely to be before the commission.

(A) Any case filed which is not in compliance with this section *[shall not]* **may** be permitted and the *[secretary of the]* commission *[shall]* **may** reject any such filing.

(8) Any communication, other than public statements *[at a public event]* or de minimis or immaterial communications, between a commissioner or technical advisory staff and any regulated entity regarding regulatory issues, including but not limited to issues of general regulatory policy under subsection 386.210.4, RSMo, if not otherwise disclosed pursuant to this rule, shall be disclosed in the following manner:

(10) The following communications shall not be prohibited by or subject to the disclosure and notice requirements of section (3) of this rule, if such communication would otherwise be an ex parte communication, or subject to section (8) of this rule:

(A) Communications between the commission, a commissioner, or a member of the technical advisory staff and a public utility or other regulated entity that is a party to a contested case, or an anticipated party to an anticipated contested case, notifying the commission, a commissioner, a member of the technical advisory staff, or the presiding officer assigned to the proceeding of—

1. *[An]* **Planned outages or maintenance of facilities** and anticipated or actual interruption or loss of service;

2. Damage to or an incident or operational problems at a utility's facility;

3. An update regarding efforts to restore service after an interruption, loss of service, damages, or an incident or problems referred in paragraphs (10)(A)1. and 2.;

4. Security or reliability of utility facilities;

5. Issuance of public communications regarding utility operations, such as **outages, loss of service,** the status of utility programs, billing issues, security issuances, or publicly available information *[about a utility's finances]*. These communications may also include a copy of the public communication, but should not contain any other communications regarding substantive issues;

6. Information regarding matters before state or federal agencies and committees **and courts,** including but not limited to state advisory committees, **the Department of Natural Resources, the Environmental Protection Agency, the Department of Energy,** the Federal Communications Commission, the Federal Energy Regulatory Commission, and the Nuclear Regulatory Commission;

7. Information regarding a regional transmission organization**, independent system operator, or regional planning organization**;

8. Labor matters not part of a pending case; or

9. Matters related to the safety of personnel**, the safety of facilities, and the general public**;

(B) Presentations, speeches, statements, or discussions made in an open forum such as but not limited to those made before the National Association of Regulatory Utility Commissioners, the Mid-American Regulatory Conference, and other regional or national organizations;

*[(B)]***(C)** Communications between the commission, a commissioner, or a member of the technical advisory staff and any employee of the commission relating to exercise of the commission's investigative powers as established under Missouri law. If the communication concerns an anticipated case, notice shall be given in accordance with section (4) upon the filing of the case;

*[(C)]***(D)** Communications between the commission, a commissioner, a member of the technical advisory staff, or the presiding officer and a party or anticipated party concerning an issue or case in which no evidentiary hearing has been scheduled made at a public agenda meeting of the commission where such matter has been posted in advance as an item for discussion or decision;

*[(D)]***(E)** Communications between the commission, a commissioner, a member of the technical advisory staff, or the presiding officer and a party or anticipated party concerning a case in which no evidentiary hearing has been scheduled made at a forum where representatives of the public utility affected thereby, the office of public counsel, and all other parties to the case are present; and

*[(E)]***(F)** Communications between the commission, a commissioner, a member of the technical advisory staff, or the presiding officer and a party or anticipated party concerning a case in which no evidentiary hearing has been scheduled made outside a public agenda meeting or forum where representatives of the parties are present when disclosed as provided in section 386.210.3(3), RSMo.

[(11) No person who is likely to be a party to a future case before the commission shall attempt to communicate with any commissioner or member of the technical advisory staff regarding any substantive issue that is likely to be an issue within a future contested case, unless otherwise allowed under this rule. Should such a communication occur, the person involved in the communication shall file a notice with the secretary of the commission. Such notice shall provide the information required in section (4) of this rule. Once such a case has been filed, the secretary shall promptly file any such notices in the official case file for each discussed case.]

*[(12)]***(11)** It is improper for any person interested in a case before the commission to attempt to sway the judgment of the commission by undertaking, directly or indirectly, outside the hearing process to bring pressure or influence to bear upon the commission, its employees, or the presiding officer assigned to the proceeding.

*[(13)]***(12)** Notwithstanding any provision of this rule to the contrary, once a contested case has been finally *[adjudicated]* **determined**, the commission, a commissioner, a member of the technical advisory staff, or the presiding officer may communicate with any person regarding any procedural or substantive issues related to such case *[within thirty (30) days of the case being finally adjudicated, unless the same regulated entity has a contested case or anticipated contested case pending before the commission which includes such issues]*. **When such communications are anticipated to relate to the performance or merit of individual employees, they may be closed pursuant to Chapter 610, RSMo.**

*[(14)]***(13)** An attorney, or any law firm the attorney is associated with, appearing before the commission shall—

(A) Make reasonable efforts to ensure that the attorney and any person whom the attorney represents avoid initiating, participating in, or undertaking an ex parte communication prohibited by section (3) *[or a communication prohibited by section (11)]*;

(B) Make reasonable efforts to ensure that the attorney and any person whom the attorney represents gives notice of any communication as directed in section (4), (5), **or** (8)*[, or (11)]*;

(C) Prepare a notice in accordance with section (4), (5), **or** (8)*[, or (11)]* when requested to do so by the commission, a commissioner, technical advisory staff, or the presiding officer assigned to a contested case;

(D) Make reasonable efforts to notify the secretary when a notice of ex parte communication is not transferred to a case file as set forth in subsection (3)(D);

(E) Comply with all the Missouri Rules of Professional Conduct;

(F) During the pendency of an administrative proceeding before the commission, not make or participate in making a statement, other than a quotation from or reference to public records, that a reasonable person would expect to be disseminated by means of public communication if it is made outside the official course of the proceeding and relates to any of the following:

1. Evidence regarding the occurrence or transaction involved;

2. The character, credibility, or criminal record of a party, witness, or prospective witness;

3. Physical evidence, the performance or results of any examinations or tests, or the refusal or failure of a party to submit to examinations or tests;

4. The attorney's opinion as to the merits of the claims, defenses, or positions of any interested person; and

5. Any other matter which is reasonably likely to interfere with a fair hearing; and

(G) Exercise reasonable care to prevent the client, its employees, and the attorney's associates from making a statement that the attorney is prohibited from making.

*[(15)]***(14)** The commission may issue an order to show cause why sanctions should not be ordered against any party or anticipated party, or the agent or representative of a party or anticipated party, engaging in an ex parte communication in violation of section (3) *[or (11)]* of this rule or a failure to file notice or otherwise comply with section (4), (5), or (8) of this rule. The commission may also issue an order to show cause why sanctions should not be ordered against any attorney who knowingly violates section *[(14)]***(13)** of this rule.

*[(16)]***(15)** No person who has served as a commissioner, presiding officer, or commission employee shall, after termination of service or employment with or on the commission, appear before the commission in relation to any case, proceeding, or application with respect to which that person was directly involved or in which that person personally participated or had substantial responsibility during the period of service or employment with the commission.

AUTHORITY: section 386.410, RSMo 2000. Original rule filed Dec. 19, 1975, effective Dec. 29, 1975. Amended: Filed April 26, 1976, effective Sept. 11, 1976. Rescinded and readopted: Filed Nov. 4, 2009, effective July 30, 2010. Amended: Filed Sept. 28, 2011.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars ($500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file comments in support of or in opposition to this proposed amendment with the Missouri Public Service Commission, Steven C. Reed, Secretary of the Commission, PO Box 360, Jefferson City, MO 65102. To be considered, comments must be received at the commission's offices on or before December 1, 2011,

and should include a reference to Commission Case No. AX-2012-0072. Comments may also be submitted via a filing using the commission's electronic filing and information system at http://www.psc.mo.gov/efis.asp. A public hearing regarding this proposed amendment is scheduled for Monday, December 5, 2011, at 10:00 a.m. in the commission's offices in the Governor Office Building, 200 Madison Street, Jefferson City, Missouri. Interested persons may appear at this hearing to submit additional comments and/or testimony in support of or in opposition to this proposed amendment, and may be asked to respond to commission questions.

SPECIAL NEEDS: Any persons with special needs as addressed by the Americans with Disabilities Act should contact the Missouri Public Service Commission at least ten (10) days prior to the hearing at one (1) of the following numbers: Consumer Services Hotline 1-800-392-4211 (voice) or Relay Missouri at 711.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 5—Air Quality Standards and Air Pollution Control Rules Specific to the St. Louis Metropolitan Area

PROPOSED AMENDMENT

10 CSR 10-5.040 *[Use of Fuel in Hand-Fired Equipment Prohibited]* ***Control of Emissions from Hand-Fired Equipment***. The commission proposes to amend the rule title; amend the rule purpose; amend sections (1) and (2); and add sections (3)–(5). If the commission adopts this rule action, it will be the department's intention to submit this rule amendment to the U.S. Environmental Protection Agency to replace the current rule that is in the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Environmental Regulatory Agenda website, www.dnr.mo.gov/regs/index.html.

PURPOSE: This rule sets conditions and restrictions for the operation of hand-fired fuel-burning equipment in the St. Louis Metropolitan Area. This amendment will allow the burning of certain fuels, such as clean wood and biomass, in non-residential hand-fired equipment. Combustion practices and restrictions will be specified to ensure the equipment is operated in an environmentally-sound manner. The evidence supporting the need for this proposed rulemaking, per section 536.016, RSMo, is a request for variance from a business that wishes to use clean wood waste to fuel their boilers.

PURPOSE: This rule [prohibits the operation of hand-fired fuel-burning equipment] ***sets conditions and restrictions for the operation of hand-fired fuel-burning equipment in the St. Louis Metropolitan Area****.*

(1) *[General]* **Applicability**. **This rule shall apply to all hand-fired fuel-burning equipment at commercial facilities, including, but not limited to, furnaces, heating and cooking stoves, and hot water furnaces with the exception of the following:**

(A) *[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, fires used for recreational purpose nor to fires used solely for the preparation of food by barbecuing.]* **Fires used for recreational purpose;**

(B) *[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.]* **Fires used solely for the preparation of food by barbecuing;**

(C) Wood-burning fireplaces in commercial facilities that are part of the building décor and are not intended to supply building heat;

(D) Ovens that only burn wood, charcoal, or anthracite coal for New York style pizzas or bakery products;

(E) Craftsman, hobbyist, horseshoe, and rivet blacksmith forges that only burn charcoal, coking coal, or coke; and

(F) Wood and coal-fired educational, hobbyist, or recreational steam engines or tractors for demonstrations.

(2) *[Prohibition.]* **Definitions.**

(A) *[After three (3) years (March 25, 1976) from the effective date of this regulation (March 25, 1976), it shall be unlawful to operate any hand-fired fuel-burning equipment in the St. Louis, Missouri metropolitan area.]* **Clean biomass—Biomass that has not been treated (including, but not limited to, treatment with copper chromium arsenate, creosote, or pentachlorophenol) and has no paint, stain, or any other type of coating.**

(B) *[The director may order that any hand-fired fuel-burning equipment not be used at any time earlier than three (3) years (March 25, 1976) from the adoption of this regulation (March 25, 1976), whenever that equipment has been found in violation of any air contaminant emission regulation on three (3) or more occasions in any six (6)-month period.]* **Clean wood—Wood that has not been treated (including, but not limited to, treatment with copper chromium arsenate, creosote, or pentachlorophenol) and has no paint, stain, or any other type of coating.**

(C) Start-up—Time period beginning with flame stability after first charge of wood and/or biomass fuel, but no longer than a two (2)-hour duration. This definition only includes initial start-up where no previous embers bed exists. This does not include refueling.

(D) Definitions of certain terms specified in this rule, other than those defined in this rule section, may be found in 10 CSR 10-6.020.

(3) General Provisions. No owner or operator shall operate applicable hand-fired fuel-burning equipment unless the following conditions are met:

(A) Best combustion practices shall be adhered to at all times to minimize emissions during start-up, burn, and shutdown;

(B) Equipment door(s) shall not leak;

(C) Equipment dampers shall be fully functional and operated as designed so that emissions are minimized during start-up, burn, and shutdown;

(D) Equipment shall have a permanent stack extending five feet (5') higher than the peak of any roof structure located within one hundred fifty feet (150');

(E) For wood and/or biomass fuel-burning equipment, fuel shall be clean wood or biomass, wood scraps, chips, and shavings with a moisture content less than or equal to twenty-five percent (25%);

(F) Each piece of equipment shall burn no more than thirty (30) tons of fuel per year; and

(G) Fuel shall not be—

1. Any wood or biomass that does not meet the definition of clean wood and/or biomass with a moisture content above twenty-five percent (25%);

2. Garbage;

3. Tires;

4. Lawn clippings and/or yard waste;

5. Materials containing plastic and/or rubber;

6. Waste petroleum products;

7. Paints and paint thinners;
8. Chemicals;
9. Coal;
10. Glossy and/or colored papers;
11. Non-clean wood construction and/or demolition debris;
12. Plywood and/or particleboard;
13. Manure;
14. Animal carcasses; and
15. Asphalt products.

(4) Reporting and Record Keeping. (*Not Applicable)*

(5) Test methods. *(Not Applicable)*

*AUTHORITY: section 643.050, RSMo [1994] **2000**. Original rule filed March 14, 1967, effective March 24, 1967. Amended: Filed Sept. 26, 2011.*

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars ($500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed amendment will begin at 9:00 a.m., December 8, 2011. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded any interested person. Interested persons, whether or not heard, may submit a written or email statement of their views until 5:00 p.m., December 15, 2011. Written comments shall be sent to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176. Email comments shall be sent to apcprulespn@dnr.mo.gov.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 5—Air Quality Standards and Air Pollution Control Rules Specific to the St. Louis Metropolitan Area

PROPOSED AMENDMENT

10 CSR 10-5.130 Certain Coals to be Washed. The commission proposes to amend section (3). If the commission adopts this rule action, it will be the department's intention to submit this rule amendment to the U.S. Environmental Protection Agency to replace the current rule that is in the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Environmental Regulatory Agenda website, www.dnr.mo.gov/regs/index.html.

PURPOSE: This rule provides that specified coals shall be cleaned by washing prior to their sale. The purpose of this rulemaking is to update the reference to the area specific indirect heating rule with the new statewide consolidated indirect heating rule. The evidence supporting the need for this proposed rulemaking, per section 536.016, RSMo, is new rule 10 CSR 10-6.405, Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used For Indirect Heating which replaces the area specific indirect heating rules.

(3) Exception. This regulation shall not apply if a person proposing to use unwashed coal can show that the emission of sulfur dioxide from the plant in which the coal is to be burned will not exceed two and three-tenths (2.3) pounds of sulfur dioxide per million British Thermal Units of heat input to the installation and that emission of particulate matter will be no more than that allowed in 10 CSR 10-*[5.030]***6.405**.

*AUTHORITY: section 643.050, RSMo [1994] **2000**. Original rule filed March 14, 1967, effective March 24, 1967. Amended: Filed Sept. 16, 2011.*

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars ($500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed amendment will begin at 9:00 a.m., December 8, 2011. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded any interested person. Interested persons, whether or not heard, may submit a written or email statement of their views until 5:00 p.m., December 15, 2011. Written comments shall be sent to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176. Email comments shall be sent to apcprulespn@dnr.mo.gov.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 5—Air Quality Standards and Air Pollution Control Rules Specific to the St. Louis Metropolitan Area

PROPOSED AMENDMENT

10 CSR 10-5.455 Control of Emissions from Industrial Solvent Cleaning Operations. The commission proposes to amend subsection (3)(E). If the commission adopts this rule action, it will be the department's intention to submit this rule amendment to the U.S. Environmental Protection Agency to replace the current rule that is in the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Environmental Regulatory Agenda website, www.dnr.mo.gov/regs/index.html.

PURPOSE: This rule will reduce the volatile organic compounds emissions from industrial cleaning operations that use organic solvents. This amendment will revise the provisions for equipment cleaning at manufacturers of coatings, inks, and resins by adding work practices to the compliance options and removing it as a separate requirement. The evidence supporting the need for this proposed rulemaking, per section 536.016, RSMo, is a June 8, 2011, email from a trade association for manufacturers of coatings, inks, and resins.

(3) General Provisions.

(E) Requirements for coatings, inks, and resin manufacturers. Coating, ink, and resin manufacturers must comply with the following requirements:

1. Clean portable or stationary mixing vats, high dispersion

mills, grinding mills, tote tanks, and roller mills by one (1) or more of the following methods:

A. Use a solvent or solvent solution that either contains less than 1.67 pounds per gallon (0.20 kilograms per liter) of VOC or has a composite vapor pressure no more than eight millimeters of mercury (8.0 mmHg) at twenty degrees Celsius (20 °C);

B. Collect and vent the emissions from equipment cleaning to a VOC emission control system that has an overall capture and control efficiency of at least eighty percent (80%) by weight for the VOC emissions. Where such reduction is achieved by incineration, at least ninety percent (90%) of the organic carbon shall be oxidized to carbon dioxide; *[or]*

C. Use organic solvents other than those allowed in subparagraph (3)(E)1.A. of this rule provided no more than sixty (60) gallons (two hundred twenty-eight (228) liters) of fresh solvent shall be used per month. Organic solvent that is reused or recycled (either onsite or offsite), for further use in equipment cleaning or the manufacture of coating, is not included in this limit; **or**

D. Comply with the following work practices:

(I) Equipment being cleaned must be maintained leak free;

(II) VOC-containing cleaning materials must be drained from the cleaned equipment upon completion of cleaning;

(III) VOC-containing cleaning materials, including waste solvents, shall not be stored or disposed of in such a manner that will cause or allow evaporation into the atmosphere; and

(IV) Store all VOC-containing materials in closed containers; and

[2. Work practices while cleaning shall include:

A. Equipment being cleaned must be maintained leak free;

B. VOC-containing cleaning materials must be drained from the cleaned equipment upon completion of cleaning;

C. VOC-containing cleaning materials, including waste solvents, shall not be stored or disposed of in such a manner that will cause or allow evaporation into the atmosphere; and

D. Store all VOC-containing materials in closed containers; and]

*[3.]***2.** When using solvent for wipe cleaning, the owner or operator of a facility shall*[:]***—**

A. Not use open containers for the storage or disposal of cloth or paper impregnated with organic compounds that is used for cleanup or coating, ink, or resin removal; and

B. Not store spent or fresh organic compounds to be used for cleanup or coating, ink, or resin removal in open containers.

*AUTHORITY: section 643.050, RSMo [Supp. 2010] **2000**. Original rule filed Oct. 7, 1994, effective May 28, 1995. Amended: Filed July 15, 1996, effective Feb. 28, 1997. Amended: Filed Nov. 30, 2010, effective Aug. 30, 2011. Amended: Filed Sept. 16, 2011.*

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars ($500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed amendment will begin at 9:00 a.m., December 8, 2011. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded any interested person. Interested persons, whether or not heard, may submit a written or email statement of their views until 5:00 p.m., December 15, 2011. Written comments shall be sent to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176. Email comments shall be sent to apcprulespn@dnr.mo.gov.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 5—Air Quality Standards and Air Pollution Control Rules Specific to the St. Louis Metropolitan Area

PROPOSED AMENDMENT

10 CSR 10-5.490 Municipal Solid Waste Landfills. The commission proposes to amend subsections (1)(B) and (1)(C); add subsection (1)(D); amend original sections (2) and (3); add subsection (3)(C); amend and renumber original sections (4) through (7); and add new sections (4), (9), and (10). If the commission adopts this rule action, it will be the department's intention to submit this rule amendment to the U.S. Environmental Protection Agency to replace the current rule that is in the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Environmental Regulatory Agenda website, www.dnr.mo.gov/regs/index.html.

*PURPOSE: This rule requires municipal solid waste landfills to monitor their non-methane organic compound (NMOC) emissions. Landfills having NMOC emission rates above the regulatory cutoff shall design and install a gas collection and control system. This amendment is to maintain consistency with federal emission guidelines for existing municipal solid waste landfills promulgated as 40 CFR 60, Subpart Cc. The evidence supporting the need for this proposed rulemaking, per section 536.016, RSMo, are **Federal Register** updates published on April 10, 2000, October 17, 2000, and September 21, 2006.*

PUBLISHER'S NOTE: The secretary of state has determined that the publication of the entire text of the material which is incorporated by reference as a portion of this rule would be unduly cumbersome or expensive. This material as incorporated by reference in this rule shall be maintained by the agency at its headquarters and shall be made available to the public for inspection and copying at no more than the actual cost of reproduction. This note applies only to the reference material. The entire text of the rule is printed here.

(1) Applicability.

(B) For purposes of obtaining an operating permit under Title V of the Clean Air Act, the owner or operator of an MSW landfill subject to this rule with a design capacity less than two and one-half (2.5) million megagrams or two and one-half (2.5) million cubic meters is not subject to the requirements to obtain an operating permit for the landfill under 40 *Code of Federal Regulations* (CFR) *[part]* 70 or 71, unless the landfill is otherwise subject to either 40 CFR *[part]* 70 or 71. For purposes of submitting a timely application for an operating permit under 40 CFR *[part]* 70 or 71, the owner or operator of an MSW landfill subject to the rule with a design capacity greater than or equal to two and one-half (2.5) million megagrams and two and one-half (2.5) million cubic meters on the effective date of EPA approval of the state's program under section 111(d) of the Clean Air Act (June 23, 1998), and not otherwise subject to either 40 CFR *[part]* 70 or 71, becomes subject to the requirements of section 70.5(a)(1)(i) or 71.5(a)(1)(i) of the Clean Air Act ninety (90) days after the effective date of such 111(d) program approval, even if the design capacity report is submitted earlier.

(C) When an MSW landfill subject to this rule is closed, the owner or operator is no longer subject to the requirement to maintain an operating permit under 40 CFR *[part]* 70 or 71 for the landfill if the landfill is not otherwise subject to the requirements of either 40 CFR *[part]* 70 or 71 and if either of the following conditions is met:

1. The landfill was never subject to a requirement for a control system under section (3) of this rule; or

2. The owner or operator meets the conditions for control system removal specified in section 60.752(b)(2)(v) of **40 CFR 60,** */s/***S**ubpart WWW.

(D) Physical or operational changes made to an existing MSW landfill solely to comply with this rule are not considered construction, reconstruction, or modification for the purposes of this rule.

(2) Definitions. **Definitions of certain terms specified in this rule may be found in 10 CSR 10-6.020.**

[(A) Active collection system—A gas collection system that uses gas mover equipment.

(B) Closed landfill—A landfill in which solid waste is no longer being placed, and in which no additional wastes will be placed without first filing a notification of modification as prescribed under 40 CFR part 60.7(a)(4) (incorporated by reference). Once a notification of modification has been filed, and additional solid waste is placed in the landfill, the landfill is no longer closed.

(C) Closure—That point in time when a landfill becomes a closed landfill.

(D) Design capacity—The maximum amount of solid waste the landfill can accept, as indicated in terms of volume or mass in the most recent operating or construction permit issued by the county or state agency responsible for regulating the landfill, plus any in-place waste not accounted for in the most recent permit. If the owner or operator chooses to convert the design capacity from volume to mass or from mass to volume to demonstrate its design capacity is less than two and one-half (2.5) million megagrams or two and one-half (2.5) million cubic meters, the calculation must include a site-specific density, which must be recalculated annually.

(E) Enclosed combustor—An enclosed firebox which maintains a relatively constant limited peak temperature generally using a limited supply of combustion air. An enclosed flare is considered an enclosed combustor.

(F) Flare—An open combustor without enclosure or shroud.

(G) Gas mover equipment—The equipment (i.e., fan, blower, compressor) used to transport landfill gas through the header system.

(H) Household waste—Any solid waste (including garbage, trash, and sanitary waste in septic tanks) derived from households (including, but not limited to, single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas).

(I) Lateral expansion—A horizontal expansion of the waste boundaries of an existing MSW landfill. A lateral expansion is not a modification unless it results in an increase in the design capacity of the landfill.

(J) Modification—An increase in the permitted volume design capacity of the landfill by either horizontal or vertical expansion based on its most recent permitted design capacity. Modification does not occur until the owner or operator commences construction on the horizontal or vertical expansion.

(K) Municipal solid waste landfill or MSW landfill—An entire disposal facility in a contiguous geographical space where household waste is placed in or on land. An MSW landfill may also receive other types of Resource Conservation and Recovery Act (RCRA) Subtitle D wastes such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, and industrial solid waste. Portions of an MSW landfill may be separated by access roads. An MSW landfill may be publicly or privately owned. An MSW landfill may be a new MSW landfill, an existing MSW landfill or a lateral expansion.

(L) NMOC—Nonmethane organic compounds.

(M) Passive collection system—A gas collection system that solely uses positive pressure within the landfill to move the gas rather than using gas mover equipment.

(N) Solid waste—Any garbage, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permits under 33 U.S.C. 1342 (incorporated by reference), or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq., incorporated by reference).

(O) Sufficient density—Any number, spacing, and combination of collection system components, including vertical wells, horizontal collectors, and surface collectors, necessary to maintain emission and migration control as determined by measures of performance set forth in this rule.

(P) Sufficient extraction rate—A rate sufficient to maintain a negative pressure at all wellheads in the collection system without causing air infiltration, including any wellheads connected to the system as a result of expansion or excess surface emissions, for the life of the blower.]

(3) *[General Provisions.]* **Standards for Air Emissions from Municipal Solid Waste Landfills. Provisions of 40 CFR 51, 40 CFR 52, 40 CFR 60, and 40 CFR 258 are incorporated by reference in subsection (3)(C) of this rule. Also, the *Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources*, AP-42, Fifth Edition, January 1995 (hereafter AP-42), as published by the Government Printing Office, 732 North Capitol Street NW, Washington, DC, 20401, shall apply and is hereby incorporated by reference, including Supplement E dated November 1998. This rule does not incorporate any subsequent amendments or additions.**

(A) Each owner or operator of a municipal solid waste (MSW) landfill having a design capacity less than one (1.0) million megagrams (one and one-tenth (1.1) million tons) by mass or one (1.0) million cubic meters (one and three-tenths (1.3) million cubic yards) by volume shall submit within ninety (90) days of the rule effective date an initial design capacity report, as described in **sub**section *[(7)]***(8)(A)** of this rule, to the director. The landfill may calculate design capacity in either megagrams or cubic meters for comparison with the exemption values. Any density conversions shall be documented and submitted with the report. Submittal of the initial design capacity report shall fulfill the requirements of this rule, except as provided for in paragraphs (3)(A)1. and 2. of this rule.

1. The owner or operator shall submit an amended design capacity report *[to the director when there is any increase in the design capacity of the landfill. An increase in design capacity may result from an increase in the area or depth of the landfill, a change in the operating procedures of the landfill, or any other means]***, as provided for in paragraph (8)(A)3. of this rule**.

2. *[If]* **When** an increase in the design capacity of the landfill results in a revised maximum design capacity equal to or greater than

one (1.0) million megagrams or one (1.0) million cubic meters, the owner or operator shall comply with the provisions of subsection (3)(B) of this rule.

(B) Each owner or operator of an MSW landfill having a design capacity equal to or greater than one (1.0) million megagrams or one (1.0) million cubic meters shall *[submit within ninety (90) days of the rule effective date an initial design capacity report and an NMOC emission rate report, as described in sections (4) and (7) of this rule, to the director]* **either comply with paragraph (3)(B)2. of this rule or calculate an NMOC emission rate for the landfill using the procedures specified in section (5) of this rule**. The NMOC emission rate shall be recalculated annually except as provided for in *[subsection (7)(C)]* **subparagraph (8)(B)1.B.** of this rule.

1. If the calculated NMOC emission rate is less than twenty-five (25) megagrams (twenty-seven and one-half (27.5) tons) per year, the owner or operator shall—

A. Submit an annual emission rate report to the director**, except as provided for in subparagraph (8)(B)1.B. of this rule**; and

B. Recalculate the NMOC emission rate annually **using the procedures specified in paragraph (5)(A)1. of this rule** until such time as the calculated NMOC emission rate is equal to or greater than twenty-five (25) megagrams, or the landfill closes.

(I) If the NMOC emission rate, upon recalculation, is equal to or greater than twenty-five (25) megagrams per year, the owner or operator shall install a collection and control system in compliance with paragraph (3)(B)2. of this rule.

(II) If the landfill is permanently closed, a closure notification shall be submitted to the director **as provided for in subsection (8)(D) of this rule**.

2. If the calculated NMOC emission rate is equal to or greater than twenty-five (25) megagrams per year, the owner or operator shall—

A. Submit a collection and control system design plan prepared by a professional engineer to the director within one (1) year of the NMOC emission rate report. Permit modification approval from the Missouri Department of Natural Resources' Solid Waste Management Program shall be required prior to construction of any gas collection system.

(I) The collection and control system **as described in the plan** shall meet the design requirements of subparagraph (3)(B)2.B. of this rule.

(II) The collection and control system design plan shall include any alternatives to the operation standards, test methods, procedures, compliance measures, monitoring, record keeping**,** or reporting provisions of sections (4) through *[(7)]***(9)** of this rule proposed by the owner or operator.

(III) The collection and control system design plan shall either conform with specifications for active collection systems **in section (10) of this rule** or include a demonstration to the director's satisfaction of the sufficiency of the *[alternate system]* **alternative provisions to section (10) of this rule**.

(IV) The director will review the collection and control system design plan and either approve it, disapprove it, or request that additional information be submitted**. Because of the many site-specific factors involved with landfill gas system design, alternative systems may be necessary. A wide variety of system designs are possible, such as vertical wells, combination horizontal and vertical collection systems, horizontal trenches only, leachate collection components, and passive systems**;

B. Install a collection and control system that captures the gas generated within the landfill as required by part (3)(B)2.B.(I) or (II) and subparagraph (3)(B)2.C. of this rule within thirty (30) months after the first annual report in which the emission rate equals or exceeds twenty-five (25) megagrams per year, unless Tier 2 or Tier 3 sampling under *[subsection (4)(C) or (4)(D)]* **section (5)** of this rule demonstrates that the emission rate is less than twenty-five (25) megagrams per year, as specified in paragraph *[(7)(D)]***(8)(C)**1. or 2. of this rule.

(I) An active collection system shall—

(a) Be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control **over the intended use period of the gas control or treatment system equipment**;

(b) Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of**—**

I. *[f]***F**ive (5) years or more, if active*[,]***;** or

II. *[t]***T**wo (2) years or more, if closed or at final grade;

(c) Collect gas at a sufficient extraction rate; and

(d) Be designed to minimize off-site migration of subsurface gas.

(II) A passive collection system shall—

(a) Comply with the provisions of subparts (3)(B)2.B.(I)(a), (b), and (d) of this rule; and

(b) Be installed with liners on the bottom and all sides in all areas in which gas is to be collected**. The liners shall be installed as required under 40 CFR 258.40**;

[(III) Each owner or operator of an MSW landfill gas collection and control system shall—

(a) Operate the collection system with negative pressure at each wellhead except under the following conditions:

I. A fire or increased well temperature. The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in subsection (7)(H) of this rule;

II. Use of a geomembrane or synthetic cover. The owner or operator shall develop acceptable pressure limits in the design plan; and

III. A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the director;

(b) Operate each interior wellhead in the collection system with a landfill gas temperature less than fifty-five degrees Celsius (55 °C) and with either a nitrogen level less than twenty percent (20%) or an oxygen level less than five percent (5%). The owner or operator may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

I. The nitrogen level shall be determined using Method 3C of Appendix A, 40 CFR part 60, unless an alternative test method is established as allowed by part (3)(B)2.A.(II) of this rule.

II. Unless an alternative test method is established as allowed by part (3)(B)2.A.(II) of this rule, the oxygen shall be determined by an oxygen meter using Method 3A of Appendix A, 40 CFR part 60, except that—

a. The span shall be set so that the regulatory limit is between twenty and fifty percent (20 and 50%) of the span;

b. A data recorder is not required;

c. Only two (2) calibration gases are required, a zero and span, and ambient air may be used as the span;

d. A calibration error check is not required; and

e. The allowable sample bias, zero drift, and calibration drift are plus or minus ten percent (± 10%);

(c) Operate the collection system so that the

methane concentration is less than five hundred (500) parts per million above background concentration at the surface of the landfill. To determine if this level is exceeded, the owner or operator shall conduct surface testing around the perimeter of the collection area along a pattern that traverses the landfill at thirty (30)-meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the thirty (30)-meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing;

(d) Operate the system such that all collected gases are vented to a control system designed and operated in compliance with subparagraph (3)(B)2.C. of this rule. In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within one (1) hour;

(e) Operate the control or treatment system at all times when the collected gas is routed to the system; and

(f) If monitoring demonstrates that the operational requirement in subpart (3)(B)2.B.(III)(a), (b), or (c) of this rule are not met, corrective action shall be taken as specified in subsection (5)(B) of this rule. If corrective actions are taken as specified in subsection (5)(B) of this rule, the monitored exceedance is not a violation of the operational requirements in this section;]

C. Route all the collected gas to one **(1)** or more of the following control systems:

(I) An open flare designed and operated in accordance with 40 CFR *[part]* 60.18 *[(incorporated by reference)]* **except as noted in subsection (5)(E) of this rule**;

(II) A control system designed and operated to reduce NMOC by ninety-eight (98) weight-percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by ninety-eight (98) weight-percent, or reduce the outlet NMOC concentration to less than twenty (20) parts per million by volume, dry basis as hexane at three percent (3%) oxygen. The reduction efficiency or parts per million by volume shall be established by an initial performance test, to be completed no later than one hundred eighty (180) days after the initial startup of the approved control system*[; or]* **using the test methods specified in subsection (5)(D) of this rule.**

(a) If a boiler or process heater is used as the control device, the landfill gas stream shall be introduced into the flame zone.

(b) The control device shall be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored are specified in section (7) of this rule; or

(III) A system that routes the collected gas to a treatment system that processes the collected gas for subsequent sale or use*[; and]*. **All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of part (3)(B)2.C.(I) or (II) of this rule;**

D. Operate the collection and control device installed to comply with this rule in accordance with the provisions of sections (4), (6), and (7) of this rule;

*[D.]***E.** The collection and control system may be capped or removed provided the following conditions are met:

(I) The landfill shall be no longer accepting solid waste and be permanently closed **under the requirements of 40 CFR 258.60**. A closure report shall be submitted to the director;

(II) The collection and control system has been in operation a minimum of fifteen (15) years; and

(III) The calculated NMOC gas produced by the landfill is less than twenty-five (25) megagrams per year on three (3) successive test dates. The test dates shall be no less than ninety (90) days apart and no more than one hundred eighty (180) days apart; and

*[E.]***F.** The planning, awarding of contracts, and installation of MSW landfill air emission collection and control equipment capable of meeting the emission standards in subsection (3)(B) of this rule shall be accomplished within thirty (30) months after the date the initial NMOC emission rate report shows NMOC emissions equal or exceed twenty-five (25) megagrams per year.

(C) The specific citations of 40 CFR 51, 40 CFR 52, 40 CFR 60, and 40 CFR 258 referenced in this rule and promulgated as of June 30, 2011, shall apply and are hereby incorporated by reference in this rule, as published by the Office of the Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, DC 20408. This rule does not incorporate any subsequent amendments or additions. All of the provisions of 40 CFR 51.166 other than (a) Plan requirements and (q) Public participation are incorporated by reference in this rule. All of the provisions 40 CFR 52.21, other than (a) Plan disapproval, (q) Public participation, (s) Environmental impact statements, and (u) Delegation of authority are incorporated by reference in this rule with the following adaptation. Administrator as it appears in 40 CFR 52.21 shall refer to the director of the Missouri Department of Natural Resources' Air Pollution Control Program except in the following, where it shall continue to refer to the administrator of the U.S. Environmental Protection Agency:

1. (b)(17) Federally enforceable;

2. (b)(37)(i) Repowering;

3. (b)(43) Prevention of Significant Deterioration (PSD) program;

4. (b)(48) Baseline actual emissions;

5. (b)(49) Subject to regulation;

6. (b)(50) Regulated NSR pollutant;

7. (b)(51) Reviewing authority;

8. (g) Redesignation;

9. (l) Air quality models;

10. (p) Federal Land Manager;

11. (t) Disputed permits or redesignations; and

12. (v) Innovative control technology.

(4) Operational Standards for Collection and Control Systems. Each owner or operator of an MSW landfill gas collection and control system used to comply with the provisions of subparagraph (3)(B)2.B. of this rule shall—

(A) Operate the collection system such that gas is collected from each area, cell, or group of cells in the MSW landfill in which solid waste has been in place for—

1. Five (5) years or more if active; or

2. Two (2) years or more if closed or at final grade;

(B) Operate the collection system with negative pressure at each wellhead except under the following conditions:

1. A fire or increased well temperature. The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in paragraph (8)(F)1. of this rule;

2. Use of a geomembrane or synthetic cover. The owner or operator shall develop acceptable pressure limits in the design plan; and

3. A decommissioned well. A well may experience a static positive pressure after shutdown to accommodate for declining flows. All design changes shall be approved by the director and EPA;

(C) Operate each interior wellhead in the collection system with a landfill gas temperature less than fifty-five degrees Celsius

(55 °C) and with either a nitrogen level less than twenty percent (20%) or an oxygen level less than five percent (5%). The owner or operator may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

1. The nitrogen level shall be determined using Method 3C of 40 CFR 60, Appendix A unless an alternative test method is established as allowed by subparagraph (3)(B)2.A. of this rule.

2. Unless an alternative test method is established as allowed by subparagraph (3)(B)2.A. of this rule, the oxygen shall be determined by an oxygen meter using Method 3A or 3C of 40 CFR 60, Appendix A except that—

A. The span shall be set so that the regulatory limit is between twenty and fifty percent (20%–50%) of the span;

B. A data recorder is not required;

C. Only two (2) calibration gases are required, a zero (0) and span, and ambient air may be used as the span;

D. A calibration error check is not required; and

E. The allowable sample bias, zero (0) drift, and calibration drift are plus or minus ten percent (±10%);

(D) Operate the collection system so that the methane concentration is less than five hundred (500) parts per million above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator shall conduct surface testing around the perimeter of the collection area along a pattern that traverses the landfill at thirty (30)-meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the thirty (30)-meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing;

(E) Operate the system such that all collected gases are vented to a control system designed and operated in compliance with subparagraph (3)(B)2.C. of this rule. In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within one (1) hour;

(F) Operate the control or treatment system at all times when the collected gas is routed to the system; and

(G) If monitoring demonstrates that the operational requirements in subsection (4)(B), (C), or (D) of this rule are not met, corrective action shall be taken as specified in paragraphs (3)(A)3. through 5. or subsection (6)(C) of this rule. If corrective actions are taken as specified in section (6) of this rule, the monitored exceedance is not a violation of the operational requirements in this section.

*[(4)]***(5)** Test Methods **and Procedures**.

(A) **NMOC Emission Rate Calculation.**

1. The **landfill** owner or operator *[of a MSW landfill]* shall calculate the NMOC emission rate using either the equation provided in *[paragraph (4)(A)1.]* **subparagraph (5)(A)1.A.** of this rule or the equation provided in *[paragraph (4)(A)2.]* **subparagraph (5)(A)1.B.** of this rule. Both equations may be used if the actual year-to-year solid waste acceptance rate is known**, as specified in subparagraph (5)(A)1.A. of this rule, for part of the life of the landfill and the actual year-to-year solid waste acceptance rate is unknown, as specified in subparagraph (5)(A)1.B., for part of the life of the landfill**. The values to be used in both equations are 0.05 per year for k, 170 cubic meters per megagram for L_o, and 4,000 parts per million by volume as hexane for the C_{NMOC} *[unless site-specific values are calculated as described under Tier 1, Tier 2, and Tier 3 in subsections (4)(B), (4)(C), and (4)(D) of this rule]*. For landfills located in geographical areas with a thirty (30)-year annual average precipitation of less than twenty-five inches (25"), as measured at the nearest representative official meteorologic site, the k value to be used is 0.02 per year.

*[1.]***A.** *[The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for M_i if documentation of the nature and amount of such wastes is maintained.]* The following equation shall be used if the actual year-to-year solid waste acceptance rate is known*[:]***. The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for M_i if documentation of the nature and amount of such wastes is maintained.**

$$M_{NMOC} = \sum_{i=1}^{n} 2kL_oM_i(e^{-kt_i})\ (C_{NMOC})\ (3.6 \times 10^{-9})$$

where,

M_{NMOC}	=	Total NMOC emission rate from the landfill, megagrams per year
k	=	methane generation rate constant, year $^{-1}$
L_o	=	methane generation potential, cubic meters per megagram solid waste
M_i	=	mass of solid waste in the i^{th} section, megagrams
t_i	=	age of the i^{th} section, years
C_{NMOC}	=	concentration of NMOC, parts per million by volume as hexane
3.6×10^{-9}	=	conversion factor

*[2.]***B.** *[The mass of nondegradable solid waste may be subtracted from the average annual acceptance rate when calculating a value for R if documentation is provided.]* The following equation shall be used if the actual year-to-year solid waste acceptance rate is unknown*[:]***. The mass of nondegradable solid waste may be subtracted from the average annual acceptance rate when calculating a value for R if documentation is provided.**

$$M_{NMOC} = 2L_o\ R\ (e^{-kc} - e^{-kt})\ (C_{NMOC})\ (3.6 \times 10^{-9})$$

where,

M_{NMOC}	=	mass emission rate of NMOC, megagrams per year
L_o	=	methane generation potential, cubic meters per megagram solid waste
R	=	average annual acceptance rate, megagrams per year
k	=	methane generation rate constant, year^{-1}
c	=	time since closure, years (for active landfill c = 0 and e^{-kc} = 1)
t	=	age of landfill, years
C_{NMOC}	=	concentration of NMOC, parts per million by volume as hexane
3.6×10^{-9}	=	conversion factor

*[(B)]***2.** Tier 1. The owner or operator shall compare the calculated NMOC mass emission rate to the standard of twenty-five (25) megagrams per year.

*[1.]***A.** If the NMOC emission rate calculated in paragraph *[(4)(A)1. or 2.]* **(5)(A)1.** of this rule is less than twenty-five (25) megagrams per year, then the landfill owner shall submit an emission rate report **as provided in paragraph (8)(B)1. of this rule** and shall recalculate the NMOC mass emission rate annually as required under paragraph (3)(B)1. of this rule.

*[2.]***B.** If the calculated NMOC emission rate is equal to or greater than twenty-five (25) megagrams per year, then the landfill owner shall either comply with paragraph (3)(B)2. of this rule, or determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the procedures provided in *[subsection (4)(C)]* **paragraph (5)(A)3.** of this rule.

*[(C)]***3.** Tier 2. The **landfill** owner or operator shall determine the NMOC concentration using the following sampling procedure. The landfill owner or operator shall install at least two (2) sample probes per hectare of landfill surface that has retained solid waste for at least two (2) years. If the landfill is larger than twenty-five (25) hectares in area, only fifty (50) samples are required. The sample probes shall be located to avoid known areas of nondegradable solid waste. The owner or operator shall collect and analyze one (1) sample of landfill gas from each probe to determine the NMOC concentration using Method **25 or** 25C *[or]* **of 40 CFR 60, Appendix A.** Method 18 of *[Appendix A,]* 40 CFR *[part]* 60*[. If composite sampling is used, equal volumes shall be taken from each sample probe.]*, **Appendix A may be used to analyze the samples collected by the Method 25 or 25C sampling procedure**. **Taking composite samples from different probes into a single cylinder is allowed; however, equal sample volumes must be taken from each probe. For each composite, the sampling rate, collection times, beginning and ending cylinder vacuums, or alternative volume measurements must be recorded to verify that composite volumes are equal. Composite sample volumes should not be less than one (1) liter unless evidence can be provided to substantiate the accuracy of smaller volumes. Terminate compositing before the cylinder approaches ambient pressure where measurement accuracy diminishes. If using Method 18 of 40 CFR 60, Appendix A, the minimum list of compounds to be tested shall be those published in AP-42, minus carbon monoxide, hydrogen sulfide, and mercury. As a minimum, the instrument must be calibrated for each of the compounds on the list. Convert the concentration of each Method 18 compound to C_{NMOC} as hexane by multiplying by the ratio of its carbon atoms divided by six (6).** If more than the required number of samples are taken, all samples shall be used in the analysis. The landfill owner or operator *[shall]* **must** divide the NMOC concentration from Method **25 or** 25C **of 40 CFR 60, Appendix A** by six (6) to convert from C_{NMOC} as carbon to C_{NMOC} as hexane. **If the landfill has an active or passive gas removal system in place, Method 25 or 25C samples may be collected from these systems instead of surface probes provided the removal system can be shown to provide sampling as representative as the two (2) sampling probe per hectare requirement. For active collection systems, samples may be collected from the common header pipe before the gas moving or condensate removal equipment. For these systems, a minimum of three (3) samples must be collected from the header pipe.**

A. The **landfill** owner or operator shall recalculate the NMOC mass emission rate using the equations provided in *[paragraph (4)(A)1. or 2.]* **subparagraph (5)(A)1.A. or B.** of this rule and using the average NMOC concentration from the collected samples instead of the default value in the equation **provided in paragraph (5)(A)1. of this rule**.

*[1.]***B.** If the resulting NMOC mass emission rate is less than twenty-five (25) megagrams per year, the owner or operator shall submit an emission rate report as required under paragraph *[(3)(B)1.]* **(8)(B)1.** of this rule and retest the site-specific NMOC concentration every five (5) years using the methods specified in this section.

*[2.]***C.** If the resulting mass emission rate calculated using the site-specific NMOC concentration is equal to or greater than twenty-five (25) megagrams per year, then the landfill owner or operator shall either comply with paragraph (3)(B)2.of this rule, or determine the site-specific methane generation rate constant and recalculate the NMOC emission rate using the site-specific methane generation rate using the procedure specified in *[subsection (4)(D)]* **paragraph (5)(A)4.** of this rule.

*[(D)]***4.** Tier 3. The site-specific methane generation rate constant shall be determined using the procedures provided in Method 2E of *[Appendix A,]* 40 CFR *[part]* 60**, Appendix A**. The landfill owner or operator shall estimate the NMOC mass emission rate using the equations in *[paragraph (4)(A)1. or 2.]* **subparagraph (5)(A)1.A. or B.** of this rule using a site-specific methane generation rate constant k, and using the site-specific NMOC concentration as determined in *[subsection (4)(C)]* **paragraph (5)(A)3.** of this rule instead of the default values provided in *[subsection (4)(A)]* **paragraph (5)(A)1.** of this rule. The landfill owner or operator shall compare the resulting NMOC mass emission rate to the standard of twenty-five (25) megagrams per year.

*[1.]***A.** If the NMOC mass emission rate is less than twenty-five (25) megagrams per year, then the owner or operator shall submit a periodic emission rate report as provided in paragraph *[(3)(B)1.]* **(8)(B)1.** of this rule and shall recalculate the NMOC mass emission rate annually**, as provided in paragraph (8)(B)1. of this rule using the equations in paragraph (5)(A)1. of this rule and using the site-specific methane generation rate constant and NMOC concentration obtained in paragraph (5)(A)3. of this rule**. The calculation of the methane generation rate constant is performed only once, and the value obtained shall be used in all subsequent annual NMOC emission rate calculations.

*[2.]***B.** If the NMOC mass emission rate as calculated using the site-specific methane generation rate and concentration of NMOC is equal to or greater than twenty-five (25) megagrams per year, the owner or operator shall comply with paragraph (3)(B)2. of this rule.

*[(E)]***5.** The owner or operator may use other methods to determine the NMOC concentration or a site-specific k as an alternative to the methods **required** in *[subsections (4)(C) and (D)]* **paragraphs (5)(A)3. and 4.** of this rule if the method has been approved *[in writing]* by the director **and EPA**.

*[(F)]***(B)** After the installation of a collection and control system in compliance with section *[(5)]* **(6)** of this rule, the owner or operator shall calculate the NMOC emission rate for purposes of determining when the system can be removed as provided in subparagraph *[(3)(B)2.D.]* **(3)(B)2.E.** of this rule, using the following equation:

$$M_{NMOC} = (1.89 \times 10^{-3}) (Q_{LFG}) (C_{NMOC})$$

where,

M_{NMOC} = mass emission rate of NMOC, megagrams per year
Q_{LFG} = flow rate of landfill gas, cubic meters per minute
C_{NMOC} = NMOC concentration, parts per million by volume as hexane

1. The flow rate of landfill gas, Q_{LFG}, shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control device using a gas flow measuring device calibrated according to the provisions of section 4 of Method 2E of *[Appendix A,]* 40 CFR *[part]* 60**, Appendix A**.

2. The average NMOC concentration, C_{NMOC}, shall be determined by collecting and analyzing landfill gas sampled from the common header pipe before the gas moving or condensate removal equipment using the procedures in Method 25C or Method 18 of *[Appendix A,]* 40 CFR *[part]* 60**, Appendix A**. If using Method 18, the minimum list of compounds to be tested shall be those published in *[the most recent Compilation of Air Pollutant Emission Factors (]*AP-42*[)]*. The sample location on the common header pipe shall be before any condensate removal or other gas refining units. The landfill owner or operator shall divide the NMOC concentration from Method 25C by six (6) to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

3. The owner or operator may use another method to determine landfill gas flow rate and NMOC concentration if the method has

been approved by the director **and EPA as provided in part (3)(B)2.A.(II) of this rule**.

*[(G)]***(C) When calculating emissions for prevention of significant deterioration (PSD) purposes,** *[T]*the owner or operator of each MSW landfill **subject to the provisions of this rule** shall estimate the NMOC emission rate for comparison to the *[Prevention of Significant Deterioration []* PSD *[]]* major source and significance levels in *[section]* **40 CFR** 51.166 or 52.21 *[of 40 CFR parts 51 and 52]* using AP-42 or other approved measurement procedures. *[If a collection system, which complies with the provisions in paragraph (3)(B)2. of this rule is already installed, the owner or operator shall estimate the NMOC emission rate using the procedures provided in subsection (4)(F) of this rule.]*

*[(H)]***(D)** For the performance test required in part (3)(B)2.C.(II) of this rule, Method **25,** 25C**,** or Method 18 **of 40 CFR 60, Appendix A** shall be used to determine compliance with ninety-eight (98) weight-percent efficiency or the twenty parts per million by volume (20 ppmv) outlet concentration level, unless another method to demonstrate compliance has been approved by the director **and EPA** as provided by part (3)(B)2.A.(II) of this rule. **Method 3 or 3A of 40 CFR 60, Appendix A shall be used to determine oxygen for correcting the NMOC concentration as hexane to three percent (3%). In cases where the outlet concentration is less than fifty (50) ppm NMOC as carbon (eight (8) ppm NMOC as hexane), Method 25A of 40 CFR 60, Appendix A should be used in place of Method 25.** If using Method 18, the minimum list of compounds to be tested shall be those published in *[the most recent Compilation of Air Pollutant Emission Factors []*AP-42*[]]*. The following equation shall be used to calculate efficiency:

$$\text{Control Efficiency} = (NMOC_{in} - NMOC_{out})/(NMOC_{in})$$

where,

$NMOC_{in}$ = mass of NMOC entering control device
$NMOC_{out}$ = mass of NMOC exiting control device

(E) For the performance test required in part (3)(B)2.C.(I) of this rule, the net heating value of the combusted landfill gas as determined in 40 CFR 60.18(f)(3) is calculated from the concentration of methane in the landfill gas as measured by Method 3C of 40 CFR 60, Appendix A. A minimum of three (3) thirty (30)-minute Method 3C samples are determined. The measurement of other organic components, hydrogen, and carbon monoxide is not applicable. Method 3C may be used to determine the landfill gas molecular weight for calculating the flare gas exit velocity under 40 CFR 60.18(f)(4).

*[(5)]***(6)** Compliance **Provisions**.

(A) Except as provided for in part (3)(B)2.A.(II) of this rule, the following methods shall be used to determine whether the gas collection system is in compliance:

1. One of the following equations shall be used in calculating the maximum expected gas generation flow rate from the landfill as described in subpart (3)(B)2.B.(I)(a) of this rule. The k and L_o kinetic factors shall be those published in *[the most recent Compilation of Air Pollution Emission Factors []*AP-42*[]]* or other site-specific values demonstrated to be appropriate and approved in writing by the director **and EPA**. **If k has been determined as specified in paragraph (5)(A)4. of this rule, the value of k determined from the test shall be used.** A value of no more than fifteen (15) years shall be used for the intended use period of the gas mover equipment. The active life of the landfill is the age of the landfill plus the estimated number of years until closure. After installation of a collection and control system, actual flow data shall be used to project the maximum flow rate.

A. For sites with unknown year-to-year solid waste acceptance rate*[:]*—

$$Q_m = 2L_o R (e^{-kc} - e^{-kt})$$

where,

Q_m = maximum expected gas generation flow rate, cubic meters per year
L_o = methane generation potential, cubic meters per megagram solid waste
R = average annual acceptance rate, megagrams per year
k = methane generation rate constant, year $^{-1}$
c = time since closure, years (for an active landfill c = 0 and $e^{-kc} = 1$)
t = age of the landfill at equipment installation plus the time the owner or operator intends to use the gas mover equipment or active life of the landfill, whichever is less. If the equipment is installed after closure, t is the age of the landfill at installation, years

B. For sites with known year-to-year solid waste acceptance rate*[:]*—

$$Q_m = \sum_{i=1}^{n} 2 k L_o M_i (e^{-kt_i})$$

where,

Q_m = maximum expected gas generation flow rate, cubic meters per year
k = methane generation rate constant, year $^{-1}$
L_o = methane generation potential, cubic meters per megagram solid waste
M_i = mass of solid waste in the i^{th} section, megagrams
t_i = age of the i^{th} section, years*[;]*

C. If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, the equations in subparagraphs (6)(A)1.A. and B. of this rule. If the landfill is still accepting waste, the actual measured flow data will not equal the maximum expected gas generation rate, so calculations using the equations in subparagraphs (6)(A)1.A. or B. of this rule or other methods shall be used to predict the maximum expected gas generation rate over the intended period of use of the gas control system equipment;

2. For the purposes of determining sufficient density of gas collectors for compliance with subpart (3)(B)2.B.(I)(b) of this rule, the owner or operator shall design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the director, capable of controlling and extracting gas from all portions of the landfill **sufficient to meet all operational and performance standards**;

3. For the purposes of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with subpart (3)(B)2.B.(I)(c) of this rule, the owner or operator shall measure gauge pressure in the gas collection header at each individual well, monthly. If a positive pressure exists, action shall be initiated to correct the exceedance within five (5) calendar days**, except for the three (3) conditions allowed under subsection (4)(B) of this rule**. If negative pressure cannot be achieved without excess air infiltration within fifteen (15) calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within one hundred twenty (120) days of the initial measurement of positive pressure. *[Compliance with this subsection will not be required during the first one hundred eighty (180) days after gas collection system start-up.]* **Any attempted corrective measure shall not cause exceedances of other operational or performance standards.** An alternative timeline for correcting the exceedance may be submitted to the director for approval; *[and]*

4. Owners or operators are not required to expand the system as required in paragraph (6)(A)3. of this rule during the first one hundred eighty (180) days after gas collection system start-up;

5. For the purpose of identifying whether excess air infiltration into the landfill is occurring, the owner or operator shall monitor each well monthly for temperature and nitrogen or oxygen as provided in subsection (4)(C) of this rule. If a well exceeds one (1) of these operating parameters, action shall be initiated to correct the exceedance within five (5) calendar days. If correction of the exceedance cannot be achieved within fifteen (15) calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within one hundred twenty (120) days of the initial exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the director for approval; and

*[4.]***6.** An owner or operator seeking to demonstrate compliance with subpart (3)(B)2.B.(I)(d) of this rule **through the use of a collection system not conforming to the specifications provided in section (10) of this rule** shall provide information satisfactory to the director **and EPA as specified in part (3)(B)2.A.(III) of this rule** demonstrating that off-site migration is being controlled.

(B) For purposes of compliance with subsection (4)(A) of this rule, each owner or operator of a controlled landfill shall place each well or design component as specified in the approved design plan as provided in subparagraph (3)(B)2.A. of this rule. Each well shall be installed no later than sixty (60) days of the date in which the initial solid waste has been in place for a period of—

1. Five (5) years or more if active; or

2. Two (2) years or more if closed or at final grade.

(C) The following procedures shall be used for compliance with the surface methane operational standard as provided in subsection (4)(D) of this rule:

*[(B)]***1.** After installation of the collection system, the owner or operator shall monitor surface concentrations of methane along the entire perimeter of the collection area and *[in]* **along** a *[serpentine]* pattern *[every]* **that traverses the landfill at** thirty (30) meters for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specification provided in *[Method 21 of Appendix A, 40 CFR part 60, except that "methane" shall replace all references to VOC]* **subsection (6)(D) of this rule**.

*[1.]***2.** The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least thirty (30) meters from the perimeter wells.

*[2.]***3.** Surface emission monitoring shall be performed in accordance with section 4.3.1 of Method 21 of *[Appendix A,]* 40 CFR *[part]* 60, **Appendix A,** except that the probe inlet shall be placed within five to ten centimeters (5–10 cm) of the ground. **Monitoring shall be performed during typical meteorological conditions.**

*[3.]***4.** Any reading of five hundred parts per million (500 ppm) or more above background at any location shall be recorded as an exceedance **and the actions specified in subparagraphs (6)(C)4.A. through E. of this rule shall be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of subsection (4)(D) of this rule**.

A. The location of each **monitored** exceedance shall be marked, and the location recorded.

B. Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made**, and the location shall be remonitored** within ten (10) calendar days of detecting the exceedance.

C. *[Any]* **If the remonitoring of the location shows a second exceedance, additional corrective action shall be taken, and the** location *[at which an exceedance has occurred]* shall be *[rechecked]* **monitored again** within ten (10) *[calendar]* days of *[detecting]* the **second** exceedance. *[The location shall be rechecked every ten (10) calendar days until either a reading below five hundred parts per million (500 ppm) is taken or there are three (3) exceedances]* **If the remonitoring shows a third exceedance for the same location, the action specified in subparagraph (6)(C)4.E. of this rule shall be taken, and no further monitoring of that location is required until the action specified in subparagraph (6)(C)4.E. of this rule has been taken**.

D. Any location that initially *[exceeded]* **showed an exceedance but has a methane concentration less than** five hundred parts per million (500 ppm) methane*[, but does not exceed five hundred parts per million (500 ppm) methane]* **above background** at the ten (10)-day *[recheck,]* **remonitoring specified in subparagraph (6)(C)4.B. or C. of this rule** shall be remonitored one (1) month from the initial exceedance. If the *[monthly remonitoring does not exceed five hundred parts per million (500 ppm) methane, then quarterly monitoring can be resumed]* **one (1)-month remonitoring shows a concentration less than five hundred parts per million (500 ppm) above background, no further monitoring of that location is required until the next quarterly monitoring period. If the one (1)-month remonitoring shows an exceedance, the actions specified in subparagraph (6)(C)4.C. or E. of this rule shall be taken**.

E. When any location **equals or** exceeds five hundred parts per million (500 ppm) methane **above background** three (3) times within a quarterly period, a new well or other collection device shall be installed within one hundred twenty (120) calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes**,** or control device, and a corresponding time line for installation may be submitted to the director for written approval.

5. The owner or operator shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.

(D) Each owner or operator seeking to comply with the provisions in subsection (6)(C) of this rule shall comply with the following instrumentation specifications and procedures for surface emission monitoring devices:

1. The portable analyzer shall meet the instrument specifications provided in section 3 of Method 21 of 40 CFR 60, Appendix A, except that "methane" shall replace all references to VOC;

2. The calibration gas shall be methane, diluted to a nominal concentration of five hundred parts per million (500 ppm) in air;

3. To meet the performance evaluation requirements in section 3.1.3 of Method 21 of 40 CFR 60, Appendix A, the instrument evaluation procedures of section 4.4 of Method 21 shall be used; and

4. The calibration procedures provided in section 4.2 of Method 21 of 40 CFR 60, Appendix A shall be followed immediately before commencing a surface monitoring survey.

(E) The provisions of this rule apply at all times, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction shall not exceed five (5) days for collection systems and shall not exceed one (1) hour for treatment or control devices.

*[(6)]***(7)** Monitoring **of Operations**. **Except as provided in part (3)(B)2.A.(II) of this rule—**

(A) Each owner or operator seeking to comply with part (3)(B)2.B.(I) of this rule for an active gas collection system shall install a sampling port and a thermometer or other temperature measuring device, or an access port for temperature measurements at each wellhead and—

1. Measure the gauge pressure in the gas collection header on a monthly basis **as provided in paragraph (6)(A)3. of this rule**;

2. Monitor the nitrogen or oxygen concentration in the landfill gas on a monthly basis **as provided in paragraph (6)(A)5. of this rule**; and

3. Monitor the temperature of the landfill gas on a monthly basis **as provided in paragraph (6)(A)5. of this rule**.

(B) Each owner or operator seeking to comply with subparagraph (3)(B)2.C. of this rule using an enclosed combustion device shall calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment:

1. A temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of plus or minus one *[1]* percent (± 1%) of the temperature being measured expressed in degrees Celsius or plus or minus one-half degree Celsius (± 0.5°C), whichever is greater. A temperature monitoring device is not required for boilers or process heaters with maximum design heat input capacity **equal to or** greater than forty-four (44) megawatts; and

2. A device that records flow to or bypass of the control device. The owner or operator shall either—

A. Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every fifteen (15) minutes; or

B. Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. **A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.**

(C) Each owner or operator seeking to comply with subparagraph (3)(B)2.C. of this rule using an open flare shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:

1. A heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame; and

2. A device that records flow to or bypass of the flare. The owner or operator shall either—

A. Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every fifteen (15) minutes; or

B. Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. **A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line.**

(D) Each owner or operator seeking to comply with subparagraph (3)(B)2.C. of this rule using a device other than an open flare or an enclosed combustion device shall provide information satisfactory to the director **as provided in part (3)(B)2.A.(II) of this rule** describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The director shall review the information and either approve it*[,]* or request that additional information be submitted. **The director may specify additional appropriate monitoring procedures.**

(E) Each owner or operator seeking to install a collection system that does not meet the specifications in section (10) of this rule or seeking to monitor alternative parameters to those required by sections (4) through (7) of this rule shall provide information satisfactory to the director as provided in parts (3)(B)2.A.(II) and (III) of this rule describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The director may specify additional appropriate monitoring procedures.

*[(E)]***(F)** Each owner or operator seeking to comply with subsection *[(5)(B)]* **(6)(C)** of this rule shall monitor surface concentrations of methane according to the instrument specifications **and procedures provided in subsection (6)(D) of this rule**. Any closed landfill that has no **monitored** exceedances of the *[five hundred parts per million (500 ppm) standard]* **operational standard** in three (3) consecutive quarterly monitoring periods may *[change]* **skip** to annual monitoring. Any *[exceedance]* **methane reading** of *[the]* five hundred parts per million (500 ppm) *[standard recorded]* **or more above the background detected** during the annual monitoring *[shall]* returns the monitoring frequency to quarterly *[testing]* **monitoring**.

*[(7)]***(8)** Reporting *[and Record Keeping]* **Requirements**. **Except as provided in part (3)(B)2.A.(II) of this rule—**

(A) **Each owner or operator subject to the requirements of this rule shall submit an initial design capacity report to the director.**

1. The initial design capacity report shall be submitted ninety (90) days from the rule effective date *[and contain the following information:]***.**

2. The initial design capacity report shall contain the following information:

*[1.]***A.** A map or plot of the landfill, providing the size and location of the landfill, and identifying all areas where solid waste may be landfilled according to the provision of the state, local, tribal, or RCRA construction or operating permit; and

*[2.]***B.** The maximum design capacity of the landfill. Where the maximum design capacity is specified in the state or local construction or RCRA permit, a copy of the permit specifying the maximum design capacity may be submitted as part of the report. If the maximum design capacity of the landfill is not specified in the permit, the maximum design capacity shall be calculated using good engineering practices. The calculations shall be provided, along with *[such]* **relevant** parameters *[as depth of solid waste, solid waste acceptance rate, and compaction practices]* as part of the report. The director may request other information as may be necessary to verify the maximum design capacity of the landfill.

*[(B)]***3.** An amended design capacity report shall be submitted to the director providing notification of any increase in the design capacity of the landfill**, whether the increase results from an increase in the permitted area or depth of the landfill, a change in the operating procedures, or any other means which results in an increase in the maximum design capacity of the landfill above one (1.0) million megagrams and one (1.0) million cubic meters**. The amended design capacity report shall be submitted within ninety (90) days of the issuance of an amended construction or operating permit**, or the placement of waste in additional land, or the change in operating procedures which will result in an increase in maximum design capacity, whichever occurs first**.

[(C) The initial NMOC emission rate report shall be submitted within ninety (90) days of the rule effective date and annually thereafter. The initial NMOC emission rate report may be combined with the initial design capacity report required in subsection (7)(A) of this rule. The NMOC emission rate report shall include all the data, calculations, sample reports and measurements used to estimate the annual emission rate. An annual emission rate report will not be required for landfills after installation of a collection and control system.]

(B) Each owner or operator subject to the requirements of this rule shall submit an NMOC emission rate report to the director initially and annually thereafter, except as provided for in subparagraph (8)(B)1.B. or paragraph (8)(B)3. of this rule. The director may request such additional information as may be necessary to verify the reported NMOC emission rate.

1. The NMOC emission rate report shall contain an annual or five (5)-year estimate of the NMOC emission rate calculated using the formula and procedures provided in subsection (5)(A) or (B) of this rule, as applicable.

A. The initial NMOC emission rate report shall be submitted within ninety (90) days of the rule effective date and may

be combined with the initial design capacity report required in subsection (8)(A) of this rule. Subsequent NMOC emission rate reports shall be submitted annually thereafter, except as provided for in subparagraph (8)(B)1.B. and paragraph (8)(B)3. of this rule.

B. If the estimated NMOC emission rate as reported in the annual report to the director is less than fifty (50) megagrams per year in each of the next five (5) consecutive years, the owner or operator may elect to submit an estimate of the NMOC emission rate for the next five (5)-year period in lieu of the annual report. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the five (5) years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the director. This estimate shall be revised at least once every five (5) years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the five (5)-year estimate, a revised five (5)-year estimate shall be submitted to the director. The revised estimate shall cover the five (5)-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.

2. The NMOC emission rate report shall include all the data, calculations, sample reports, and measurements used to estimate the annual or five (5)-year emissions.

3. Each owner or operator subject to the requirements of this rule is exempted from the requirements of paragraphs (8)(B)1. and 2. of this rule after the installation of a collection and control system in compliance with paragraph (3)(B)2. of this rule, during such time as the collection and control system is in operation and in compliance with sections (4) and (6) of this rule.

*[(D)]***(C)** Each owner or operator subject to subparagraph (3)(B)2.A. of this rule shall submit a collection and control system design plan to the director within one (1) year of the NMOC emission rate report, required under subsection *[(7)(C)]* **(8)(B)** of this rule, in which the emission rate **equals or** exceeds twenty-five (25) megagrams per year, except as follows:

1. If the owner or operator elects to recalculate the NMOC emission rate after Tier 2 NMOC sampling and analysis as provided under *[subsection (4)(C)]* **paragraph (5)(A)3.** of this rule and the resulting rate is less than twenty-five (25) megagrams per year, annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than twenty-five (25) megagrams per year or the landfill is closed. The revised NMOC emission rate report, with the recalculated emission rate based on NMOC sampling and analysis, shall be submitted within one hundred eighty (180) days of the first calculated exceedance of twenty-five (25) megagrams per year; and

2. If the owner or operator elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant (k), as provided in Tier 3 in *[subsection (4)(D)]* **paragraph (5)(A)4.** of this rule and the resulting NMOC emission rate is less than twenty-five (25) megagrams per year, annual periodic reporting shall be resumed. The resulting site-specific methane generation rate constant (k) shall be used in the emission rate calculation until such time as the emission*[s]* rate calculation results in an exceedance. The revised NMOC emission rate report, with the site-specific methane generation rate constant (k) shall be submitted to the director within one (1) year of the first calculated emission rate exceeding twenty-five (25) megagrams per year.

*[(E)]***(D)** Each owner or operator of a controlled landfill shall submit a closure report to the director within thirty (30) days of the date the landfill ceases accepting solid waste. The director may request additional information as may be necessary to verify that permanent closure has taken place **in accordance with the requirements of 40 CFR 258.60. If a closure report has been submitted to the director, no additional wastes may be placed into the landfill without filing a notification of modification as described under 40 CFR 60.7(a)(4)**.

*[(F)]***(E)** Each owner or operator of a controlled landfill shall submit an equipment removal report to the director thirty (30) days prior to removal or cessation of operation of the control equipment. The report shall contain all of the following items:

1. A copy of the closure report;

2. A copy of the initial performance test report demonstrating that the fifteen (15)-year minimum control period has expired; and

3. Dated copies of three (3) successive NMOC emission rate reports demonstrating that the landfill is no longer producing twenty-five (25) megagrams or greater of NMOC per year.

4. The director may request such additional information as may be necessary to verify that all of the conditions for removal have been met.

[(G) Each owner or operator of an MSW landfill subject to paragraph (3)(B)2. of this rule shall keep up-to-date, readily accessible on-site records of the following:

1. Maximum design capacity;

2. Control equipment compliance monitoring;

3. A plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector; and

4. Collection and control system exceedances of the operation standards and the location of each exceedance.]

*[(H)]***(F)** Each owner or operator of a landfill seeking to comply with paragraph (3)(B)2. of this rule using an active collection system designed in accordance with subparagraph (3)(B)2.B. of this rule shall submit to the director annual reports of the recorded information in paragraphs *[(7)(H)1.–6.]* **(8)(F)1. through 6.** of this rule. The initial annual report shall be submitted within one hundred *[and]* eighty (180) days of installation and start-up of the collection and control system*[,]* and shall include an initial performance test report **required under 40 CFR 60.8. For enclosed combustion devices and flares, reportable exceedances are defined under subsection (9)(C) of this rule**.

1. Value and length of time for exceedance of applicable parameters monitored under subsections *[(6)(A), (B), (C), and (D)]* **(7)(A), (B), (C), and (D)** of this rule.

2. Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow.

3. Description and duration of all periods when the control device was not operating for a period exceeding one (1) hour and length of time the control device was not operating.

4. All periods when the collection system was not operating in excess of five (5) days.

5. The location of each exceedance of the five hundred parts per million (500 ppm) methane concentration as provided in *[subpart (3)(B)2.B.(III)(c)]* **subsection (4)(D)** of this rule and the concentration recorded at each location for which an exceedance was recorded in the previous month.

6. The date of installation and the location of each well or collection system expansion added.

*[(I)]***(G)** Each owner or operator seeking to comply with subparagraph (3)(B)2.A. of this rule shall include the following information with the initial performance test report **required under 40 CFR 60.8**:

1. A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion;

2. The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based;

3. The documentation of the presence of asbestos or nondegradable material for each area from which collection wells have

been excluded based on the presence of asbestos or nondegradable material;

4. The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on nonproductivity and the calculations of gas generation flow rate for each excluded area;

5. The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill; and

6. The provisions for the control of off-site migration.

[(J) Landfill owners or operators who convert design capacity from volume to mass or mass to volume to demonstrate that landfill design capacity is less than one (1.0) million megagrams or one (1.0) million cubic meters, as provided in the definition of design capacity, shall keep readily accessible, on-site records of the annual recalculation of site-specific density, design capacity, and the supporting documentation. Off-site records may be maintained if they are retrievable within four (4) hours of request. Either paper copy or electronic formats are acceptable.]

(9) Record Keeping Requirements. Except as provided in part (3)(B)2.A.(II) of this rule—

(A) Each owner or operator of an MSW landfill subject to the provisions of subsection (3)(B) of this rule shall keep for at least five (5) years up-to-date, readily accessible, on-site records of the design capacity report which triggered subsection (3)(B) of this rule, the current amount of solid waste in-place, and the year-by-year waste acceptance rate. Records may be maintained off-site if they are retrievable within four (4) hours. A longer period is acceptable if records are needed for an unresolved enforcement action. Either paper copy or electronic formats are acceptable;

(B) Each owner or operator of a controlled landfill shall keep up-to-date, readily accessible records for the life of the control equipment of the data listed in paragraphs (9)(B)1. through 4. of this rule as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of five (5) years. Records of the control device vendor specifications shall be maintained until removal.

1. Where an owner or operator subject to the provisions of this rule seeks to demonstrate compliance with subparagraph (3)(B)2.B. of this rule—

A. The maximum expected gas generation flow rate as calculated in paragraph (6)(A)1. of this rule. The owner or operator may use another method to determine the maximum gas generation flow rate, if the method has been approved by the director and EPA; and

B. The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in paragraph (10)(A)1. of this rule.

2. Where an owner or operator subject to the provisions of this rule seeks to demonstrate compliance with subparagraph (3)(B)2.C. of this rule through use of an enclosed combustion device other than a boiler or process heater with a design heat input capacity equal to or greater than forty-four (44) megawatts—

A. The average combustion temperature measured at least every fifteen (15) minutes and averaged over the same time period of the performance test; and

B. The percent reduction of NMOC determined as specified in part (3)(B)2.C.(II) of this rule achieved by the control device.

3. Where an owner or operator subject to the provisions of this rule seeks to demonstrate compliance with subpart (3)(B)2.C.(II)(a) of this rule through use of a boiler or process heater of any size—a description of the location at which the collected gas vent stream is introduced into the boiler or process heater over the same time period of the performance testing.

4. Where an owner or operator subject to the provisions of this rule seeks to demonstrate compliance with part (3)(B)2.C.(I) of this rule through use of an open flare, the flare type (that is, steam-assisted, air-assisted, or nonassisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in 40 CFR 60.18; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent;

(C) Each owner or operator of a controlled landfill subject to the provisions of this rule shall keep for five (5) years up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored in section (7) of this rule as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded.

1. The following constitute exceedances that shall be recorded and reported under subsection (8)(F) of this rule:

A. For enclosed combustors except for boilers and process heaters with design heat input capacity of forty-four (44) megawatts (150 million British thermal units per hour) or greater, all three (3)-hour periods of operation during which the average combustion temperature was more than twenty-eight degrees Celsius (28 °C) below the average combustion temperature during the most recent performance test at which compliance with subparagraph (3)(B)2.C. of this rule was determined; and

B. For boilers or process heaters, whenever there is a change in the location at which the vent stream is introduced into the flame zone as required under subparagraph (9)(B)3.A. of this rule.

2. Each owner or operator subject to the provisions of this rule shall keep up-to-date, readily accessible continuous records of the indication of flow to the control device or the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines, specified under section (7) of this rule.

3. Each owner or operator subject to the provisions of this rule who uses a boiler or process heater with a design heat input capacity of forty-four (44) megawatts or greater to comply with subparagraph (3)(B)2.C. of this rule shall keep an up-to-date, readily accessible record of all periods of operation of the boiler or process heater. (Examples of such records could include records of steam use, fuel use, or monitoring data collected pursuant to other state or local regulatory requirements.)

4. Each owner or operator seeking to comply with the provisions of this rule by use of an open flare shall keep up-to-date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under subsection (7)(C) of this rule and up-to-date, readily accessible records of all periods of operation in which the flame or flare pilot flame is absent;

(D) Each owner or operator subject to the provisions of this rule shall keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label for each collector.

1. Each owner or operator subject to the provisions of this rule shall keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under subsection (6)(B) of this rule.

2. Each owner or operator subject to the provisions of this rule shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing or nondegradable waste excluded from collection as provided in subparagraph (10)(A)3.A. of this rule as well as any nonproductive

areas excluded from collection as provided in subparagraph (10)(A)3.B. of this rule;

(E) Each owner or operator subject to the provisions of this rule shall keep for at least five (5) years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in section (4) of this rule, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance; and

(F) Landfill owners or operators who convert design capacity from volume to mass or mass to volume to demonstrate that landfill design capacity is less than one (1.0) million megagrams or one (1.0) million cubic meters, as provided in the definition of design capacity, shall keep readily accessible, on-site records of the annual recalculation of site-specific density, design capacity, and the supporting documentation. Off-site records may be maintained if they are retrievable within four (4) hours of request. Either paper copy or electronic formats are acceptable.

(10) Specifications for Active Collection Systems.

(A) Each owner or operator seeking to comply with subparagraph (3)(B)2.A. of this rule shall site active collection wells, horizontal collectors, surface collectors, or other extraction devices at a sufficient density throughout all gas producing areas using the following procedures unless alternative procedures have been approved by the director and EPA as provided in parts (3)(B)2.A.(III) and (IV) of this rule:

1. The collection devices within the interior and along the perimeter areas shall be certified to achieve comprehensive control of surface gas emissions by a professional engineer. The following issues shall be addressed in the design: depths of refuse, refuse gas generation rates and flow characteristics, cover properties, gas system expandability, leachate and condensate management, accessibility, compatibility with filling operations, integration with closure end use, air intrusion control, corrosion resistance, fill settlement, and resistance to the refuse decomposition heat;

2. The sufficient density of gas collection devices determined in paragraph (10)(A)1. of this rule shall address landfill gas migration issues and augmentation of the collection system through the use of active or passive systems at the landfill perimeter or exterior; and

3. The placement of gas collection devices determined in paragraph (10)(A)1. of this rule shall control all gas producing areas, except as provided by subparagraphs (10)(A)3.A. and B. of this rule.

A. Any segregated area of asbestos or nondegradable material may be excluded from collection if documentation is provided as specified under subsection (9)(D) of this rule. The documentation shall provide the nature, date of deposition, location, and amount of asbestos or nondegradable material deposited in the area and shall be provided to the director upon request.

B. Any nonproductive area of the landfill may be excluded from control, provided that the total of all excluded areas can be shown to contribute less than one percent (1%) of the total amount of NMOC emissions from the landfill. The amount, location, and age of the material shall be documented and provided to the director upon request. A separate NMOC emissions estimate shall be made for each section proposed for exclusion, and the sum of all such sections shall be compared to the NMOC emissions estimate for the entire landfill. Emissions from each section shall be computed using the following equation:

$$Q_i = 2\,k\,L_o\,M_i\,(e^{-kt_i})\,(C_{NMOC})\,(3.6 \times 10^{-9})$$

where,

Q_i = NMOC emission rate from the i^{th} section, megagrams per year

k = methane generation rate constant, $year^{-1}$

L_o = methane generation potential, cubic meters per megagram solid waste

M_i = mass of the degradable solid waste in the i^{th} section, megagram

t_i = age of the solid waste in the i^{th} section, years

C_{NMOC} = concentration of nonmethane organic compounds, parts per million by volume

3.6×10^{-9} = conversion factor

C. The values for k and C_{NMOC} determined in field testing shall be used, if field testing has been performed in determining the NMOC emission rate or the radii of influence (the distance from the well center to a point in the landfill where the pressure gradient applied by the blower or compressor approaches zero). If field testing has not been performed, the default values for k, L_o, and C_{NMOC} provided in paragraph (5)(A)1. of this rule or the alternative values from paragraph (5)(A)5. of this rule shall be used. The mass of nondegradable solid waste contained within the given section may be subtracted from the total mass of the section when estimating emissions provided the nature, location, age, and amount of the nondegradable material is documented as provided in subparagraph (10)(A)3.A. of this rule.

(B) Each owner or operator seeking to comply with part (3)(B)2.A.(I) of this rule shall construct the gas collection devices using the following equipment or procedures:

1. The landfill gas extraction components shall be constructed of polyvinyl chloride (PVC), high density polyethylene (HDPE) pipe, fiberglass, stainless steel, or other nonporous corrosion resistant material of suitable dimensions to—convey projected amounts of gases; withstand installation, static, and settlement forces; and withstand planned overburden or traffic loads. The collection system shall extend as necessary to comply with emission and migration standards established in this rule. Collection devices such as wells and horizontal collectors shall be perforated to allow gas entry without head loss sufficient to impair performance across the intended extent of control. Perforations shall be situated with regard to the need to prevent excessive air infiltration;

2. Vertical wells shall be placed so as not to endanger underlying liners and shall address the occurrence of water within the landfill. Holes and trenches constructed for piped wells and horizontal collectors shall be of sufficient cross-section so as to allow for their proper construction and completion including, for example, centering of pipes and placement of gravel backfill. Collection devices shall be designed so as not to allow indirect short circuiting of air into the cover or refuse into the collection system or gas into the air. Any gravel used around pipe perforations should be of a dimension so as not to penetrate or block perforations; and

3. Collection devices may be connected to the collection header pipes below or above the landfill surface. The connector assembly shall include a positive closing throttle valve, any necessary seals and couplings, access couplings, and at least one (1) sampling port. The collection devices shall be constructed of PVC, HDPE, fiberglass, stainless steel, or other nonporous material of suitable thickness.

(C) Each owner or operator seeking to comply with part (3)(B)2.A.(I) of this rule shall convey the landfill gas to a control system in compliance with subparagraph (3)(B)2.C. of this rule through the collection header pipe(s). The gas mover equipment shall be sized to handle the maximum gas generation flow rate expected over the intended use period of the gas moving equipment using the following procedures:

1. For existing collection systems, the flow data shall be used to project the maximum flow rate. If no flow data exists, the procedures in paragraph (10)(C)2. of this rule shall be used; and

2. For new collection systems, the maximum flow rate shall be in accordance with paragraph (6)(A)1. of this rule.

*AUTHORITY: section 643.050, RSMo [Supp. 1998] **2000**. Original rule filed May 15, 1996, effective Dec. 30, 1996. Amended: Filed Oct. 7, 1999, effective July 30, 2000. Amended: Filed Sept. 26, 2011.*

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars ($500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed amendment will begin at 9:00 a.m., December 8, 2011. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded any interested person. Interested persons, whether or not heard, may submit a written or email statement of their views until 5:00 p.m., December 15, 2011. Written comments shall be sent to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176. Email comments shall be sent to apcprulespn@dnr.mo.gov.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 6—Air Quality Standards, Definitions, Sampling and Reference Methods and Air Pollution Control Regulations for the Entire State of Missouri

PROPOSED AMENDMENT

10 CSR 10-6.020 Definitions and Common Reference Tables. The commission proposes to amend section (1) and subsections (2)(C), (2)(E), (2)(M), (2)(N), and (2)(P). If the commission adopts this rule action, it will be the department's intention to submit this rule amendment to the U.S. Environmental Protection Agency to replace the current rule that is in the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Environmental Regulatory Agenda website, www.dnr.mo.gov/regs/index.html.

*PURPOSE: This rule defines key words and expressions used in chapters 1 through 6 and provides common reference tables. The purpose of this rulemaking is to update the references to the area specific indirect heating rules with the new statewide consolidated indirect heating rule. At the same time, particulate matter definitions are being added for consistency with federal definitions and a reference to rule 10 CSR 10-6.010 is being removed since it is redundant. The evidence supporting the need for this proposed rulemaking, per section 536.016, RSMo, is new rule 10 CSR 10-6.405, Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used For Indirect Heating which replaces the area specific indirect heating rules and a **Federal Register** Notice dated December 21, 2010 which incorporates updated definitions of the various forms of particulate matter.*

(1) Applicability. This rule shall apply throughout Missouri defining terms and expressions used in all Title 10, Division 10—Air Conservation Commission rules. **If a definition in this rule conflicts with a definition in any other rule, the definition in 10 CSR 10-6.020 shall take precedence with the exception of definitions pertaining to 10 CSR 10-6.060.**

(2) Definitions.

(C) All terms beginning with "C."

1. CAA—The Clean Air Act, as amended; see also Act.

2. Camouflage coating—A coating, used principally by the military, to conceal equipment from detection.

3. Capacity factor—Ratio (expressed as a percentage) of a power generating unit's actual annual electric output (expressed in MWe-hr) divided by the unit's nameplate capacity multiplied by eight thousand seven hundred sixty (8,760) hours.

4. Capture device—A hood, enclosed room, floor sweep, or other means of collecting solvent emissions or other pollutants into a duct so that the pollutant can be directed to a pollution control device such as an incinerator or carbon adsorber.

5. Capture efficiency—The fraction of all organic vapors or other pollutants generated by a process that is directed to a control device.

6. CARB—California Air Resources Board, 2020 L Street, PO Box 2815, Sacramento, CA 95812.

7. Carbon adsorption system—A device containing adsorbent material (for example, activated carbon, aluminum, silica gel); an inlet and outlet for exhaust gases; and a system to regenerate the saturated adsorbent. The carbon adsorption system must provide for the proper disposal or reuse of all volatile organic compounds (VOC) adsorbed.

8. Cargo tank—A delivery tank truck or railcar which is loading gasoline or which has loaded gasoline on the immediately-previous load.

9. Catalytic incinerator—A control device using a catalyst to allow combustion to occur at a lower temperature.

10. Category I nonfriable ACM—Asbestos-containing packings, gaskets, resilient floor covering, and asphalt roofing products containing more than one percent (1%) asbestos as determined using the method specified in 40 CFR 763, subpart E, Appendix E, section 1, Polarized Light Microscopy.

11. Category II nonfriable ACM—Any material, excluding category I nonfriable ACM, containing more than one percent (1%) asbestos as determined using the method specified in 40 CFR 763, subpart E, Appendix E, section 1, Polarized Light Microscopy that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

12. Caulking and smoothing compound—A semi-solid material that is used to aerodynamically smooth exterior vehicle surfaces or fill cavities such as bolt hole accesses. A material shall not be classified as a caulking and smoothing compound if it can be classified as a sealant.

13. Cause or contribute to a new violation—A federal action that—

A. Causes a new violation of a national ambient air quality standard (NAAQS) at a location in a nonattainment or maintenance area which would otherwise not be in violation of the standard during the future period in question if the federal action were not taken; or

B. Contributes, in conjunction with other reasonably foreseeable actions, to a new violation of a NAAQS at a location in a nonattainment or maintenance area in a manner that would increase the frequency or severity of the new violation.

14. Caused by, as used in the terms "direct emissions" and "indirect emissions"—Emissions that would not otherwise occur in the absence of the federal action.

15. Ceramic tile installation adhesive—An adhesive intended by the manufacturer for use in the installation of ceramic tiles.

16. Certified product data sheet—Documentation furnished by a coating supplier or an outside laboratory that provides the VOC content by percent weight, the solids content by percent weight, and density of a finishing material, strippable booth coating, or solvent, measured using the EPA Method 24*[,]* or an equivalent or alternative method (or formulation data, if approved by the director). The purpose of the certified product data sheet is to assist the affected source

in demonstrating compliance with the emission limitations. Therefore, the VOC content should represent the maximum VOC emission potential of the finishing material, strippable booth coating, or solvent.

17. Charcoal kiln—Any closed structure used to produce charcoal by controlled burning (pyrolysis) of wood. Retorts and furnaces used for charcoal production are not charcoal kilns.

18. Charcoal kiln control system—A combination of an emission control device and connected charcoal kiln(s).

19. Chemical milling maskant—A coating that is applied directly to aluminum components to protect surface areas when chemical milling the component with a Type I or Type II etchant. Type I chemical milling maskants are used with a Type I etchant, and Type II chemical milling maskants are used with a Type II etchant. This definition does not include bonding maskants, critical use and line sealer maskants, and seal coat maskants. Maskants that must be used with a combination of Type I or Type II etchants and any of the above types of maskants are also not included in this definition.

20. Chemotherapeutic waste—Waste material resulting from the production or use of antineoplastic agents used for the purpose of stopping or reversing the growth of malignant cells.

21. Circumvention—Building, erecting, installing, or using any article, machine, equipment, process, or method which, when used, would conceal an emission that would otherwise constitute a violation of an applicable standard or requirement. That concealment includes, but is not limited to, the use of gaseous adjutants to achieve compliance with a visible emissions standard, and the piecemeal carrying out of an operation to avoid coverage by a standard that applies only to operations larger than a specific size.

22. Class I hardboard—A hardboard panel that meets the specifications of Voluntary Product Standard PS 59-73 as approved by the American National Standards Institute.

23. Class II finish—A finish applied to hardboard panels that meets the specifications of Voluntary Product Standard PS 59-73 as approved by the American National Standards Institute.

24. Clean room—An uncontaminated area or room which is a part of the worker decontamination enclosure system.

25. Clean scanning—The illegal act of connecting the On-Board Diagnostics (OBD) cable or wireless transmitter to the data link connector of a vehicle other than the vehicle photographed and identified on the emissions VIR for the purpose of bypassing the required OBD test procedure.

26. Cleaning operations—processes of cleaning products, product components, tools, equipment, or general work areas during production, repair, maintenance or servicing, including, but not limited to, spray gun cleaning, spray booth cleaning, large and small manufactured component cleaning, parts cleaning, equipment cleaning, line cleaning, floor cleaning, and tank cleaning, at sources with emission units.

27. Cleaning solution—A liquid solvent used to remove printing ink and debris from the surfaces of the printing press and its parts. Cleaning solutions include, but are not limited to, blanket wash, roller wash, metering roller cleaner, plate cleaner, impression cylinder washes, and rubber rejuvenators.

28. Clear coat—A coating which lacks color and opacity or is transparent and uses the undercoat as a reflectant base or undertone color. This term also includes corrosion preventative coatings used for the interior of drums or pails.

29. Clear wood finishes—Clear and semi-transparent topcoats applied to wood substrates to provide a transparent or translucent film.

30. Clinker—The product of a Portland cement kiln from which finished cement is manufactured by milling and grinding.

31. Closed container—A container with a cover fastened in place so that it will not allow leakage or spilling of the contents.

32. Closed landfill—A landfill in which solid waste is no longer being placed and in which no additional wastes will be placed without first filing a notification of modification as prescribed under 40 CFR 60.7(a)(4). Once a notification of modification has been filed, and additional solid waste is placed in the landfill, the landfill is no longer closed.

33. Closure—That point in time when a landfill becomes a closed landfill.

34. Coating—A protective, decorative, or functional material applied in a thin layer to a surface. Such materials include, but are not limited to, paints, topcoats, varnishes, sealers, stains, washcoats, basecoats, inks, and temporary protective coatings. For the purposes of 10 CSR 10-5.330, coating does not include ink used in printing operations regulated under 10 CSR 10-5.340 and 10 CSR 10-5.442.

35. Coating applicator—An apparatus used to apply a surface coating.

36. Coating line—One (1) or more apparatus or operations which include a coating applicator, flash-off area, and oven where a surface coating is applied, dried, or cured, or a combination of these.

37. Coating solids (or "solids")—The part of the coating that remains after the coating is dried or cured; solids content is determined using data from EPA Method 24*[,]* or an alternative or equivalent method.

38. Co-fired combustor—A unit combusting hospital waste and/or medical/infectious waste with other fuels or wastes and subject to an enforceable requirement limiting the unit to combusting a fuel feed stream, ten percent (10%) or less of the weight of which is comprised, in aggregate, of hospital waste and medical/infectious waste as measured on a calendar-quarter basis. For purposes of this definition, pathological waste, chemotherapeutic waste, and low-level radioactive waste are considered "other wastes" when calculating the percentage of hospital waste and medical/infectious waste combusted.

39. Cogenerator—For the purposes of paragraph (1)(A).3. of 10 CSR 10-6.364 only, cogenerator is a facility which—

A. For a unit that commenced construction on or prior to November 15, 1990, was constructed for the purpose of supplying equal to or less than one-third (1/3) its potential electrical output capacity or equal to or less than two hundred nineteen thousand (219,000) MWe-hrs actual electric output on an annual basis to any utility power distribution system for sale (on a gross basis). If the purpose of construction is not known, the administrator will presume that actual operation from 1985 through 1987 is consistent with such purpose. However, if in any three (3)-calendar-year period after November 15, 1990, such unit sells to a utility power distribution system an annual average of more than one-third (1/3) of its potential electrical output capacity and more than two hundred nineteen thousand (219,000) MWe-hrs actual electric output (on a gross basis), that unit shall be an affected unit, subject to the requirements of the acid rain program; or

B. For units which commenced construction after November 15, 1990, supplies equal to or less than one-third (1/3) its potential electrical output capacity or equal to or less than two hundred nineteen thousand (219,000) MWe-hrs actual electric output on an annual basis to any utility power distribution system for sale (on a gross basis). However, if in any three (3)-calendar-year period after November 15, 1990, such unit sells to a utility power distribution system an annual average of more than one-third (1/3) of its potential electrical output capacity and more than two hundred nineteen thousand (219,000) MWe-hrs actual electric output (on a gross basis), that unit shall be an affected unit, subject to the requirements of the acid rain program.

40. Cold cleaner—Any device or piece of equipment that contains and/or uses liquid solvent, into which parts are placed to remove soils from the surfaces of the parts or to dry the parts. Cleaning machines that contain and use heated nonboiling solvent to clean the parts are classified as cold cleaning machines.

41. Cold rolling mill—Batch process aluminum sheet rolling mill with a preset gap between the work rolls used to reduce the sheet thickness. The process generally occurs at temperatures below two

hundred sixty-five degrees Fahrenheit (265 °F). A cold rolling mill is used mainly for the production of aluminum sheet at gauges between three-tenths of one inch to two-thousands of one inch (0.3" to 0.002"). Reductions to finish gauge may occur in one (1) pass or several passes.

42. Combined cycle system—A system comprised of one (1) or more combustion turbines, heat recovery steam generators, and steam turbines configured to improve overall efficiency of electricity generation or steam production.

43. Combustion turbine—An enclosed fossil or other fuel-fired device that is comprised of a compressor, a combustor, and a turbine and in which the flue gas resulting from the combustion of fuel in the combustor passes through the turbine, rotating the turbine.

44. Commenced—An owner or operator has undertaken a continuous program of construction or modification, has entered into a binding agreement, or has contractual obligation to undertake and complete within a reasonable time a continuous program of construction or modification.

45. Commenced commercial operation—With regard to a unit that serves a generator, to have begun to produce steam, gas, or other heated medium used to generate electricity for sale or use, including test generation. For the purpose of 10 CSR 10-6.360 only, the date of commencement of commercial operation shall be as follows:

A. Except as provided in subsection (1)(E) of 10 CSR 10-6.360, for a unit that is a NO_x budget unit under section (1) of 10 CSR 10-6.360 on the date the unit commences commercial operation, such date shall remain the unit's date of commencement of commercial operation even if the unit is subsequently modified, reconstructed, or repowered; and

B. Except as provided in subsections (1)(E) or (3)(H) of 10 CSR 10-6.360, for a unit that is not a NO_x budget unit under section (1) of 10 CSR 10-6.360 on the date the unit commences commercial operation, the date the unit becomes a NO_x budget unit under section (1) of 10 CSR 10-6.360 shall be the unit's date of commencement of commercial operation.

46. Commenced operation—The initial setting into operation of any air pollution control equipment or process equipment. For the purpose of 10 CSR 10-6.360 only, commenced operation is to have begun any mechanical, chemical, or electronic process, including, with regard to a unit, start-up of a unit's combustion chamber and the date of commencement of operation shall be as follows:

A. Except as provided in subsection (1)(E) of 10 CSR 10-6.360, for a unit that is a NO_x budget unit under section (1) of 10 CSR 10-6.360 on the date of commencement of operation, such date shall remain the unit's date of commencement of operation even if the unit is subsequently modified, reconstructed, or repowered; and

B. Except as provided in subsection (1)(E) of 10 CSR 10-6.360 or subsection (3)(H) of 10 CSR 10-6.360, for a unit that is not a NO_x budget unit under section (1) of 10 CSR 10-6.360 on the date of commencement of operation, the date the unit becomes a NO_x budget unit under section (1) of 10 CSR 10-6.360 shall be the unit's date of commencement of operation.

47. Commercial HMIWI—An HMIWI which offers incineration services for hospital/medical/infectious waste generated offsite by firms unrelated to the firm that owns the HMIWI.

48. Commercial solid waste—All types of solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities, excluding residential and industrial wastes.

49. Commercial vehicle—Any motor vehicle, other than a passenger vehicle, and any trailer, semitrailer, or pole trailer drawn by such motor vehicle, that is designed, used, and maintained for the transportation of persons or property for hire, compensation, profit, or in the furtherance of a commercial enterprise.

50. Commercial/Institutional boiler—A boiler used in commercial establishments or institutional establishments such as medical centers, institutions of higher education, hotels, and laundries to provide electricity, steam, and/or hot water.

51. Commission—The Missouri Air Conservation Commission established pursuant to section 643.040, RSMo.

52. Common stack—A single flue through which emissions from two (2) or more NO_x units are exhausted.

53. Compliance account—A NO_x allowance tracking system account, established for an affected unit, in which the NO_x allowance allocations for the unit are initially recorded and in which are held NO_x allowances available for use by the unit for a control period for the purpose of meeting the unit's NO_x emission limitation.

54. Compliance certification—A submission to the director or the administrator, that is required to report a NO_x budget source's or a NO_x budget unit's compliance or noncompliance with stated requirements and that is signed by the NO_x authorized account representative in accordance with 10 CSR 10-6.360.

55. Compliance cycle—The two (2)-year duration during which a subject vehicle in the enhanced emissions inspection program area is required to comply with sections 643.300–643.355, RSMo.

A. For private-entity vehicles, the compliance cycle begins sixty (60) days prior to the subject vehicle's registration and biennial license plate tab expiration.

B. For public-entity vehicles, the compliance cycle begins on January 1 of each even-numbered calendar year. The compliance cycle ends on December 31 of each odd-numbered calendar year.

56. Compliant coating—A finishing material or strippable booth coating that meets the emission limits as specified.

57. Condensate (hydrocarbons)—A hydrocarbon liquid separated from natural gas which condenses due to changes in the temperature or pressure, or both, and remains liquid at standard conditions.

58. Condenser—Any heat transfer device used to liquefy vapors by removing their latent heats of vaporization including, but not limited to, shell and tube, coil, surface, or contact condensers.

59. Conference, conciliation, and persuasion—A process of verbal or written communications, including but not limited to meetings, reports, correspondence, or telephone conferences between authorized representatives of the department and the alleged violator. The process shall, at minimum, consist of one (1) offer to meet with the alleged violator tendered by the department. During any such meeting, the department and the alleged violator shall negotiate in good faith to eliminate the alleged violation and shall attempt to agree upon a plan to achieve compliance.

60. Confidential business information—Secret processes, secret methods of manufacture or production, trade secrets**,** and other information possessed by a business that, under existing legal concepts, the business has a right to preserve as confidential*[,]* and to limit its use by not disclosing it to others in order that the business may obtain or retain business advantages it derives from its rights in the information. For the purpose of 10 CSR 10-6.300, confidential business information (CBI) is information that has been determined by a federal agency, in accordance with its applicable regulations, to be a trade secret, or commercial or financial information obtained from a person and privileged or confidential and is exempt from required disclosure under the Freedom of Information Act (5 U.S.C. 552(b)(4)).

61. Conformity determination—The evaluation (made after an applicability analysis is completed) that a federal action conforms to the applicable implementation plan and meets the requirements of rule 10 CSR 10-6.300.

62. Conformity evaluation—The entire process from the applicability analysis through the conformity determination that is used to demonstrate that the federal action conforms to the requirements of rule 10 CSR 10-6.300.

63. Conservation vent—Any valve designed and used to reduce evaporation losses of VOC by limiting the amount of air admitted to, or vapors released from, the vapor space of a closed storage vessel.

64. Construction—Fabricating, erecting, reconstructing, or installing a source operation. Construction shall include installation of building supports and foundations, laying of underground pipe work, building of permanent storage structures, and other construction activities related to the source operation.

65. Contact adhesive—An adhesive that—

A. Is designed for application to both surfaces to be bonded together;

B. Is allowed to dry before the two (2) surfaces are placed in contact with each other;

C. Forms an immediate bond that is impossible, or difficult, to reposition after both adhesive-coated surfaces are placed in contact with each other; and

D. Does not need sustained pressure or clamping of surfaces after the adhesive-coated surfaces have been brought together using sufficient momentary pressure to establish full contact between both surfaces.

Contact adhesive does not include rubber cements that are primarily intended for use on paper substrates. Contact adhesive also does not include vulcanizing fluids that are designed and labeled for tire repair only.

66. Containment—The area where an asbestos abatement project is conducted. The area must be enclosed either by a glove bag or plastic sheeting barriers.

67. Continuing program responsibility—A federal agency has responsibility for emissions caused by actions it takes itself or actions of non-federal entities that the federal agency, in exercising its normal programs and authorities, approves, funds, licenses, or permits, provided the agency can impose conditions on any portion of the action that could affect the emissions.

68. Continuous coater—A finishing system that continuously applies finishing materials onto furniture parts moving along a conveyor system. Finishing materials that are not transferred to the part are recycled to the finishing material reservoir. Several types of application methods can be used with a continuous coater including spraying, curtain coating, roll coating, dip coating, and flow coating.

69. Continuous emissions monitoring system (CEMS)—Monitoring system for continuously measuring and recording the emissions of a pollutant from an affected facility. For the purposes of 10 CSR 10-6.350 and 10 CSR 10-6.360, CEMS means the equipment required to sample, analyze, measure, and provide, by readings taken at least once every fifteen (15) minutes of the measured parameters, a permanent record of nitrogen oxides emissions, expressed in tons per hour for nitrogen oxides. The following systems are component parts included, consistent with 40 CFR 75, in a continuous emissions monitoring system:

A. Flow monitor;

B. Nitrogen oxides pollutant concentration monitors;

C. Diluent gas monitor (oxygen or carbon dioxide) when such monitoring is required;

D. A continuous moisture monitor when such monitoring is required; and

E. An automated data acquisition and handling system.

70. Continuous HMIWI—An HMIWI that is designed to allow waste charging and ash removal during combustion.

71. Continuous opacity monitoring system (COMS)—All equipment required to continuously measure and record the opacity of emissions within a stack or duct. COMS consists of sample interface, analyzer, and data recorder components and usually includes, at a minimum, transmissometers, transmissometer control equipment, and data transmission, acquisition, and recording equipment.

72. Continuous program to implement—The federal agency has started the action identified in the plan and does not stop the actions for more than an eighteen (18)-month period, unless it can demonstrate that such a stoppage was included in the original plan.

73. Continuous recorder—A data recording device recording an instantaneous data value at least once every fifteen (15) minutes.

74. Contractor—The state contracted company who shall implement the decentralized motor vehicle emissions inspection program as specified in sections 643.300–643.355, RSMo, and the state contracted company who shall implement the acceptance test procedure.

75. Control device—Any equipment that reduces the quantity of a pollutant that is emitted to the air. The device may destroy or secure the pollutant for subsequent recovery. Includes, but is not limited to, incinerators, carbon adsorbers, and condensers.

76. Control device efficiency—The ratio of the pollution released by a control device and the pollution introduced to the control device, expressed as a fraction.

77. Control period—The period beginning May 1 of a calendar year and ending on September 30 of the same calendar year.

78. Control system—The combination of capture and control devices used to reduce emissions to the atmosphere.

79. Controlled landfill—Any landfill at which collection and control systems are required under this rule as a result of the nonmethane organic compounds emission rate. The landfill is considered controlled if a collection and control system design plan is submitted in compliance with the applicable rule.

80. Conventional air spray—A spray coating method in which the coating is atomized by mixing it with compressed air at an air pressure greater than ten (10) pounds per square inch (gauge) at the point of atomization. Airless and air-assisted airless spray technologies are not conventional air spray because the coating is not atomized by mixing it with compressed air. Electrostatic spray technology is also not considered conventional air spray because an electrostatic charge is employed to attract the coating to the workpiece.

81. Conveyorized degreaser—A type of degreaser in which the parts are loaded continuously.

82. Cove base—A flooring trim unit, generally made of vinyl or rubber, having a concave radius on one (1) edge and a convex radius on the opposite edge that is used in forming a junction between the bottom wall course and the floor or to form an inside corner.

83. Cove base installation adhesive—An adhesive intended by the manufacturer to be used for the installation of cove base or wall base on a wall or vertical surface at floor level.

84. Criteria pollutant or standard—Any pollutants for which there is established a NAAQS at 40 CFR 50 *[and air quality standards have been established in 10 CSR 10-6.010]*.

85. Crude oil—A naturally-occurring mixture which consists of hydrocarbons and sulfur, nitrogen, or oxygen derivatives, or a combination of these, of hydrocarbons which is a liquid at standard conditions.

86. Custody transfer—The transfer of produced crude oil or condensate, or both, after processing or treating, or both, in the producing operations, from storage tanks or automatic transfer facilities to pipelines or any other forms of transportation.

87. Cutback asphalt—Any asphaltic cement that has been liquefied by blending with VOC liquid diluents.

88. Cyanoacrylate adhesive—An adhesive with a cyanoacrylate content of at least ninety-five percent (95%) by weight.

89. Cyclone boiler—A boiler with a horizontal, cylindrical furnace that burns crushed, rather than pulverized, coal.

90. Cyclone EGU—An electric generating unit (EGU) with a fossil-fuel-fired boiler consisting of one (1) or more horizontal cylindrical barrels that utilize tangentially applied air to produce a swirling combustion pattern of coal and air.

(E) All terms beginning with "E."

1. Early reduction credit (ERC)—NO_x emission reductions in the years 2000, 2001, 2002, and 2003 that are below the limits specified in subsection (3)(A) of 10 CSR 10-6.350; ERCs will only be available for use during the years of 2004 and 2005. When calculating ERCs or performing calculations involving ERCs, ERCs shall always be rounded down to the nearest ton.

2. Economic benefit—Any monetary gain which accrues to a violator as a result of noncompliance.

3. E85—Ethanol-gasoline blend containing eighty-five percent (85%) denatured ethanol and fifteen percent (15%) gasoline that also meets the standard specification requirements of the most recent update to ASTM D 5798.

4. Electric dissipating coating—A coating that rapidly dissipates a high-voltage electric charge.

5. Electric generating unit (EGU)—Any fossil-fuel-fired boiler

or turbine that serves an electrical generator with the potential to use more than fifty percent (50%) of the usable energy from the boiler or turbine to generate electricity.

6. Electric-insulating and thermal conducting coating—A coating that displays an electrical insulation of at least one thousand (1,000) volts DC per mil on a flat test plate and an average thermal conductivity of at least twenty-seven hundredths British thermal units (0.27 Btu) per hour-foot-degree-Fahrenheit.

7. Electric-insulating varnish—A non-convertible-type coating applied to electric motors, components of electric motors, or power transformers, to provide electrical, mechanical, and environmental protection or resistance.

8. Electrodeposition primer (EDP)—A protective, corrosion-resistant waterborne primer on exterior and interior surfaces that provides thorough coverage of recessed areas. It is a dip coating method that uses an electrical field to apply or deposit the conductive coating onto the part. The object being painted acts as an electrode that is oppositely charged from the particles of paint in the dip tank.

9. Electronic component—All portions of an electronic assembly, including, but not limited to, circuit board assemblies, printed wire assemblies, printed circuit boards, soldered joints, ground wires, bus bars, and associated electronic component manufacturing equipment such as screens and filters.

10. Electrostatic preparation coat—A coating that is applied to a plastic part solely to provide conductivity for the subsequent application of a prime, topcoat, or other coating through the use of electrostatic application methods. An electrostatic preparation coat is clearly identified as an electrostatic preparation coat on its material safety data sheet.

11. Emergency—A situation where extremely quick action on the part of the federal agencies involved is needed and where the timing of such federal activities makes it impractical to meet the requirements of 10 CSR 10-6.300, such as natural disasters like hurricanes or earthquakes, civil disturbances such as terrorist acts, and military mobilizations.

12. Emergency asbestos abatement project—An asbestos abatement project that must be undertaken immediately to prevent imminent severe human exposure or to restore essential facility operation.

13. Emergency standby boiler—For the purpose of 10 CSR 10-5.510 only, a boiler operated during times of loss of primary power at the installation that is beyond the control of the owner or operator, during routine maintenance, to provide steam for building heat; or to protect essential equipment.

14. Emergency standby engine—For the purpose of 10 CSR 10-6.390, an internal combustion engine used only when normal electrical power or natural gas service is interrupted or for the emergency pumping of water for either fire protection or flood relief. An emergency standby engine may not be operated to supplement a primary power source when the load capacity or rating of the primary power source has been either reached or exceeded.

15. Emergency standby generator—For the purpose of 10 CSR 10-6.350 only, a generator operated only during times of loss of primary power at the facility that is beyond the control of the owner or operator of the facility or during routine maintenance.

16. Emergency stationary combustion turbine—For the purpose of 10 CSR 10-5.510 only, a stationary combustion turbine operated only during times of loss of primary power at the facility that is beyond the control of the owner or operator of the facility or during routine maintenance.

17. Emergency stationary internal combustion engine—For the purpose of 10 CSR 10-5.510 only, a stationary internal combustion engine used to drive pumps, aerators, or other equipment only during times of loss of primary power at the facility that is beyond the control of the owner or operator of the facility or during routine maintenance.

18. EMI/RFI shielding—A coating used on electrical or electronic equipment to provide shielding against electromagnetic interference (EMI), radio frequency interference (RFI), or static discharge.

19. Emission(s)—The release or discharge, whether directly or indirectly, into the atmosphere of one (1) or more air contaminants. For the purposes of 10 CSR 10-6.360 only, air pollutants exhausted from a unit or source into the atmosphere, as measured, recorded, and reported to the administrator by the NO_x authorized account representative and as determined by the administrator.

20. Emission data—

A. The identity, amount, frequency, concentration, or other characteristics (related to air quality) of any air contaminant which—

(I) Has been emitted from an emission unit;

(II) Results from any emission by the emissions unit;

(III) Under an applicable standard or limitation, the emissions unit was authorized to emit; or

(IV) Is a combination of any of the parts (2)(E)20.A.(I), (II), or (III) of this rule;

B. The name, address (or description of the location), and the nature of the emissions unit necessary to identify the emission units including a description of the device, equipment, or operation constituting the emissions unit; and

C. The results of any emission testing or monitoring required to be reported under any rules of the commission.

21. Emission events—Discrete venting episodes that may be associated with a single unit of operation.

22. Emission ***i***nventory—A listing of information on the location, type of source, type and quantity of pollutant emitted, as well as other parameters of the emissions;

23. Emission limitation—A regulatory requirement, permit condition, or consent agreement which limits the quantity, rate, or concentration of emissions on a continuous basis, including any requirement which limits the level of opacity, prescribes equipment, sets fuel specifications, or prescribes operation or maintenance procedures for an installation to assure continuous emission reduction.

24. Emission offsets—Emissions reductions which are quantifiable, consistent with the applicable implementation plan attainment and reasonable further progress demonstrations, surplus to reductions required by, and credited to, other applicable implementation plan provisions, enforceable under both state and federal law, and permanent within the time frame specified by the program. Emissions reductions intended to be achieved as emissions offsets must be monitored and enforced in a manner equivalent to that under EPA's new source review requirements.

25. Emission rate cutoff—The threshold annual emission rate to which a landfill compares its estimated emission rate to determine if control under the applicable regulation is required.

26. Emission reduction credit (ERC)—A certified emission reduction that is created by eliminating future emissions and expressed in tons per year. One (1) ERC is equal to one (1) ton per year. An ERC must be real, properly quantified, permanent, and surplus.

27. Emissions budgets—Those portions of the total allowable emissions defined in an EPA-approved revision to the applicable implementation plan for a certain date for the purpose of meeting reasonable further progress milestones or attainment or maintenance demonstrations, for any criteria pollutant or its precursors, specifically allocated by the applicable implementation plan to mobile sources, to any stationary source or class of stationary sources, to any federal action or class of action, to any class of area sources, or to any subcategory of the emissions inventory. The allocation system must be specific enough to assure meeting the criteria of section 176(c)(1)(B) of the CAA. An emissions budget may be expressed in terms of an annual period, a daily period, or other period established in the applicable implementation plan.

28. Emissions inspection—Tests performed on a vehicle in order to evaluate whether the vehicle's emissions control components are present and properly functioning.

29. Emissions report—A report that satisfies the provisions of

this rule and is either a—

A. Full emissions report—Contains all required data elements for current reporting year; or

B. Reduced reporting form—Represents data elements and emissions from the last full emissions report.

30. Emissions unit—Any part or activity of an installation that emits or has the potential to emit any regulated air pollutant or any pollutant listed under section 112(b) of the Act. This term is not meant to alter or affect the definition of the term unit for the purposes of Title IV of the Act. For the purpose of 10 CSR 10-6.410 only, emissions unit is any part of a source or activity at a source that emits or would have the potential to emit criteria pollutants or their precursors.

31. Emulsified asphalt—An emulsion of asphalt cement and water that contains a small amount of an emulsifying agent, as specified in ASTM D (977-77) or ASTM D (2397-73).

32. Enamel—A surface coating that is a mixture of paint and varnish, having vehicles similar to those used for varnish, but also containing pigments.

33. Enclosed combustor—An enclosed firebox which maintains a relatively-constant limited peak temperature generally using a limited supply of combustion air. An enclosed flare is considered an enclosed combustor.

34. End exterior coating—A coating applied to the exterior end of a can to provide protection to the metal.

35. End seal compound—The gasket forming coating used to attach the end pieces of a can during manufacturing or after filling with contents.

36. Energized electrical system—Any alternating current (AC) or direct current (DC) electrical circuit on an assembled aircraft once electrical power is connected, including interior passenger and cargo areas, wheel wells, and tail sections.

37. Energy Information Administration—The Energy Information Administration of the United States Department of Energy.

38. Engine rating—The output of an engine as determined by the engine manufacturer and listed on the nameplate of the unit, regardless of any derating.

39. Equipment—Any item that is designed or intended to perform any operation and includes any item attached to it to assist in the operation.

40. EPA—The U.S. Environmental Protection Agency.

41. EPDM roof membrane—A prefabricated single sheet of elastomeric material composed of ethylene propylene diene monomer (EPDM) and that is field-applied to a building roof using one (1) layer of membrane material.

42. Equipment leak—Emissions of volatile organic compounds from pumps, valves, flanges, or other equipment used to transfer or apply finishing materials or organic solvents.

43. Equivalent method—Any method of sampling and analyzing for an air pollutant that has been demonstrated to the director's satisfaction to have a consistent and quantitatively-known relationship to the reference method under specific conditions.

44. Etching filler—A coating for metal that contains less than twenty-three percent (23%) solids by weight and at least one-half percent (0.5%) acid by weight, and is used instead of applying a pretreatment coating followed by a primer.

45. Excess emissions—The emissions which exceed the requirements of any applicable emission control regulation.

46. Excessive concentration—

A. For installations seeking credit for reduced ambient pollutant concentrations from stack height exceeding that defined in subparagraph (2)(G)15.B. of this rule an excessive concentration is a maximum ground level concentration due to emissions from a stack due in whole or part to downwash, wakes, or eddy effects produced by nearby structures or nearby terrain features which are at least forty percent (40%) in excess of the maximum concentration experienced in the absence of the downwash, wakes, or eddy effects, and that contributes to a total concentration due to emissions from all installations that is greater than an ambient air quality standard. For installations subject to the prevention of significant deterioration program as set forth in 10 CSR 10-6.060(8), an excessive concentration means a maximum ground level concentration due to emissions from a stack due to the same conditions as mentioned previously and is greater than a prevention of significant deterioration increment. The allowable emission rate to be used in making demonstrations under this definition shall be prescribed by the new source performance regulation as referenced by 10 CSR 10-6.070 for the source category unless the owner or operator demonstrates that this emission rate is infeasible. Where demonstrations are approved by the director, an alternative emission rate shall be established in consultation with the source owner or operator;

B. For installations seeking credit after October 11, 1983, for increases in stack heights up to the heights established under subparagraph (2)(G)15.B. of this rule, an excessive concentration is either—

(I) A maximum ground level concentration due in whole or part to downwash, wakes, or eddy effects as provided in subparagraph (2)(E)46.A. of this rule, except that the emission rate used shall be the applicable emission limitation (or, in the absence of this limit, the actual emission rate); or

(II) The actual presence of a local nuisance caused by the stack, as determined by the director; and

C. For installations seeking credit after January 12, 1979, for a stack height determined under subparagraph (2)(G)15.B. of this rule where the director requires the use of a field study of fluid model to verify good engineering practice stack height, for installations seeking stack height credit after November 9, 1984, based on the aerodynamic influence of cooling towers and for installations seeking stack height credit after December 31, 1970, based on the aerodynamic influence of structures not represented adequately by the equations in subparagraph (2)(G)15.B. of this rule, a maximum ground level concentration due in whole or part to downwash, wakes, or eddy effects that is at least forty percent (40%) in excess of the maximum concentration experienced in the absence of downwash, wakes, or eddy effects.

47. Existing—As applied to any equipment, machine, device, article, contrivance, or installation shall mean in being, installed, or under construction in the Kansas City metropolitan area on September 25, 1968 (Buchanan County, January 21, 1970), in the St. Louis metropolitan area on March 24, 1967 (Franklin County, January 18, 1972), in the Springfield metropolitan area on September 24, 1971, and in the outstate Missouri area on February 24, 1971, except that if equipment, machine, device, article, contrivance, or installation subsequently is altered, repaired, or rebuilt at a cost of fifty percent (50%) or more of its replacement cost exclusive of routine maintenance, it shall no longer be existing but shall be considered new as defined in this regulation. The cost of installing equipment designed principally for the purpose of air pollution control is not to be considered a cost of altering, repairing, or rebuilding existing equipment for the purpose of this definition. For the purpose of 10 CSR 10-*[2.040 and 10 CSR 10-5.030 only]***6.405**, existing is any source which was in being, installed, or under construction on February 15, 1979**, in the Kansas City or St. Louis metropolitan area**, except that if any source **in these areas** subsequently is altered, repaired, or rebuilt at a cost of thirty percent (30%) or more of its replacement cost, exclusive of routine maintenance, it shall no longer be existing but shall be considered as new.

48. Exterior coating (two (2)-piece)—A surface coating used to coat the outside face of a two (2)-piece can. Used to provide protection from the lithograph or printing operations.

49. External floating roof—A storage vessel cover in an open top tank consisting of a double-deck or pontoon single deck which rests upon and is supported by petroleum liquid being contained and is equipped with a closure seal(s) to close the space between the roof edge and tank wall.

50. Extreme environmental conditions—The exposure to any of the weather all of the time, temperatures consistently above ninety-five degrees Celsius (95 °C), detergents-abrasive and scouring agents, solvents, corrosive atmospheres, or similar environmental conditions.

51. Extreme high gloss coating—A coating applied to—

A. Pleasure craft which, when tested by the ASTM Test Method D-523-89, shows a reflectance of ninety percent (90%) or more on a sixty-degree (60°) meter; or

B. Metal and plastic parts that are not components of pleasure craft, which, when tested by the ASTM Test Method D-523 adopted in 1980, shows a reflectance of seventy-five percent (75%) or more on a sixty-degree (60°) meter.

52. Extreme performance coating—A coating used on a metal or plastic surface where the coated surface is, in its intended use, subject to the following:

A. Chronic exposure to corrosive, caustic, or acidic agents, chemicals, chemical fumes, chemical mixtures, or solutions;

B. Repeated exposure to temperatures in excess of two hundred fifty degrees Fahrenheit (250 °F); or

C. Repeated heavy abrasion, including mechanical wear and repeated scrubbing with industrial grade solvents, cleansers, or scouring agents.

(M) All terms beginning with "M."

1. MACT (Maximum achievable control technology)—The maximum degree of reduction in emissions of the hazardous air pollutants listed in subsection (3)(C) of this rule (including a prohibition on these emissions where achievable), taking into consideration the cost of achieving emissions reductions and any non-air quality health and environmental impacts and requirements, determines is achievable for new or existing sources in the category or subcategory to which this emission standard applies, through application of measures, processes, methods, systems, or techniques including, but not limited to, measures which:

A. Reduce the volume of or eliminate emissions of pollutants through process changes, substitution of materials, or other modifications;

B. Enclose systems or processes to eliminate emissions;

C. Collect, capture, or treat pollutants when released from a process, stack, storage, or fugitive emissions point;

D. Are design, equipment, work practice, or operational standards (including requirements for operational training or certification); or

E. Are a combination of subparagraphs (2)(M)1.A.–D.

2. Maintenance area—An area that was designated as nonattainment and has been re-designated in 40 CFR 81 to attainment, meeting the provisions of section 107(d)(3)(E) of the Act and has a maintenance plan approved under section 175A of the Act.

3. Maintenance operation—Normal routine maintenance on any stationary internal combustion engine or the use of an emergency standby engine and fuel system during testing, repair, and routine maintenance to verify its readiness for emergency standby use.

4. Maintenance plan—A revision to the applicable Missouri State Implementation Plan (SIP), meeting the requirements of section 175A of the CAA.

5. Major modification—Any physical change or change in the method of operation at an installation or in the attendant air pollution control equipment that would result in a significant net emissions increase of any pollutant. A physical change or a change in the method of operation, unless previously limited by enforceable permit conditions, shall not include:

A. Routine maintenance, repair, and replacement of parts;

B. Use of an alternative fuel or raw material by reason of an order under Sections 2(a) and (b) of the Energy Supply and Environmental Coordination Act of 1974, a prohibition under the Power Plant and Industrial Fuel Use Act of 1978, or by reason of a natural gas curtailment plan pursuant to the Federal Power Act;

C. Use of an alternative fuel or raw material, if prior to January 6, 1975, the source was capable of accommodating the fuel or material, unless the change would be prohibited under any enforceable permit condition which was established after January 6, 1975;

D. An increase in the hours of operation or in the production rate unless the change would be prohibited under any enforceable permit condition which was established after January 6, 1975; or

E. Use of an alternative fuel by reason of an order or rule under *[S]*section 125 of the Clean Air Act.

6. Malfunction—A sudden and unavoidable failure of air pollution control equipment or process equipment or of a process to operate in a normal and usual manner. Excess emissions caused by improper design shall not be deemed a malfunction. For the purpose of 10 CSR 10-6.200 only, malfunction is any sudden, infrequent, and not reasonably-preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused, in part, by poor maintenance or careless operation are not malfunctions. During periods of malfunction the operator shall operate within established parameters as much as possible, and monitoring of all applicable operating parameters shall continue until all waste has been combusted or until the malfunction ceases, whichever comes first.

7. Malfunction indicator lamp (MIL)—An amber-colored warning light located on the dashboard of vehicles equipped with On-Board Diagnostics systems indicating to the vehicle operator that the vehicle either has a malfunction or has deteriorated enough to cause a potential increase in the vehicle's tailpipe or evaporative emissions.

8. Management planner—An individual, under AHERA, who devises and writes plans for asbestos abatement.

9. Manure storage and application systems—Any system that includes but is not limited to lagoons, manure treatment cells, earthen storage ponds, manure storage tanks, manure stockpiles, composting areas, pits and gutters within barns, litter used in bedding systems, all types of land application equipment, and all pipes, hoses, pumps, and other equipment used to transfer manure.

10. Marine vessel—A craft capable of being used as a means of transportation on water, except amphibious vehicles.

11. Maskant—A coating applied directly to an aerospace component to protect those areas when etching other parts of the component.

12. Mask coating—A thin film coating applied through a template to coat a small portion of a substrate.

13. Material safety data sheet (MSDS)—The chemical, physical, technical, and safety information document supplied by the manufacturer of the coating, solvent, or other chemical product.

14. Maximum charge rate—For continuous and intermittent HMIWI, one hundred ten percent (110%) of the lowest three (3)-hour average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limits; for batch HMIWI, one hundred ten percent (110%) of the lowest daily charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limits.

15. Maximum design heat input—The ability of a unit to combust a stated maximum amount of fuel per hour on a steady state basis, as determined by the physical design and physical characteristics of the unit.

16. Maximum fabric filter inlet temperature—One hundred ten percent (110%) of the lowest three (3)-hour average temperature at the inlet to the fabric filter (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the dioxin/furan emission limit.

17. Maximum flue gas temperature—One hundred ten percent (110%) of the lowest three (3)-hour average temperature at the outlet from the wet scrubber (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the mercury (Hg) emission limit.

18. Maximum potential hourly heat input—An hourly heat input

used for reporting purposes when a unit lacks certified monitors to report heat input. If the unit intends to use Appendix D of 40 CFR 75 to report heat input, this value should be calculated*[,]* in accordance with 40 CFR 75, using the maximum fuel flow rate and the maximum gross calorific value. If the unit intends to use a flow monitor and a diluent gas monitor, this value should be reported*[,]* in accordance with 40 CFR 75, using the maximum potential flow rate and either the maximum carbon dioxide concentration (in percent CO_2) or the minimum oxygen concentration (in percent O_2).

19. Maximum potential NO_x emission rate—The NO_x emission rate of nitrogen oxides (in lb/mmBtu) calculated in accordance with section 3 of Appendix F of 40 CFR 75, using the maximum potential nitrogen oxides concentration as defined in section 2 of Appendix A of 40 CFR 75, and either the maximum oxygen concentration (in percent O_2) or the minimum carbon dioxide concentration (in percent CO_2), under all operating conditions of the unit except for unit start-up, shutdown, and upsets.

20. Maximum rated hourly heat input—A unit-specific maximum hourly heat input (mmBtu) which is the higher of the manufacturer's maximum rated hourly heat input or the highest observed hourly heat input.

21. Mechanical shoe seal—A metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

22. Medical device—An instrument, apparatus, implement, machine, contrivance, implant*, in vitro* reagent, or other similar article, including any component or accessory that meets one (1) of the following conditions:

A. It is intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease;

B. It is intended to affect the structure or any function of the body; or

C. It is defined in the *National Formulary* or the *United States Pharmacopoeia*, or any supplement to them.

23. Medical/infectious waste—Any waste generated in the diagnosis, treatment, or immunization of human beings or animals, in research pertaining thereto, or in the production or testing of biologicals as exempted in the applicable rule. The definition of medical/infectious waste does not include hazardous waste identified or listed under the regulations in 40 CFR 261; household waste, as defined in 40 CFR 261.4(b)(1); ash from incineration of medical/infectious waste, once the incineration process has been completed; human corpses, remains, and anatomical parts that are intended for interment or cremation; and domestic sewage materials identified in 40 CFR 261.4(a)(1).

A. Cultures and stocks of infectious agents and associated biologicals, including cultures from medical and pathological laboratories; cultures and stocks of infectious agents from research and industrial laboratories; wastes from the production of biologicals; discarded live and attenuated vaccines; and culture dishes and devices used to transfer, inoculate, and mix cultures.

B. Human pathological waste, including tissues, organs, and body parts and body fluids that are removed during surgery or autopsy, or other medical procedures, and specimens of body fluids and their containers.

C. Human blood and blood products including:

(I) Liquid waste human blood;

(II) Products of blood;

(III) Items saturated and/or dripping with human blood; and

(IV) Items that were saturated and/or dripping with human blood that are now caked with dried human blood including serum, plasma, and other blood components, and their containers, which were used or intended for use in either patient care, testing and laboratory analysis, or the development of pharmaceuticals. Intravenous bags are also included in this category.

D. Sharps that have been used in animal or human patient care or treatment or in medical, research, or industrial laboratories, including hypodermic needles, syringes (with or without the attached needle), pasteur pipettes, scalpel blades, blood vials, needles with attached tubing, and culture dishes (regardless of presence of infectious agents). Also included are other types of broken or unbroken glassware that were in contact with infectious agents, such as used slides and cover slips.

E. Animal waste including contaminated animal carcasses, body parts, and bedding of animals that were known to have been exposed to infectious agents during research (including research in veterinary hospitals), production of biologicals, or testing of pharmaceuticals.

F. Isolation wastes including biological waste and discarded materials contaminated with blood, excretions, exudates, or secretions from humans who are isolated to protect others from certain highly-communicable diseases, or isolated animals known to be infected with highly-communicable diseases.

G. Unused sharps including the following unused, discarded sharps: hypodermic needles, suture needles, syringes, and scalpel blades.

24. Medium HMIWI—An HMIWI whose maximum design waste burning capacity is more than two hundred pounds (200 lbs) per hour but less than or equal to five hundred pounds (500 lbs) per hour, or a continuous or intermittent HMIWI whose maximum charge rate is more than two hundred pounds (200 lbs) per hour but less than or equal to five hundred pounds (500 lbs) per hour, or a batch HMIWI whose maximum charge rate is more than one thousand six hundred pounds (1,600 lbs) per day**,** but less than or equal to four thousand pounds (4,000 lbs) per day. The following are not medium HMIWI: a continuous or intermittent HMIWI whose maximum charge rate is less than or equal to two hundred pounds (200 lbs) per hour or more than five hundred pounds (500 lbs) per hour; or a batch HMIWI whose maximum charge rate is more than four thousand pounds (4,000 lbs) per day or less than or equal to one thousand six hundred pounds (1,600 lbs) per day.

25. Metal to urethane/rubber molding or casting adhesive—An adhesive intended by the manufacturer to bond metal to high density or elastomeric urethane or molded rubber materials to fabricate products such as rollers for computer printers or other paper handling equipment.

26. Metallic coating—A coating which contains more than five (5) grams of metal particles per liter of coating as applied. Metal particles are pieces of a pure elemental metal or a combination of elemental metals.

27. Metropolitan planning organization (MPO)—The policy board of an organization created as a result of the designation process in 23 U.S.C. 134(d) and in 49 U.S.C. 5303. It is the forum for cooperative transportation decision-making and is responsible for conducting the planning required under section 174 of the CAA.

28. Mid-kiln firing—Secondary firing in kiln systems by injecting fuel at an intermediate point in the kiln system using a specially-designed fuel injection mechanism for the purpose of decreasing NO_x emissions through—

A. The burning of part of the fuel at a lower temperature; and

B. The creation of reducing conditions at the point of initial combustion.

29. Milestone—The meaning given in sections 182(g)(1) and 189(c)(1) of the CAA. It consists of an emissions level and the date on which it is required to be achieved.

30. Military specification coating—A coating which has a formulation approved by a United States Military Agency for use on military equipment.

31. Minimum dioxin/furan sorbent flow rate—Ninety percent (90%) of the highest three (3)-hour average dioxin/furan sorbent flow rate (taken, at a minimum, once every hour) measured during the most recent performance test demonstrating compliance with the

dioxin/furan emission limit.

32. Minimum mercury (Hg) sorbent flow rate—Ninety percent (90%) of the highest three (3)-hour average Hg sorbent flow rate (taken, at a minimum, once every hour) measured during the most recent performance test demonstrating compliance with the Hg emission limit.

33. Minimum horsepower or amperage—Ninety percent (90%) of the highest three (3)-hour average horsepower or amperage to the wet scrubber (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the applicable emission limit.

34. Minimum hydrogen chloride (HCl) sorbent flow rate—Ninety percent (90%) of the highest three (3)-hour average HCl sorbent flow rate (taken, at a minimum, once every hour) measured during the most recent performance test demonstrating compliance with the HCl emission limit.

35. Minimum pressure drop across the wet scrubber—Ninety percent (90%) of the highest three (3)-hour average pressure drop across the wet scrubber particulate matter (PM) control device (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the PM emission limit.

36. Minimum reagent flow rate—Ninety percent (90%) of the highest three (3)-hour average reagent flow rate at the inlet to the selective noncatalytic reduction technology (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the NO_x emissions limit.

37. Minimum scrubber liquor flow rate—Ninety percent (90%) of the highest three (3)-hour average liquor flow rate at the inlet to the wet scrubber (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with all applicable emission limits.

38. Minimum scrubber liquor pH—Ninety percent (90%) of the highest three (3)-hour average liquor pH at the inlet to the wet scrubber (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with all HCl emission limits.

39. Minimum secondary chamber temperature—Ninety percent (90%) of the highest three (3)-hour average secondary chamber temperature (taken, at a minimum, once every minute) measured during the most recent performance test demonstrating compliance with the PM, carbon monoxide (CO), dioxin/furan, and NO_x emission limits.

40. Minor violation—A violation which possesses a small potential to harm the environment or human health or cause pollution, was not knowingly committed, and is not defined by the United States Environmental Protection Agency as other than minor.

41. Missouri Decentralized Analyzer System (MDAS)—The emissions inspection equipment that is sold by the state's contractor to licensed emissions inspection stations. The department may approve alternative equipment if the equipment described in this paragraph is no longer available. At a minimum, the vehicle emissions inspection equipment shall consist of the following contractor equipment package:

A. At least a seventeen-inch (17") Liquid Crystal Display (LCD) monitor;

B. Universal serial bus (USB) lane camera;

C. At least a four (4.0) megapixel digital camera and dock;

D. Fingerprint scanner;

E. Two hundred fifty-six (256)-megabyte USB flash drive;

F. Keyboard with plastic keyboard cover and optical mouse;

G. Printer with ink or toner cartridges and blank paper;

H. 2D barcode reader;

I. Windshield sticker printer with blank windshield stickers and thermal cartridge;

J. OBD vehicle interface cable with a standard Society of Automotive Engineers J1962/J1978 OBD connector;

K. OBD verification tool;

L. Low-speed or high-speed Internet connection capabilities;

M. Surge protector and uninterruptible power supply (UPS);

N. At least a three gigahertz (3.0 GHz) personal computer (DellTM Pentium® 4 or equivalent), with Windows Vista® and one (1) gigabyte of Random Access Memory (RAM); and

O. Metal cabinet to hold all of the components described in this paragraph.

42. Missouri Department of Revenue (MDOR)—The state agency responsible for the oversight of vehicle registration at contract offices and via the Internet. This agency is also responsible for the registration denial method of enforcement for the vehicle emissions inspection and maintenance program.

43. Missouri Emissions Inventory System (MoEIS)—Online interface of the state of Missouri's air emissions inventory database.

44. Missouri State Highway Patrol (MSHP)—The state agency responsible for the oversight of the vehicle safety inspection program and joint oversight with the department of the vehicle emissions inspection and maintenance program.

45. Mitigation measure—any method of reducing emissions of the pollutant or its precursor taken at the location of the federal action and used to reduce the impact of the emissions of that pollutant caused by the action.

46. Mobile equipment—Any equipment that is physically capable of being driven or drawn on a roadway including, but not limited to, the following types of equipment:

A. Construction vehicles such as mobile cranes, bulldozers, concrete mixers, etc.;

B. Farming equipment such as a wheel tractor, plow, pesticide sprayer, etc.;

C. Hauling equipment such as truck trailers, utility bodies, etc.; and

D. Miscellaneous equipment such as street cleaners, golf carts, etc.

47. Model year—The manufacturer's annual production period which includes January 1 of such calendar year. If the manufacturer has no annual production period, model year shall refer to the calendar year.

48. Modeling domain—A geographic area covered by an air quality model.

49. Modification—Any physical change, or change in method of operation of, a source operation or attendant air pollution control equipment which would cause an increase in potential emissions of any air pollutant emitted by the source operation. For the purpose of 10 CSR 10-5.490 **and 10 CSR 10-6.310** only, modification is an increase in the permitted volume design capacity of the landfill by either horizontal or vertical expansion based on its most recent permitted design capacity; modification does not occur until the owner or operator commences construction on the horizontal or vertical expansion.

50. Modification, Title I—See Title I modification.

51. Modified HMIWI—Any change to an HMIWI unit after the effective date of these standards such that the cumulative costs of the modifications, over the life of the unit, exceed fifty percent (50%) of the original cost of the construction and installation of the unit (not including the cost of any land purchased in connection with such construction or installation) updated to current costs, or the change involves a physical change in or change in the method of operation of the unit which increases the amount of any air pollutant emitted by the unit for which standards have been established under section 129 or section 111 of the CAA.

52. Mold release—A coating applied to a mold surface to prevent the mold piece from sticking to the mold as it is removed, or to an aerospace component for purposes of creating a form-in-place seal.

53. Mold seal coating—The initial coating applied to a new mold or a repaired mold to provide a smooth surface which, when coated with a mold-release coating, prevents products from sticking to the mold.

54. Monitoring system—Any monitoring system that meets the

requirements as described in a specific rule, including a continuous emissions monitoring system, an excepted monitoring system, or an alternative monitoring system.

55. Monthly throughput—The total volume of gasoline that is loaded into all gasoline storage tanks during a month, as calculated on a rolling thirty (30)-day average.

56. MOPETP—The Missouri Performance Evaluation Test Procedures, a set of standards and test procedures for evaluating performance of Stage I/II vapor recovery control equipment and systems to be installed or that have been installed in Missouri.

57. Motor tricycle—A motor vehicle operated on three (3) wheels, including a motorcycle with any conveyance, temporary or otherwise, requiring the use of a third wheel.

58. Motor vehicle—Any self-propelled vehicle.

59. Motor vehicle adhesive—An adhesive, including glass bonding adhesive, used at an installation that is not an automobile or light duty truck assembly coating installation, applied for the purpose of bonding two (2) motor vehicle surfaces together without regard to the substrates involved.

60. Motor vehicle bedliner—A multi-component coating, used at an installation that is not an automobile or light duty truck assembly coating installation, applied to a cargo bed after the application of topcoat to provide additional durability and chip resistance.

61. Motor vehicle cavity wax—A coating, used at an installation that is not an automobile or light duty truck assembly coating installation, applied into the cavities of the motor vehicle primarily for the purpose of enhancing corrosion protection.

62. Motor vehicle deadener—A coating, used at an installation that is not an automobile or light duty truck assembly coating installation, applied to selected motor vehicle surfaces primarily for the purpose of reducing the sound of road noise in the passenger compartment.

63. Motor vehicle gasket/gasket-sealing material—A fluid, used at an installation that is not an automobile or light duty truck assembly coating installation, applied to coat a gasket or replace and perform the same function as a gasket. Automobile and light duty truck gasket/gasket-sealing material includes room temperature vulcanization (RTV) seal material.

64. Motor vehicle glass-bonding primer—A primer, used at an installation that is not an automobile or light duty truck assembly coating installation, applied to windshield or other glass, or to body openings, to prepare the glass or body opening for the application of glass-bonding adhesives or the installation of adhesive-bonded glass. Motor vehicle glass bonding primer includes glass bonding/cleaning primers that perform both functions (cleaning and priming of the windshield or other glass or body openings) prior to the application of adhesive or the installation of adhesive-bonded glass.

65. Motor vehicle lubricating wax/compound—A protective lubricating material, used at an installation that is not an automobile or light duty truck assembly coating installation, applied to motor vehicle hubs and hinges.

66. Motor vehicle sealer—A high viscosity material, used at an installation that is not an automobile or light duty truck assembly coating installation, generally, but not always, applied in the paint shop after the body has received an electrodeposition primer coating and before the application of subsequent coatings (e.g., primer-surfacer). Such materials are also referred to as sealant, sealant primer, or caulk.

67. Motor vehicle *[truck]* **trunk** interior coating—A coating, used at an installation that is not an automobile or light duty truck assembly coating installation, applied to the trunk interior to provide chip protection.

68. Motor vehicle underbody coating—A coating, used at an installation that is not an automobile or light duty truck assembly coating installation, applied to the undercarriage or firewall to prevent corrosion and/or provide chip protection.

69. Motor vehicle weatherstrip adhesive—An adhesive, used at an installation that is not an automobile or light duty truck assembly coating installation, applied to weatherstripping materials for the purpose of bonding the weatherstrip material to the surface of the motor vehicle.

70. Motorcycle—A motor vehicle operated on two (2) wheels.

71. Multi-colored coating—A coating which exhibits more than one (1) color when applied and which is packaged in a single container and applied in a single coat.

72. Multi-component coating—A coating requiring the addition of a separate reactive resin, commonly known as a catalyst or hardener, before application to form an acceptable dry film.

73. Multi-day violation—A violation which has occurred on or continued for two (2) or more consecutive or nonconsecutive days.

74. Multiple-violation penalty—The sum of individual administrative penalties assessed when two (2) or more violations are included in the same complaint or enforcement action.

75. Multipurpose construction adhesive—An adhesive intended by the manufacturer for use in the installation or repair of various construction materials, including but not limited to drywall, subfloor, panel, fiberglass reinforced plastic (FRP), ceiling tile, and acoustical tile.

76. Municipal solid waste landfill or MSW landfill—An entire disposal facility in a contiguous geographical space where household waste is placed in or on land. An MSW landfill may also receive other types of Resource Conservation and Recovery Act (RCRA) Subtitle D wastes per 40 CFR 257.2, such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, and industrial solid waste. Portions of an MSW landfill may be separated by access roads. An MSW landfill may be publicly or privately owned. An MSW landfill may be a new MSW landfill, an existing MSW landfill, or a lateral expansion.

77. Municipal solid waste landfill emissions or MSW landfill emissions—Gas generated by the decomposition of organic waste deposited in an MSW landfill or derived from the evolution of organic compounds in the waste.

(N) All terms beginning with "N."

1. Nameplate capacity—The maximum electrical generating output (expressed as megawatt) that a generator can sustain over a specified period of time when not restricted by seasonal or other deratings, as listed in the National Allowance Data Base (NADB) under the data field "NAMECAP" if the generator is listed in the NADB or as measured in accordance with the United States Department of Energy standards. For generators not listed in the NADB, the nameplate capacity shall be used.

2. National *[a]***A**mbient *[a]***A**ir *[q]***Q**uality *[s]***S**tandards (NAAQS)—*[t]***T**hose standards established pursuant to section 109 of the Act and defined by *[10 CSR 10-6.010]* **40 CFR 50** *[A]***a**mbient *[A]***a**ir *[Q]***q**uality *[S]***s**tandards. It includes standards for carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone, particulate matter (PM_{10} and $PM_{2.5}$), and sulfur dioxide (SO_2);

3. Natural finish hardwood plywood panel—A panel whose original grain pattern is enhanced by essentially transparent finishes frequently supplemented by fillers and toners.

4. NEPA—*[t]***T**he National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.).

5. Nearby—Nearby, as used in the definition GEP stack height in subparagraph (2)(G)15.B. of this rule, is defined for a specific structure or terrain feature—

A. For purposes of applying the formula provided in subparagraph (2)(G)15.B. of this rule, nearby means that distance up to five (5) times the lesser of the height or the width dimension of a structure, but not greater than one-half (1/2) mile; and

B. For conducting fluid modeling or field study demonstrations under subparagraph (2)(G)15.C. of this rule, nearby means not greater than one-half (1/2) mile, except that the portion of a terrain feature may be considered to be nearby which falls within a distance of up to ten (10) times the maximum height of the feature, not to exceed two (2) miles if feature achieves a height one-half (1/2) mile from the stack that is at least forty percent (40%) of the GEP stack

height determined by the formula provided in subparagraph (2)(G)15.B. of this rule, or twenty-six meters (26 m), whichever is greater, as measured from the ground-level elevation at the base of the stack. The height of the structure or terrain feature is measured from the ground-level elevation at the base of the stack.

6. Net emissions increase—This term is defined in 40 CFR 52.21(b)(3), promulgated as of July 1, 2003, and hereby incorporated by reference in this rule, as published by the Office of the Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, DC 20408. This rule does not incorporate any subsequent amendments or additions.

7. New—As defined for the purposes of 10 CSR 10-*[2.040 and 10 CSR 10-5.030]***6.405**, any source which is not an existing source, as defined in *[subparagraph (1)(E) of 10 CSR 10-2.040 or 10 CSR 10-5.030]* **paragraph (2)(E)47. of this rule**.

8. New Source Review (NSR)—The permitting requirements found in state rule 10 CSR 10-6.060 Construction Permits Required.

9. NMOC—Nonmethane organic compounds. Precursors to oxidant formation. They allow ozone to accumulate in the atmosphere.

10. Nonaqueous solvent—Any solvent not classifiable as an aqueous solvent as defined by a solvent in which water is the primary ingredient (greater than eighty percent (80%) by weight or greater than sixty percent (60%) by volume of solvent solution as applied must be water). Aqueous solutions must have a flash point greater than ninety-three degrees Celsius (93 °C) (two hundred degrees Fahrenheit (200 °F)) (as reported by the manufacturer) and the solution must be miscible with water.

11. Nonattainment area (NAA)—Any geographic area of the United States which has been designated as nonattainment under section 107 of the CAA and described in 40 CFR **81**.

12. Nonattainment pollutant—Each and every pollutant for which the location of the source is in an area designated to be in nonattainment of a National Ambient Air Quality Standard (NAAQS) under section 107(d)(1)(A)(i) of the Act. Any constituent or precursor of a nonattainment pollutant shall be a nonattainment pollutant, provided that the constituent or precursor pollutant may only be regulated as part of regulation of the corresponding NAAQS pollutant. Both volatile organic compounds (VOC) and nitrogen oxides (NO_x) shall be nonattainment pollutants for a source located in an area designated nonattainment for ozone.

13. Nondegradable waste—Any waste that does not decompose through chemical breakdown or microbiological activity. Examples are, but are not limited to, concrete, municipal waste combustor ash, and metals.

14. Nonpermanent final finish—A material such as a wax, polish, nonoxidizing oil, or similar substance that must be periodically reapplied to a surface over its lifetime to maintain or restore the reapplied material's intended effect.

15. Non-Title V permit—A federally-enforceable permit administered by the director pursuant to the CAA and regulatory authority under the CAA, other than Title V of the CAA and 40 CFR 70 or 40 CFR 71.

16. Normal maintenance—Repair or replacement of vapor recovery control equipment and/or gasoline dispensing components/dispensers that does not require breaking of concrete (by any method) and does not require removal of dispenser(s) from island(s).

17. Normal source operation—The average actual activity rate of a source necessary for determining the actual emissions rate for the two (2) years prior to the date necessary for determining actual emissions, unless some other time period is more representative of the operation of the source or otherwise approved by the staff director.

18. Normally-closed container—A storage container that is closed unless an operator is actively engaged in activities such as emptying or filling the container.

19. NO_x allowance—An authorization by the department or the administrator under a NO_x trading program to emit one (1) ton of NO_x during the control period of the specified year or of any year thereafter.

20. NO_x allowance deduction or deduct NO_x allowances—The permanent withdrawal of NO_x allowances by the administrator from a NO_x allowance tracking system compliance account or overdraft account to account for the number of tons of emissions from a NO_x budget unit for a control period, determined in accordance with a rule, or for any other NO_x allowance surrender obligation required.

21. NO_x allowance tracking system—The system by which the director or the administrator records allocations, deductions, and transfers of NO_x allowances under a NO_x trading program.

22. NO_x allowance tracking system account—An account in the NO_x allowance tracking system established by the director or administrator for purposes of recording the allocation, holding, transferring, or deducting of NO_x allowances.

23. NO_x allowance transfer deadline—For the purpose of 10 CSR 10-6.350 only, close of business on December 31 following the control period or, if December 31 is not a business day, close of business on the first business day thereafter and is the deadline by which NO_x allowances may be submitted for recording in an affected unit's compliance account, or the overdraft account of the installation where the unit is located. For the purpose of 10 CSR 10-6.360 only, midnight of November 30 or, if November 30 is not a business day, midnight of the first business day thereafter and is the deadline by which NO_x allowances may be submitted for recordation in a NO_x budget unit's compliance account, or the overdraft account of the source where the unit is located, in order to meet the unit's NO_x budget emissions limitation for the control period immediately preceding such deadline.

24. NO_x allowances held—The NO_x allowances recorded by the director or administrator, or submitted to the director or administrator for recordation, in accordance with a rule, in a NO_x allowance tracking system account.

25. NO_x authorized account representative—The natural person who is authorized by the owners or operators of the source and all NO_x budget units at the source, in accordance with all applicable rules, to represent and legally bind each owner and operator in matters pertaining to a NO_x trading program or, for a general account, the natural person who is authorized to transfer or otherwise dispose of NO_x allowances held in the general account in accordance with the applicable rules.

26. NO_x budget emissions limitation—For a NO_x budget unit, the tonnage equivalent of the NO_x allowances available for compliance deduction for the unit and for a control period adjusted by any deductions of such NO_x allowances to account for actual utilization for the control period or to account for excess emissions for a prior control period or to account for withdrawal from the NO_x budget program or for a change in regulatory status for an affected unit.

27. NO_x budget permit—The legally-binding and federally-enforceable written document, or portion of such document, issued by the director, including any permit revisions, specifying the NO_x budget trading program requirements applicable to a NO_x budget source, to each NO_x budget unit at the NO_x budget source, and to the owners and operators and the NO_x authorized account representative of the NO_x budget source and each NO_x budget unit.

28. NO_x budget source—A source that includes one (1) or more NO_x budget units.

29. NO_x budget trading program—A multi-state nitrogen oxides air pollution control and emission reduction program pursuant to 40 CFR 51.121, as a means of mitigating the interstate transport of ozone and nitrogen oxides, an ozone precursor.

30. NO_x budget unit—A unit that is subject to the NO_x budget trading program emissions limitation under section (1) or paragraph (3)(H)1. of 10 CSR 10-6.360.

31. NO_x emission rate—The amount of NO_x emitted by a combustion unit in pounds per million British thermal units of heat input as recorded by approved monitoring devices.

32. NO_x emissions limitation—For an affected unit, the tonnage

equivalent of the NO_x emissions rate available for compliance deduction for the unit and for a control period adjusted by any deductions of such NO_x allowances to account for actual utilization for the control period or to account for excess emissions for a prior control period or to account for withdrawal from a NO_x trading program or for a change in regulatory status for an affected unit.

33. NO_x opt-in unit—An EGU whose owner or operator has requested to become an affected unit under a NO_x trading program and has been approved by the department.

34. NO_x unit—Any fossil-fuel-fired stationary boiler, combustion turbine, internal combustion engine, or combined cycle system.

(P) All terms beginning with "P."

1. Pail—Any nominal cylindrical container of one to twelve (1–12)-gallon capacity.

2. Paint—A pigmented surface coating using VOCs as the major solvent and thinner which converts to a relatively opaque solid film after application as a thin layer.

3. Pan-backing coating—A coating applied to the surfaces of pots, pans, or other cooking implements that are exposed directly to a flame or other heating elements.

4. Paper, film, and foil coating—A web coating process that applies a continuous layer of coating material across essentially the entire width or any portion of the width of a web substrate to—

A. Provide a covering, finish, or functional or protective layer to a substrate;

B. Saturate a substrate for lamination; or

C. Provide adhesion between two (2) substrates for lamination.

5. Part 70—U.S. Environmental Protection Agency regulations, codified at 40 CFR 70, setting forth requirements for state operating permit programs pursuant to Title V of the Act.

6. Part 70 installations—Installations to which the part 70 operating permit requirements of rule 10 CSR 10-6.065 apply, in accordance with the following criteria:

A. They emit or have the potential to emit, in the aggregate, ten (10) tons per year (tpy) or more of any hazardous air pollutant, other than radionuclides, or twenty-five (25) tpy or more of any combination of these hazardous air pollutants or such lesser quantity as the administrator may establish by rule. Notwithstanding the preceding sentence, emissions from any oil or gas exploration or production well (with its associated equipment) and emissions from any pipeline compressor or pump station shall not be aggregated with emissions from other similar units, whether or not these units are in a contiguous area or under common control, to determine whether these units or stations are subject installations. For sources of radionuclides, the criteria shall be established by the administrator;

B. They emit or have the potential to emit one hundred (100) tpy or more of any air pollutant, including all fugitive air pollutants. The fugitive emissions of an installation shall not be considered unless the installation belongs to one (1) of the source categories listed in 10 CSR 10-6.020(3)(B), Table 2;

C. They are located in nonattainment areas or ozone transport regions*[.]*—

(I) For ozone nonattainment areas, sources with the potential to emit one hundred (100) tpy or more of volatile organic compounds or oxides of nitrogen in areas classified as "marginal" or "moderate," fifty (50) tpy or more in areas classified as "serious," twenty-five (25) tpy or more in areas classified as "severe," and ten (10) tpy or more in areas classified as "extreme"; except that the references in this paragraph to one hundred (100), fifty (50), twenty-five (25), and ten (10) tpy of nitrogen oxides shall not apply with respect to any source for which the administrator has made a finding, under section 182(f)(1) or (2) of the Act, that requirements under section 182(f) of the Act do not apply;

(II) For ozone transport regions established pursuant to section 184 of the Act, sources with the potential to emit fifty (50) tpy or more of volatile organic compounds;

(III) For carbon monoxide nonattainment areas that are classified as "serious," and in which stationary sources contribute significantly to carbon monoxide levels as determined under rules issued by the administrator, sources with the potential to emit fifty (50) tpy or more of carbon monoxide; and

(IV) For particulate matter less than ten (10) micrometers (PM_{10}) nonattainment areas classified as "serious," sources with the potential to emit seventy (70) tpy or more of PM_{10};

D. They are affected sources under Title IV of the 1990 Act;

E. They are solid waste incinerators subject to section 129(e) of the Act;

F. Any installation in a source category designated by the administrator as a part 70 source pursuant to 40 CFR 70.3; and

G. Installations that would be part 70 sources strictly due to the following criteria are not subject to part 70 source requirements until the administrator subjects this installation to these requirements by rule:

(I) They are subject to a standard, limitation, or other requirement under section 111 of the Act, including area sources; or

(II) They are subject to a standard or other requirement under section 112 of the Act, except that a source, including an area source, is not required to obtain a permit solely because it is subject to rules or requirements under section 112(r) of the Act.

7. Particulate matter—Any material, except uncombined water, that exists in a finely-divided form as a liquid or solid and as specifically defined as follows:

A. For purposes of ambient air concentrations—

*[A.]***(I)** PM—*[a]***A**ny airborne, finely-divided solid or liquid material with an aerodynamic diameter smaller than one hundred (100) micrometers as measured in the ambient air as specified in 10 CSR 10-6.040(4)(B); *[and]*

*[B.]***(II)** PM_{10}—*[p]***P**articulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers as measured in the ambient air as specified in 10 CSR 10-6.040(4)(J); and

*[C.]***(III)** $PM_{2.5}$—*[p]***P**articulate matter with an aerodynamic diameter less than or equal to a nominal two and one-half (2.5) micrometers including the filterable component as measured in the ambient air as specified in 10 CSR 10-6.040(4)(L)*[.]***;**

B. For the purpose of 10 CSR 10-6.200 only, particulate matter, or PM, is the total particulate matter emitted from an HMIWI as measured by EPA Reference Method 5 of 40 CFR 60, Appendix A–3 or EPA Reference Method 29 of 40 CFR 60, Appendix A–8*[.]***; and**

C. For all other purposes—

(I) Condensable particulate matter (PM)—Material that is vapor phase at stack conditions, but condenses and/or reacts upon cooling and dilution in the ambient air to form solid or liquid PM immediately after discharge from the stack. Note that all condensable PM is assumed to be in the $PM_{2.5}$ size fraction;

(II) Filterable PM—Particles that are emitted directly by a source as a solid or liquid at stack or release conditions and captured on the filter of a stack test train;

(III) Primary PM (Also known as direct PM)—Particles that enter the atmosphere as a direct emission from a stack or an open source. Primary PM has two (2) components: filterable PM and condensable PM. These two (2) PM components have no upper particle size limit;

(IV) Primary $PM_{2.5}$ (Also known as direct $PM_{2.5}$, total $PM_{2.5}$, $PM_{2.5}$, or combined filterable $PM_{2.5}$ and condensable PM)—PM with an aerodynamic diameter less than or equal to two and five-tenths (2.5) micrometers. These solid particles are emitted directly from an air emissions source or activity, or are the gaseous or vaporous emissions from an air emission source or activity that condense to form PM at ambient temperatures. Direct $PM_{2.5}$ emissions include elemental carbon, directly emitted organic carbon, directly emitted sulfate, directly emitted nitrate, and other inorganic particles (including but not limited to crustal material, metals, and sea salt); and

(V) Primary PM_{10} (Also known as direct PM_{10}, total PM_{10}, PM_{10}, or the combination of filterable PM_{10} and condensable PM)—PM with an aerodynamic diameter equal to or less than ten (10) micrometers.

8. Passenger tire equivalent (PTE)—The weight of waste tires or parts of waste tires equivalent to the average weight of one (1) passenger tire. The average weight of one (1) passenger tire is equal to twenty (20) pounds.

9. Passenger vehicle—Every motor vehicle, except motorcycles, motor-driven cycles, and ambulances, designed for carrying ten (10) passengers or less and used for the transportation of persons.

10. Passive collection system—A gas collection system that solely uses positive pressure within the landfill to move the gas rather than using gas mover equipment.

11. Pathological waste—Waste material consisting of only human or animal remains, anatomical parts, and/or tissue, the bags/containers used to collect and transport the waste material, and animal bedding (if applicable).

12. Peak load—The maximum instantaneous operating load.

13. Peaking combustion unit—A combustion turbine normally reserved for operation during the hours of highest daily, weekly, or seasonal loads.

14. Perimeter bonded sheet flooring installation—The installation of sheet flooring with vinyl backing onto a nonporous substrate using an adhesive designed to be applied only to a strip of up to four inches (4") wide around the perimeter of the sheet flooring.

15. Permanent shutdown—The permanent cessation of operation of any air pollution control equipment or process equipment, not to be placed back into service or have a start-up.

16. Permitted capacity factor—The annual permitted fuel use divided by the manufacturers' specified maximum fuel consumption times eight thousand seven hundred sixty (8,760) hours per year.

17. Permitting authority—Either the administrator or the state air pollution control agency, local agency, or other agency authorized by the administrator to carry out a permit program as intended by the Act.

18. Person—Any individual, partnership, copartnership, association, firm, company, public or private corporation including the parent company of a wholly-owned subsidiary, joint stock company, municipality, political subdivision, agency, board, department or bureau of the state or federal government, trust, estate, or other legal entity either public or private which is recognized by law as the subject of rights and duties.. This shall include any legal successor, employee, or agent of the previous entities.

19. Petroleum liquid—Petroleum, condensate, and any finished or intermediate products manufactured in a petroleum refinery with the exception of Numbers 2–6 fuel oils as specified in ASTM D (396-69), gas turbine fuel oils Number 2-GT–4-GT, as specified in ASTM D (2880-71), and diesel fuel oils Number 2-D and 4-D, as specified in ASTM D (975-68).

20. Petroleum refinery—Any facility which produces gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation, cracking, extraction, or reforming of unfinished petroleum derivatives.

21. Pharmaceutical—Any compound or preparation included under the Standard Industrial Classification Codes 2833 (Medicinal Chemicals and Botanical Products) and 2834 (Pharmaceutical Preparations), excluding products formulated by fermentation, extraction from vegetable material or animal tissue, or formulation and packaging of the final product.

22. Pilot plants—The installations which are of new type or design which will serve as a trial unit for experimentation or testing.

23. Plant-mix—A mixture produced in an asphalt mixing plant that consists of mineral aggregate uniformly coated with asphalt cement, cutback asphalt, or emulsified asphalt.

24. Plastic—A synthetic material chemically formed by the polymerization of organic substances and capable of being molded, extruded, cast into various shapes and films, or drawn into filaments.

25. Plastic foam—Foam constructed of plastics.

26. Plastic solvent welding adhesive—An adhesive intended by the manufacturer for use to dissolve the surface of plastic to form a bond between mating surfaces.

27. Plastic solvent welding adhesive primer—A primer intended by the manufacturer for use to prepare plastic substrates prior to bonding or welding.

28. Pleasure craft—A marine vessel which is manufactured or operated primarily for recreational purposes or leased, rented, or chartered to a person or business for recreational purposes.

29. Pleasure craft coating—A marine coating, except unsaturated polyester resin (fiberglass) coatings, applied by brush, spray, roller, or other means to a pleasure craft.

30. Point source—For the purposes of 10 CSR 10-6.110 only, large, stationary (nonmobile), identifiable source of emissions that releases pollutants into the atmosphere. A point source is an installation that is either*[:]*—

A. A major source under 40 CFR part 70 for the pollutants for which reporting is required; or

B. A holder of an intermediate operating permit.

31. Pollutant—An air contaminant listed in 10 CSR 10-6.020(3)(A), Table 1 without regard to levels of emission or air quality impact.

32. Polyethylene bag sealing operation—Any operation or facility engaged in the sealing of polyethylene bags, usually by the use of heat.

33. Polystyrene resin—The product of any styrene polymerization process, usually involving heat.

34. Polyvinyl chloride (PVC) plastic—A polymer of the chlorinated vinyl monomer that contains fifty-seven percent (57%) chlorine.

35. Polyvinyl chloride welding adhesive—An adhesive intended by the manufacturer for use in the welding of PVC plastic pipe.

36. Porous material—A substance that has tiny openings, often microscopic, in which fluids may be absorbed or discharged, including, but not limited to, paper and corrugated paperboard. For the purposes of 10 CSR 10-5.330, porous material does not include wood.

37. Portable equipment—Any equipment that is designed and maintained to be movable, primarily for use in noncontinuous operations. Portable equipment includes rock crushers, asphaltic concrete plants, and concrete batching plants.

38. Portable equipment installation—An installation made-up solely of portable equipment, meeting the requirements of or having been permitted according to 10 CSR 10-6.060(4).

39. Portland cement—A hydraulic cement produced by pulverizing clinker consisting essentially of hydraulic calcium silicates, usually containing one (1) or more of the forms of calcium sulfate as an interground addition.

40. Portland cement kiln—A system, including any solid, gaseous, or liquid fuel combustion equipment, used to calcine and fuse raw materials, including limestone and clay, to produce Portland cement clinker.

41. Positive crankcase ventilation system—Any system or device which prevents the escape of crankcase emissions to the ambient air.

42. Potential to emit—The emission rates of any pollutant at maximum design capacity. Annual potential shall be based on the maximum annual-rated capacity of the installation assuming continuous year-round operation. Federally-enforceable permit conditions on the type of materials combusted or processed, operating rates, hours of operation, and the application of air pollution control equipment shall be used in determining the annual potential. Secondary emissions do not count in determining annual potential.

43. Potroom—A building unit which houses a group of electrolytic cells in which aluminum is produced.

44. Potroom group—An uncontrolled potroom, a potroom which is controlled individually, or a group of potrooms or potroom segments ducted to a common or similar control system.

45. Precursors of a criteria pollutant are—

A. For ozone, nitrogen oxides (NO_x), unless an area is exempted from NO_x requirements under section 182(f) of the CAA, and volatile organic compounds (VOCs);

B. For PM_{10}, those pollutants described in the PM_{10} nonattainment area applicable SIP as significant contributors to the PM_{10} levels; and

C. For $PM_{2.5}$—

(I) Sulfur dioxide (SO_2) in all $PM_{2.5}$ nonattainment and maintenance areas;

(II) Nitrogen oxides in all $PM_{2.5}$ nonattainment and maintenance areas unless both the state and EPA determine that it is not a significant precursor; and

(III) Volatile organic compounds (VOC) and ammonia (NH_3) only in $PM_{2.5}$ nonattainment or maintenance areas where either the state or EPA determines that they are significant precursors.

46. Predictive emissions monitoring system (PEMS)—A system that uses process and other parameters as inputs to a computer program or other data reduction system to predict values in terms of the applicable emission limitation or standard.

47. Prefabricated architectural component coating—A coating applied to metal parts and products which are to be used as an architectural structure.

48. Preheater/precalciner kiln—A kiln where the feed to the kiln system is preheated in cyclone chambers and that utilizes a second burner to provide heat for calcination of material prior to the material entering the rotary kiln which forms clinker.

49. Preheater kiln—A kiln where the feed to the kiln system is preheated in cyclone chambers prior to the final fusion, which forms clinker.

50. Press— A printing production assembly that can be made up of one (1) or many units to produce a finished product. For the purposes of 10 CSR 10-5.442 only, this includes any associated coating, spray powder application, heatset web dryer, ultraviolet or electron beam curing units, or infrared heating units.

51. Pretreatment coating—A coating which contains no more than twelve percent (12%) solids by weight, but at least one-half percent (0.5%) acids by weight, is used to provide surface etching, and is applied directly to metal surfaces to provide corrosion resistance, adhesion, and ease of stripping.

52. Pretreatment wash primer—A coating which contains no more than twenty-five percent (25%) solids by weight, but at least one-tenth of a percent (0.1%) acids by weight, is used to provide surface etching, and is applied directly to fiberglass and metal surfaces to provide corrosion resistance and adhesion of subsequent coatings.

53. Primary aluminum reduction installation—Any facility manufacturing aluminum by electrolytic reduction of alumina.

54. Primary chamber—The chamber in an HMIWI that receives waste material, in which the waste is ignited, and from which ash is removed.

55. Primary fuel—The fuel that provides the principal heat input to the device. To be considered primary, the fuel must be able to sustain operation without the addition of other fuels.

56. Primer—The first layer and any subsequent layers of identically-formulated coating applied to the article to provide corrosion resistance, surface etching, surface leveling, adhesion promotion, or other property depending on the end use or exposure of the final product. Primers that are defined as specialty coatings are not included under this definition.

57. Primer-surfacer—An intermediate protective coating applied over the electrodeposition primer and under the topcoat at an automobile or light duty truck assembly coating facility. Primer-surfacer provides adhesion, protection, and appearance properties to the total finish. Primer-surfacer may also be called guide coat or surfacer.

58. Printed interior panel—A panel whose grain or natural surface is obscured by fillers and basecoats upon which a simulated grain or decorative pattern is printed.

59. Printing—Any operation that imparts color, images, or text onto a substrate using printing inks.

60. Printing ink—Any fluid or viscous composition used in printing, impressing, or transferring an image onto a substrate. Varnishes and coatings applied with offset lithographic and letterpress printing presses are inks and are part of the applicable printing process, not a separate operation such as paper coating.

61. Process—Any collection of structures and/or equipment that processes, assembles, applies, or otherwise uses material inputs to produce or store an intermediate or final product. A single facility may contain more than one (1) process or production unit.

62. Process heater—Any enclosed device using controlled flame, that is not a boiler, and the unit's primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to heat transfer material for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not directly come into contact with process materials. Process heaters do not include units used for comfort heat or space heat, food preparation for onsite consumption, or autoclaves.

63. Process unit—For the purpose of 10 CSR 10-5.550 only, equipment assembled and connected by pipes or ducts to produce, as intermediates or final products, one (1) or more SOCMI chemicals (see Appendix A of Control of Volatile Organic Compound Emissions from Reactor Processes and Distillation Operations Processes in the Synthetic Organic Chemical Manufacturing Industry, EPA-450/4-91-031). A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient product storage facilities.

64. Process weight—The total weight of all materials introduced into an emission unit, including solid fuels which may cause any emission of particulate matter, but excluding liquids and gases used solely as fuels and air introduced for purposes of combustion.

65. Process weight rate—A rate in tons per hour established as follows:

A. The rate of materials introduced to the process which may cause any emission of particulate matter;

B. For continuous or long-run steady-state emission units, the total process weight for the entire period of continuous operation or for a typical portion, divided by the number of hours of that period or portion;

C. For cyclical or batch emission units, the total process weight for a period of time which covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during that period; or

D. Where the nature of any process or operation or the design of any equipment permits more than one (1) interpretation of this section, that interpretation which results in the minimum value for allowable emission shall apply.

66. Product—For the purpose of 10 CSR 10-5.550 only, any compound or SOCMI chemical (see Appendix A of Control of Volatile Organic Compound Emissions from Reactor Processes and Distillation Operations Processes in the Synthetic Organic Chemical Manufacturing Industry, EPA-450/4-91-031) that is produced as that chemical for sales as a product, by-product, co-product, or intermediate or for use in the production of other chemicals or compounds.

67. Production—Any collection of structures and/or equipment, that processes, assembles, applies, or otherwise uses material inputs to produce or store an intermediate or final product. A single facility may contain more than one (1) process or production unit.

68. Production equipment exhaust system—A device for collecting and directing out of the work area fugitive emissions from reactor openings, centrifuge openings, and other vessel openings and equipment for the purpose of protecting workers from excessive exposure.

69. Project-specific net emissions increase—The difference between permitted emissions to be emitted by the project that triggered a prevention of significant deterioration review and the baseline

emission inventory for the applicable project.

70. Protocol—A replicable and workable method to estimate the mass of emissions reductions, or the amount of ERCs needed for compliance.

71. Public vehicle—Any motor vehicle, other than a passenger vehicle, and any trailer, semi-trailer, or pole trailer drawn by such a motor vehicle, which is designed, used, and maintained for the transportation of persons or property at the public expense and under public control.

72. Publication rotogravure printing—Rotogravure printing upon paper which is subsequently formed into books, magazines, catalogues, brochures, directories, newspaper supplements, and other types of printed materials.

73. Pushing operation—The process of removing coke from the coke oven. The coke-pushing operation begins when the coke-side oven door is removed and is completed when the hot car enters the quench tower and the coke-side oven door is replaced.

74. Pyrolysis—The endothermic gasification of hospital waste and/or medical/infectious waste using external energy.

AUTHORITY: section 643.050 and 643.055, RSMo 2000. Original rule filed Aug. 16, 1977, effective Feb. 11, 1978. For intervening history, please consult the ***Code of State Regulations****. Amended: Filed Sept. 16, 2011.*

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed amendment will begin at 9:00 a.m., December 8, 2011. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded any interested person. Interested persons, whether or not heard, may submit a written or email statement of their views until 5:00 p.m., December 15, 2011. Written comments shall be sent to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176. Email comments shall be sent to apcprulespn@dnr.mo.gov.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 6—Air Quality Standards, Definitions, Sampling and Reference Methods and Air Pollution Control Regulations for the Entire State of Missouri

PROPOSED AMENDMENT

10 CSR 10-6.310 Restriction of Emissions from Municipal Solid Waste Landfills. The commission proposes to amend subsections (1)(D) and (1)(E); amend sections (2), (3), and (5); add subsection (3)(C); amend subsections (4)(B), (4)(C), (6)(A), (6)(C), (6)(D), (7)(A), (7)(B), (7)(D), (7)(E), (8)(A) through (8)(D), (8)(F), (8)(G), (9)(B), and (10)(A). If the commission adopts this rule action, it will be the department's intention to submit this rule amendment to the U.S. Environmental Protection Agency to replace the current rule that is in the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Environmental Regulatory Agenda website, www.dnr.mo.gov/regs/index.html.

PURPOSE: This rule requires owners of municipal solid waste landfills to report their landfill's design capacity and non-methane organic compound (NMOC) emissions. Landfills having design capacities of two and one-half (2.5) million cubic meters or greater and NMOC emission rates of fifty (50) megagrams or greater shall design, install, and operate a gas collection and control system. This amendment is to maintain consistency with federal emission guidelines for existing municipal solid waste landfills promulgated as 40 CFR 60, Subpart Cc. The evidence supporting the need for this proposed rulemaking, per section 536.016, RSMo, are ***Federal Register*** *updates published on April 10, 2000, October 17, 2000, and September 21, 2006.*

(1) Applicability.

(D) For purposes of obtaining an operating permit under Title V of the Clean Air Act, the owner or operator of an MSW landfill subject to this rule with a design capacity less than two and one-half (2.5) million megagrams or two and one-half (2.5) million cubic meters is not subject to the requirements to obtain an operating permit for the landfill under 40 *Code of Federal Regulations* (CFR) *[part]* 70 or 71, unless the landfill is otherwise subject to either 40 CFR *[part]* 70 or 71. For purposes of submitting a timely application for an operating permit under 40 CFR *[part]* 70 or 71, the owner or operator of an MSW landfill subject to the rule with a design capacity greater than or equal to two and one-half (2.5) million megagrams and two and one-half (2.5) million cubic meters on the effective date of EPA approval of the state's program under section 111(d) of the Clean Air Act (June 23, 1998), and not otherwise subject to either 40 CFR *[part]* 70 or 71, becomes subject to the requirements of section 70.5(a)(1)(i) or 71.5(a)(1)(i) of the Clean Air Act ninety (90) days after the effective date of such 111(d) program approval, even if the design capacity report is submitted earlier.

(E) When an MSW landfill subject to this rule is closed, the owner or operator is no longer subject to the requirement to maintain an operating permit under 40 CFR *[part]* 70 or 71 for the landfill if the landfill is not otherwise subject to the requirements of either 40 CFR *[part]* 70 or 71 and if either of the following conditions is met:

1. The landfill was never subject to a requirement for a control system under section (3) of this rule; or

2. The owner or operator meets the conditions for control system removal specified in section 60.752(b)(2)(v) of **40 CFR 60, *[s]*Subpart WWW.**

(2) Definitions. Definitions of certain terms specified in this rule may be found in 10 CSR 10-6.020. *[Additional definitions are as follows:*

(A) Active collection system—A gas collection system that uses gas mover equipment;

(B) Active landfill—A landfill in which solid waste is being placed or a landfill that is planned to accept waste in the future;

(C) Closed landfill—A landfill in which solid waste is no longer being placed, and in which no additional solid wastes will be placed without first filing a notification of modification as prescribed under 40 Code of Federal Regulations (CFR) part 60.7(a)(4) (incorporated by reference). Once a notification of modification has been filed, and additional solid waste is placed in the landfill, the landfill is no longer closed.

(D) Closure—That point in time when a landfill becomes a closed landfill;

(E) Commercial solid waste—All types of solid waste generated by stores, offices, restaurants, warehouses, and other nonmanufacturing activities, excluding residential and industrial wastes;

(F) Controlled landfill—Any landfill at which collection and control systems are required under this rule as a result of the nonmethane organic compounds emission rate. The landfill is considered controlled if a collection and control system design plan is submitted in compliance with subparagraph (3)(B)2.A. of this rule;

(G) Design capacity—The maximum amount of solid waste a landfill can accept, as indicated in terms of volume or mass in the most recent construction or operating permit issued by the state or local agency responsible for regulating the landfill, plus any in-place waste not accounted for in the most recent permit. If the owner or operator chooses to convert the design capacity from volume to mass or from mass to volume to demonstrate its design capacity is less than two and one-half (2.5) million megagrams or two and one-half (2.5) million cubic meters, the calculation must include a site-specific density, which must be recalculated annually;

(H) Disposal facility—All contiguous land and structures, other appurtenances, and improvements on the land used for the disposal of solid waste;

(I) Emission rate cutoff—The threshold annual emission rate to which a landfill compares its estimated emission rate to determine if control under the regulation is required;

(J) Enclosed combustor—An enclosed firebox which maintains a relatively constant limited peak temperature generally using a limited supply of combustion air. An enclosed flare is considered an enclosed combustor;

(K) Flare—An open combustor without enclosure or shroud;

(L) Gas mover equipment—The equipment (that is, fan, blower, compressor) used to transport landfill gas through the header system;

(M) Household waste—Any solid waste (including garbage, trash, and sanitary waste in septic tanks) derived from households (including, but not limited to, single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas);

(N) Industrial solid waste—Solid waste generated by manufacturing or industrial processes that is not a hazardous waste regulated under Subtitle C of the Resource Conservation and Recovery Act, 40 CFR parts 264 and 265 (incorporated by reference). Such waste may include, but is not limited to, waste resulting from the following manufacturing processes: electric power generation; fertilizer/agricultural chemicals; food and related products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include mining waste or oil and gas waste;

(O) Interior well—Any well or similar collection component located inside the perimeter of the landfill waste. A perimeter well located outside the landfilled waste is not an interior well;

(P) Landfill—An area of land or an excavation in which wastes are placed for permanent disposal, and that is not a land application unit, surface impoundment, injection well, or waste pile as those terms are defined under 40 CFR part 257.2 (incorporated by reference);

(Q) Lateral expansion—A horizontal expansion of the waste boundaries of an existing MSW landfill. A lateral expansion is not a modification unless it results in an increase in the design capacity of the landfill;

(R) Modification—An increase in the permitted volume design capacity of the landfill by either horizontal or vertical expansion based on its most recent permitted design capacity. Modification does not occur until the owner or operator commences construction on the horizontal or vertical expansion;

(S) Municipal solid waste landfill or MSW landfill—An entire disposal facility in a contiguous geographical space where household waste is placed in or on land. An MSW landfill may also receive other types of Resource Conservation and Recovery Act (RCRA) Subtitle D wastes, 40 CFR part 257.2 (incorporated by reference) such as commercial solid waste, nonhazardous sludge, conditionally exempt small quantity generator waste, and industrial solid waste. Portions of an MSW landfill may be separated by access roads. An MSW landfill may be publicly or privately owned. An MSW landfill may be a new MSW landfill, an existing MSW landfill, or a lateral expansion;

(T) Municipal solid waste landfill emissions or MSW landfill emissions—Gas generated by the decomposition of organic waste deposited in an MSW landfill or derived from the evolution of organic compounds in the waste;

(U) NMOC—Nonmethane organic compounds, as measured according to the provisions of section (5) of this rule;

(V) Nondegradable waste—Any waste that does not decompose through chemical breakdown or microbiological activity. Examples are, but are not limited to, concrete, municipal waste combustor ash, and metals;

(W) Passive collection system—A gas collection system that solely uses positive pressure within the landfill to move the gas rather than using gas mover equipment;

(X) Sludge—Any solid, semisolid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility, exclusive of the treated effluent from a wastewater treatment plant;

(Y) Solid waste—Any garbage, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permits under 33 U.S.C. 1342 (incorporated by reference), or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq., incorporated by reference);

(Z) Sufficient density—Any number, spacing, and combination of collection system components, including vertical wells, horizontal collectors, and surface collectors, necessary to maintain emission and migration control as determined by measures of performance set forth in this rule; and

(AA) Sufficient extraction rate—A rate sufficient to maintain a negative pressure at all wellheads in the collection system without causing air infiltration, including any wellheads connected to the system as a result of expansion or excess surface emissions, for the life of the blower.]

(3) Standards for Air Emissions from Municipal Solid Waste Landfills. **Provisions of 40 CFR 51, 40 CFR 52, 40 CFR 60, and 40 CFR 258 are incorporated by reference in subsection (3)(C) of this rule. Also, the *Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources*, AP-42, Fifth Edition, January 1995 (hereafter AP-42), as published by the Government Printing Office, 732 North Capitol Street NW, Washington, DC 20401, shall apply and is hereby incorporated by reference, including Supplement E dated November 1998.**

This rule does not incorporate any subsequent amendments or additions.

(A) Each owner or operator of an MSW landfill having a design capacity less than two and one-half (2.5) million megagrams by mass or two and one-half (2.5) million cubic meters by volume shall submit an initial design capacity report to the director as provided in subsection (8)(A) of this rule. The landfill may calculate design capacity in either megagrams or cubic meters for comparison with the exemption values. Any density conversions shall be documented and submitted with the report. *[For purposes of part 70 permitting under 10 CSR 10-6.065, a landfill with a design capacity less than two and one-half (2.5) million megagrams or two and one-half (2.5) million cubic meters does not require an operating permit under 40 CFR part 70.]* Submittal of the initial design capacity report shall fulfill the requirements of this rule except as provided for in paragraphs (3)(A)1. and 2. of this rule.

1. The owner or operator shall submit to the director an amended design capacity report, as provided for in paragraph (8)(A)3. of this rule*[, when there is any increase in the design capacity of a landfill subject to the provisions of this rule, whether the increase results from an increase in the area or depth of the landfill, a change in the operating procedures of the landfill, or any other means]*.

2. *[If any]* **When an** increase in the maximum design capacity of a landfill exempted from the provisions of subsection (3)(B) through section (10) of this rule on the basis of the design capacity exemption in subsection (3)(A) of this rule*[,]* results in a revised maximum design capacity equal to or greater than two and one-half (2.5) million megagrams and two and one-half (2.5) million cubic meters, the owner or operator shall comply with the provisions of subsection (3)(B) of this rule.

(B) Each owner or operator of an MSW landfill having a design capacity equal to or greater than two and one-half (2.5) million megagrams and two and one-half (2.5) million cubic meters*[,]* shall either comply with paragraph (3)(B)2. of this rule or calculate an NMOC emission rate for the landfill using the procedures specified in section (5) of this rule. The NMOC emission rate shall be recalculated annually, except as provided in subparagraph (8)(B)1.B. of this rule. The owner or operator of an MSW landfill subject to this rule with a design capacity greater than or equal to two and one-half (2.5) million megagrams and two and one-half (2.5) million cubic meters is subject to **40 CFR** *[part]* 70 **or 71** permitting requirements. *[When a landfill is closed, and either never needed control or meets the conditions for control system removal specified in subparagraph (3)(B)2.E of this rule, a part 70 operating permit is no longer required.]*

1. If the calculated NMOC emission rate is less than fifty (50) megagrams per year, the owner or operator shall—

A. Submit an annual emission report to the director, except as provided for in subparagraph (8)(B)1.B. of this rule; and

B. Recalculate the NMOC emission rate annually using the procedures specified in paragraph (5)(A)1. of this rule until such time as the calculated NMOC emission rate is equal to or greater than fifty (50) megagrams per year, or the landfill is closed.

(I) If the NMOC emission rate, upon recalculation required in subparagraph (3)(B)1.B. of this rule is equal to or greater than fifty (50) megagrams per year, the owner or operator shall install a collection and control system in compliance with paragraph (3)(B)2. of this rule.

(II) If the landfill is permanently closed, a closure notification shall be submitted to the director as provided for in subsection (8)(D) of this rule.

2. If the calculated NMOC emission rate is equal to or greater than fifty (50) megagrams per year, the owner or operator shall—

A. Submit a collection and control system design plan prepared by a professional engineer to the director within one (1) year. Permit modification approval from the Missouri Department of Natural Resources' Solid Waste Management Program shall be required prior to construction of any gas collection system.

(I) The collection and control system as described in the plan shall meet the design requirements of subparagraph (3)(B)2.B. of this rule.

(II) The collection and control system design plan shall include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, record keeping or reporting provisions of sections (4) through (9) of this rule proposed by the owner or operator.

(III) The collection and control system design plan shall either conform with specifications for active collection systems in section (10) of this rule or include a demonstration to the director's satisfaction*[, such that human health and safety is protected,]* of the sufficiency of the alternative provisions to section (10) of this rule.

(IV) The director shall review the information submitted under parts (3)(B)2.A.(I), (II)**,** and (III) of this rule and either approve it, disapprove it, or request that additional information be submitted. Because of the many site-specific factors involved with landfill gas system design, alternative systems may be necessary. A wide variety of system designs are possible, such as vertical wells, combination horizontal and vertical collection systems, horizontal trenches only, leachate collection components, and passive systems;

B. Install a collection and control system that captures the gas generated within the landfill as required by part (3)(B)2.B.(I) or (II) and subparagraph (3)(B)2.C. of this rule within thirty (30) months after the first annual report in which the emission rate equals or exceeds fifty (50) megagrams per year, unless Tier 2 or Tier 3 sampling under section (5) of this rule demonstrates that the emission rate is less than fifty (50) megagrams per year, as specified in paragraph (8)(C)1. or 2. of this rule.

(I) An active collection system shall—

(a) Be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control or treatment system equipment;

(b) Collect gas from each area, cell, or group of cells in the landfill in which the initial solid waste has been placed for a period of—

I. Five (5) years or more if active; or

II. Two (2) years or more if closed or at final grade;

(c) Collect gas at a sufficient extraction rate; and

(d) Be designed to minimize off-site migration of subsurface gas.

(II) A passive collection system shall—

(a) Comply with the provisions specified in subparts (3)(B)2.B.(I)(a), (b)**,** and (d) of this rule; and

(b) Be installed with liners on the bottom and all sides in all areas in which gas is to be collected. The liners shall be installed as required under 40 CFR *[part]* 258.40 *[(incorporated by reference)]*;

C. Route all the collected gas to one **(1)** or more of the following control systems:

(I) An open flare designed and operated in accordance with 40 CFR *[part]* 60.18 *[(incorporated by reference)]* **except as noted in subsection (5)(E) of this rule**;

(II) A control system designed and operated to reduce NMOC by ninety-eight (98) weight-percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by ninety-eight (98) weight-percent or reduce the outlet NMOC concentration to less than twenty parts per million by volume (20 ppmv), dry basis as hexane at three percent (3%) oxygen. The reduction efficiency or parts per million by volume shall be established by an initial performance test*[,]* to be completed no later than one hundred eighty (180) days after the initial startup of the approved control system using the test methods specified in subsection (5)(D) of this rule.

(a) If a boiler or process heater is used as the control device, the landfill gas stream shall be introduced into the flame zone.

(b) The control device shall be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored are specified in section (7) of this rule; or

(III) A system that routes the collected gas to a treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of part (3)(B)2.C.(I) or (II) of this rule;

D. Operate the collection and control device installed to comply with this rule in accordance with the provisions of sections (4), (6), and (7) of this rule;

E. The collection and control system may be capped or removed provided that all the conditions of parts (3)(B)2.E.(I), (II), and (III) of this rule are met—

(I) The landfill shall be no longer accepting solid waste and be permanently closed under the requirements of 40 CFR *[part]* 258.60 *[(incorporated by reference)]*. A closure report shall be submitted to the director as provided in subsection (8)(D) of this rule;

(II) The collection and control system shall have been in operation a minimum of fifteen (15) years; and

(III) Following the procedures specified in subsection (5)(B) of this rule, the calculated NMOC gas produced by the landfill shall be less than fifty (50) megagrams per year on three (3) successive test dates. The test dates shall be no less than ninety (90) days apart, and no more than one hundred eighty (180) days apart; and

F. The planning, awarding of contracts, and installation of MSW landfill air emission collection and control equipment capable of meeting the emission standards in subsection (3)(B) of this rule shall be accomplished within thirty (30) months after the date the initial NMOC emission rate report shows NMOC emissions equal or exceed fifty (50) megagrams per year.

(C) The specific citations of 40 CFR 51, 40 CFR 52, 40 CFR 60, and 40 CFR 258 referenced in this rule and promulgated as of June 30, 2011, shall apply and are hereby incorporated by reference in this rule, as published by the Office of the Federal Register, U.S. National Archives and Records, 700 Pennsylvania Avenue NW, Washington, DC 20408. This rule does not incorporate any subsequent amendments or additions. All of the provisions of 40 CFR 51.166 other than (a) Plan requirements and (q) Public participation are incorporated by reference in this rule. All of the provisions of 40 CFR 52.21, other than (a) Plan disapproval, (q) Public participation, (s) Environmental impact statements, and (u) Delegation of authority are incorporated by reference in this rule with the following adaptation. Administrator as it appears in 40 CFR 52.21 shall refer to the director of the Missouri Department of Natural Resources' Air Pollution Control Program except in the following, where it shall continue to refer to the administrator of the U.S. Environmental Protection Agency:

1. (b)(17) Federally enforceable;

2. (b)(37)(i) Repowering;

3. (b)(43) Prevention of Significant Deterioration (PSD) program;

4. (b)(48) Baseline actual emissions;

5. (b)(49) Subject to regulation

6. (b)(50) Regulated NSR pollutant;

7. (b)(51) Reviewing authority;

8. (g) Redesignation;

9. (l) Air quality models;

10. (p) Federal Land Manager;

11. (t) Disputed permits or redesignations; and

12. (v) Innovative control technology.

(4) Operational Standards for Collection and Control Systems. Each owner or operator of an MSW landfill gas collection and control system used to comply with the provisions of subparagraph (3)(B)2.B. of this rule shall—

(B) Operate the collection system with negative pressure at each wellhead except under the following conditions:

1. A fire or increased well temperature. The owner or operator shall record instances when positive pressure occurs in efforts to avoid a fire. These records shall be submitted with the annual reports as provided in paragraph (8)(F)1. of this rule;

2. Use of a geomembrane or synthetic cover. The owner or operator shall develop acceptable pressure limits in the design plan; and

3. A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. All design changes shall be approved by the director **and EPA**;

(C) Operate each interior wellhead in the collection system with a landfill gas temperature less than fifty-five degrees Celsius (55 °C) and with either a nitrogen level less than twenty percent (20%) or an oxygen level less than five percent (5%). The owner or operator may establish a higher operating temperature, nitrogen, or oxygen value at a particular well. A higher operating value demonstration shall show supporting data that the elevated parameter does not cause fires or significantly inhibit anaerobic decomposition by killing methanogens.

1. The nitrogen level shall be determined using Method 3C of *[Appendix A,]* 40 CFR *[part]* 60**,** *[(incorporated by reference)]* **Appendix A**, unless an alternative test method is established as allowed by subparagraph (3)(B)2.A. of this rule.

2. Unless an alternative test method is established as allowed by subparagraph (3)(B)2.A. of this rule, the oxygen shall be determined by an oxygen meter using Method 3A **or 3C** of *[Appendix A,]* 40 CFR *[Part]* 60**,** *[(incorporated by reference)]* **Appendix A**, except that—

A. The span shall be set so that the regulatory limit is between twenty and fifty percent (20%–50%) of the span;

B. A data recorder is not required;

C. Only two (2) calibration gases are required, a zero **(0)** and span, and ambient air may be used as the span;

D. A calibration error check is not required; and

E. The allowable sample bias, zero **(0)** drift, and calibration drift are plus or minus ten percent (±10%);

(5) Test Methods and Procedures.

(A) NMOC Emission Rate Calculation.

1. The landfill owner or operator shall calculate the NMOC emission rate using either the equation provided in subparagraph (5)(A)1.A. of this rule or the equation provided in subparagraph (5)(A)1.B. of this rule. Both equations may be used if the actual year-to-year solid waste acceptance rate is known**, as specified in subparagraph (5)(A)1.A. of this rule, for part of the life of the landfill and the actual year-to-year solid waste acceptance rate is unknown, as specified in subparagraph (5)(A)1.B., for part of the life of the landfill**. The values to be used in both equations are 0.05 per year for k, one hundred seventy (170) cubic meters per megagram for L_o, and four thousand (4,000) parts per million by volume as hexane for the C_{NMOC}. For landfills located in geographical areas with a thirty (30)-year annual average precipitation of less than twenty-five inches (25"), as measured at the nearest representative official meteorologic site, the k value to be used is 0.02 per year.

A. The following equation shall be used if the actual year-to-year solid waste acceptance rate is known. The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for M_i if the documentation of the nature and amount of such wastes is maintained.

$$M_{NMOC} = \sum_{i=1}^{n} 2kL_o M_i (e^{-kt_i}) (C_{NMOC}) (3.6 \times 10^{-9})$$

where,

M_{NMOC}	=	Total NMOC emission rate from the landfill, megagrams per year
k	=	methane generation rate constant, $year^{-1}$
L_o	=	methane generation potential, cubic meters per megagram solid waste
M_i	=	mass of solid waste in the i^{th} section, megagrams
t_i	=	age of the i^{th} section, years
C_{NMOC}	=	concentration of NMOC, parts per million by volume as hexane
3.6×10^{-9}	=	conversion factor

B. The following equation shall be used if the actual year-to-year solid waste acceptance rate is unknown. The mass of nondegradable solid waste may be subtracted from the average annual acceptance rate when calculating a value for R, if the documentation provisions of paragraph (9)(D)2. of this rule are followed.

$$M_{NMOC} = 2 L_o R (e^{-kc} - e^{-kt}) (C_{NMOC}) (3.6 \times 10^{-9})$$

where,

M_{NMOC}	=	mass emission rate of NMOC, megagrams per year
L_o	=	methane generation potential, cubic meters per megagram solid waste
R	=	average annual acceptance rate, megagrams per year
k	=	methane generation rate constant, $year^{-1}$
t	=	age of landfill, years
C_{NMOC}	=	concentration of NMOC, parts per million by volume as hexane
c	=	time since closure, years. For active landfill c= 0 and $e^{-kc} = 1$
3.6×10^{-9}	=	conversion factor

2. Tier 1. The owner or operator shall compare the calculated NMOC mass emission rate to the standard of fifty (50) megagrams per year.

A. If the NMOC emission rate calculated in paragraph (5)(A)1. of this rule is less than fifty (50) megagrams per year, then the landfill owner shall submit an emission rate report as provided in paragraph (8)(B)1. of this rule, and shall recalculate the NMOC mass emission rate annually as required under paragraph (3)(B)1. of this rule.

B. If the calculated NMOC emission rate is equal to or greater than fifty (50) megagrams per year, then the landfill owner shall either comply with paragraph (3)(B)2. of this rule, or determine a site-specific NMOC concentration and recalculate the NMOC emission rate using the procedures provided in paragraph (5)(A)3. of this rule.

3. Tier 2. The landfill owner or operator shall determine the NMOC concentration using the following sampling procedure. The landfill owner or operator shall install at least two (2) sample probes per hectare of landfill surface that has retained waste for at least two (2) years. If the landfill is larger than twenty-five (25) hectares in area, only fifty (50) samples are required. The sample probes should be located to avoid known areas of nondegradable solid waste. The owner or operator shall collect and analyze one (1) sample of landfill gas from each probe to determine the NMOC concentration using Method **25 or** 25C *[or]* **of 40 CFR 60, Appendix A.** Method 18 of *[Appendix A,]* 40 CFR *[part]* 60**,** *[(incorporated by reference)]* **Appendix A may be used to analyze the samples collected by the Method 25 or 25C sampling procedure**. **Taking composite samples from different probes into a single cylinder is allowed; however, equal sample volumes must be taken from each probe. For each composite, the sampling rate, collection times, beginning and ending cylinder vacuums, or alternative volume measurements must be recorded to verify that composite volumes are equal. Composite sample volumes should not be less than one (1) liter unless evidence can be provided to substantiate the accuracy of smaller volumes. Terminate compositing before the cylinder approaches ambient pressure where measurement accuracy diminishes.** If using Method 18, the minimum list of compounds to be tested shall be those published in *[the most recent Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources (]*AP-42*[)]*, *[available from the Government Printing Office. If composite sampling is used, equal volumes shall be taken from each sample probe.]* **minus carbon monoxide, hydrogen sulfide, and mercury. As a minimum, the instrument must be calibrated for each of the compounds on the list. Convert the concentration of each Method 18 compound to C_{NMOC} as hexane by multiplying by the ratio of its carbon atoms divided by six (6).** If more than the required number of samples are taken, all samples shall be used in the analysis. The landfill owner or operator *[shall]* **must** divide the NMOC concentration from Method **25 or** 25C **of 40 CFR 60, Appendix A** by six (6) to convert from C_{NMOC} as carbon to C_{NMOC} as hexane. **If the landfill has an active or passive gas removal system in place, Method 25 or 25C samples may be collected from these systems instead of surface probes provided the removal system can be shown to provide sampling as representative as the two (2) sampling probe per hectare requirement. For active collection systems, samples may be collected from the common header pipe before the gas moving or condensate removal equipment. For these systems, a minimum of three (3) samples must be collected from the header pipe.**

A. The landfill owner or operator shall recalculate the NMOC mass emission rate using the equations provided in subparagraph (5)(A)1.A. or B. of this rule and using the average NMOC concentration from the collected samples instead of the default value in the equation provided in paragraph (5)(A)1. of this rule.

B. If the resulting mass emission rate calculated using the site-specific NMOC concentration is equal to or greater than fifty (50) megagrams per year, then the landfill owner or operator shall either comply with paragraph (3)(B)2. of this rule, or determine the site-specific methane generation rate constant and recalculate the NMOC emission rate using the site-specific methane generation rate using the procedure specified in paragraph (5)(A)4. of this rule.

C. If the resulting NMOC mass emission rate is less than fifty (50) megagrams per year, the owner or operator shall submit a periodic estimate of the emission rate report as provided in paragraph (8)(B)1. of this rule and retest the site-specific NMOC concentration every five (5) years using the methods specified in this section.

4. Tier 3. The site-specific methane generation rate constant shall be determined using the procedures provided in Method 2E of *[Appendix A,]* 40 CFR *[part]* 60**,** *[(incorporated by reference)]* **Appendix A**. The landfill owner or operator shall estimate the NMOC mass emission rate using equations in subparagraph (5)(A)1.A. or B. of this rule and using a site-specific methane generation rate constant k, and the site-specific NMOC concentration as determined in paragraph (5)(A)3. of this rule instead of the default values provided in paragraph (5)(A)1. of this rule. The landfill owner or operator shall compare the resulting NMOC mass emission rate to the standard of fifty (50) megagrams per year.

A. If the NMOC mass emission rate as calculated using the site-specific methane generation rate and concentration of NMOC is equal to or greater than fifty (50) megagrams per year, the owner or operator shall comply with paragraph (3)(B)2. of this rule.

B. If the NMOC mass emission rate is less than fifty (50) megagrams per year, then the owner or operator shall submit a periodic emission rate report as provided in paragraph (8)(B)1. of this rule and shall recalculate the NMOC mass emission rate annually, as provided in paragraph (8)(B)1. of this rule using the equations in paragraph (5)(A)1. of this rule and using the site-specific methane

generation rate constant and NMOC concentration obtained in paragraph (5)(A)3. of this rule. The calculation of the methane generation rate constant is performed only once, and the value obtained from this test shall be used in all subsequent annual NMOC emission rate calculations.

5. The owner or operator may use other methods to determine the NMOC concentration or a site-specific k as an alternative to the methods required in paragraphs (5)(A)3. and 4. of this rule if the method has been approved by the director **and EPA**.

[6. The owner or operator may recalculate the NMOC mass emission rate using AP-42 values instead of the default values provided in paragraph (5)(A)1. of this rule as an alternative to the methods required in paragraph (5)(A)3. or 4. of this rule.]

(B) After the installation of a collection and control system in compliance with section (6) of this rule, the owner or operator shall calculate the NMOC emission rate for purposes of determining when the system can be removed as provided in subparagraph (3)(B)2.E. of this rule, using the following equation:

$$M_{NMOC} = (1.89 \times 10^{-3}) (Q_{LFG}) (C_{NMOC})$$

where,

M_{NMOC} = mass emission rate of NMOC, megagrams per year
Q_{LFG} = flow rate of landfill gas, cubic meters per minute
C_{NMOC} = NMOC concentration, parts per million by volume as hexane

1. The flow rate of landfill gas, Q_{LFG}, shall be determined by measuring the total landfill gas flow rate at the common header pipe that leads to the control device using a gas flow measuring device calibrated according to the provisions of section 4 of Method 2E **of 40 CFR 60, Appendix A**.

2. The average NMOC concentration, C_{NMOC}, shall be determined by collecting and analyzing landfill gas sampled from the common header pipe before the gas moving or condensate removal equipment using the procedures in Method 25C or Method 18 **of 40 CFR 60, Appendix A**. If using Method 18, the minimum list of compounds to be tested shall be those published in *[the most recent Compilation of Air Pollutant Emission Factors (]*AP-42*[)]*. The sample location on the common header pipe shall be before any condensate removal or other gas refining units. The landfill owner or operator shall divide the NMOC concentration from Method 25C by six (6) to convert from C_{NMOC} as carbon to C_{NMOC} as hexane.

3. The owner or operator may use another method to determine landfill gas flow rate and NMOC concentration if the method has been approved by the director **and EPA** as provided in part (3)(B)2.A.(II) of this rule.

(C) *[The]* **When calculating emissions for prevention of significant deterioration (PSD) purposes, the** owner or operator of each MSW landfill subject to the provisions of this rule shall estimate the NMOC emission rate for comparison to the *[prevention of significant deterioration (]* PSD *[)]* major source and significance levels in 40 CFR *[part]* 51.166 or 52.21 *[(incorporated by reference)]* using AP-42 or other approved measurement procedures. *[If a collection system, which complies with the provisions in paragraph (3)(B)2. of this rule is already installed, the owner or operator shall estimate the NMOC emission rate using the procedures provided in subsection (5)(B).]*

(D) For the performance test required in part (3)(B)2.C.(II) of this rule, Method **25,** 25C**,** or Method 18 **of 40 CFR 60, Appendix A** shall be used to determine compliance with ninety-eight (98) weight-percent efficiency or the twenty (20) ppmv outlet concentration level, unless another method to demonstrate compliance has been approved by the director **and EPA** as provided by part (3)(B)2.A.(II) of this rule. **Method 3 or 3A of 40 CFR 60, Appendix A shall be used to determine oxygen for correcting the NMOC concentration as hexane to three percent (3%). In cases where the outlet concentration is less than fifty (50) ppm NMOC as carbon (eight (8) ppm NMOC as hexane), Method 25A of 40 CFR 60, Appendix A should be used in place of Method 25.** If using Method 18, the minimum list of compounds to be tested shall be those published in *[the most recent Compilation of Air Pollutant Emission Factors (]*AP-42*[)]*. The following equation shall be used to calculate efficiency:

$$\text{Control Efficiency} = (NMOC_{in} - NMOC_{out})/(NMOC_{in})$$

where,

$NMOC_{in}$ = mass of NMOC entering control device
$NMOC_{out}$ = mass of NMOC exiting control device

(E) For the performance test required in part (3)(B)2.C.(I), the net heating value of the combusted landfill gas as determined in 40 CFR 60.18(f)(3) is calculated from the concentration of methane in the landfill gas as measured by Method 3C of 40 CFR 60, Appendix A. A minimum of three (3) thirty (30)-minute Method 3C samples are determined. The measurement of other organic components, hydrogen, and carbon monoxide is not applicable. Method 3C may be used to determine the landfill gas molecular weight for calculating the flare gas exit velocity under 40 CFR 60.18(f)(4).

(6) Compliance Provisions.

(A) Except as provided in part (3)(B)2.A.(II) of this rule, the specified methods in paragraphs (6)(A)1. through (6)(A)6. of this rule shall be used to determine whether the gas collection system is in compliance with subparagraph (3)(B)2.B. of this rule*[.]*—

1. For the purposes of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with subpart (3)(B)2.B.(I)(a) of this rule, one (1) of the following equations shall be used. The k and L_o kinetic factors should be those published in *[the most recent Compilation of Air Pollutant Emission Factors (]*AP-42*[)]* or other site specific values demonstrated to be appropriate and approved by the director **and EPA**. If k has been determined as specified in paragraph (5)(A)4. of this rule, the value of k determined from the test shall be used. A value of no more than fifteen (15) years shall be used for the intended use period of the gas mover equipment. The active life of the landfill is the age of the landfill plus the estimated number of years until closure.

A. For sites with unknown year-to-year solid waste acceptance rate—

$$Q_m = 2L_o R (e^{-kc} - e^{-kt})$$

where,

Q_m = maximum expected gas generation flow rate, cubic meters per year
L_o = methane generation potential, cubic meters per megagram solid waste
R = average annual acceptance rate, megagrams per year
k = methane generation rate constant, $year^{-1}$
t = age of the landfill at equipment installation plus the time the owner or operator intends to use the gas mover equipment or active life of the landfill, whichever is less. If the equipment is installed after closure, t is the age of the landfill at installation, years
c = time since closure, years (for an active landfill c = 0 and $e^{-kc} = 1$)

B. For sites with known year-to-year solid waste acceptance rate—

$$Q_m = \sum_{i=1}^{n} 2 k L_o M_i (e^{-kt_i})$$

where,

Q_m = maximum expected gas generation flow rate, cubic meters per year
k = methane generation rate constant, $year^{-1}$
L_o = methane generation potential, cubic meters per megagram solid waste
M_i = mass of solid waste in the i^{th} section, megagrams
t_i = age of the i^{th} section, years

C. If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, the equations in subparagraphs (6)(A)1.A. and B. of this rule. If the landfill is still accepting waste, the actual measured flow data will not equal the maximum expected gas generation rate, so calculations using the equations in subparagraphs (6)(A)1.A. or B. of this rule or other methods shall be used to predict the maximum expected gas generation rate over the intended period of use of the gas control system equipment*[.]***;**

2. For the purposes of determining sufficient density of gas collectors for compliance with subpart (3)(B)2.B.(I)(b) of this rule, the owner or operator shall design a system of vertical wells, horizontal collectors, or other collection devices, satisfactory to the director, capable of controlling and extracting gas from all portions of the landfill sufficient to meet all operational and performance standards*[.]***;**

3. For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with subpart (3)(B)2.B.(I)(c) of this rule, the owner or operator shall measure gauge pressure in the gas collection header at each individual well, monthly. If a positive pressure exists, action shall be initiated to correct the exceedance within five (5) calendar days, except for the three (3) conditions allowed under subsection (4)(B) of this rule. If negative pressure cannot be achieved without excess air infiltration within fifteen (15) calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within one hundred twenty (120) days of the initial measurement of positive pressure. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the director for approval*[.]***;**

4. Owners or operators are not required to expand the system as required in paragraph*[s]* (6)(A)3. of this rule during the first one hundred eighty (180) days after gas collection system start-up*[.]***;**

5. For the purpose of identifying whether excess air infiltration into the landfill is occurring, the owner or operator shall monitor each well monthly for temperature and nitrogen or oxygen as provided in subsection (4)(C) of this rule. If a well exceeds one (1) of these operating parameters, action shall be initiated to correct the exceedance within five (5) calendar days. If correction of the exceedance cannot be achieved within fifteen (15) calendar days of the first measurement, the gas collection system shall be expanded to correct the exceedance within one hundred twenty (120) days of the initial exceedance. Any attempted corrective measure shall not cause exceedances of other operational or performance standards. An alternative timeline for correcting the exceedance may be submitted to the director for approval*[.]***; and**

6. An owner or operator seeking to demonstrate compliance with subpart (3)(B)2.B.(I)(d) of this rule through the use of a collection system not conforming to the specifications provided in section (10) of this rule shall provide information satisfactory to the director **and EPA** as specified in part (3)(B)2.A.(III) of this rule demonstrating that off-site migration is being controlled.

(C) The following procedures shall be used for compliance with the surface methane operational standard as provided in subsection (4)(D) of this rule:

1. After installation of the collection system, the owner or operator shall monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at thirty (30)-meter intervals (or a site-specific established spacing) for each collection area on a quarterly basis using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in subsection (6)(D) of this rule;

2. The background concentration shall be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least thirty (30) meters from the perimeter wells;

3. Surface emission monitoring shall be performed in accordance with section 4.3.1 of Method 21 of *[Appendix A,]* 40 CFR *[part]* 60**,** *[(incorporated by reference)]* **Appendix A**, except that the probe inlet shall be placed within five to ten centimeters (5–10 cm) of the ground. Monitoring shall be performed during typical meteorological conditions;

4. Any reading of five hundred (500) parts per million (ppm) or more above background at any location shall be recorded as a monitored exceedance and the actions specified in subparagraphs (6)(C)4.A. through E. of this rule shall be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of subsection (4)(D) of this rule.

A. The location of each monitored exceedance shall be marked and the location recorded.

B. Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance shall be made**,** and the location shall be remonitored within ten (10) calendar days of detecting the exceedance.

C. If the remonitoring of the location shows a second exceedance, additional corrective action shall be taken**,** and the location shall be monitored again within ten (10) days of the second exceedance. If the remonitoring shows a third exceedance for the same location, the action specified in subparagraph (6)(C)4.E. of this rule shall be taken, and no further monitoring of that location is required until the action specified in subparagraph (6)(C)4.E. of this rule has been taken.

D. Any location that initially showed an exceedance but has a methane concentration less than five hundred (500) ppm methane above background at the ten (10)-day remonitoring specified in subparagraph (6)(C)4.B. or C. of this rule shall be remonitored one (1) month from the initial exceedance. If the one (1)-month remonitoring shows a concentration less than five hundred (500) ppm above background, no further monitoring of that location is required until the next quarterly monitoring period. If the one (1)-month remonitoring shows an exceedance, the actions specified in subparagraph (6)(C)4.C. or E. of this rule shall be taken.

E. For any location where monitored methane concentration equals or exceeds five hundred (500) ppm above background three (3) times within a quarterly period, a new well or other collection device shall be installed within one hundred twenty (120) calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes**,** or control device, and a corresponding timeline for installation may be submitted to the director for approval; and

5. The owner or operator shall implement a program to monitor for cover integrity and implement cover repairs as necessary on a monthly basis.

(D) Each owner or operator seeking to comply with the provisions in subsection (6)(C) of this rule shall comply with the following instrumentation specifications and procedures for surface emission monitoring devices:

1. The portable analyzer shall meet the instrument specifications provided in section 3 of Method 21 **of 40 CFR 60, Appendix A**, except that "methane" shall replace all references to VOC;

2. The calibration gas shall be methane, diluted to a nominal concentration of five hundred (500) ppm in air;

3. To meet the performance evaluation requirements in section 3.1.3 of Method 21 **of 40 CFR 60, Appendix A**, the instrument

evaluation procedures of section 4.4 of Method 21 shall be used; and

4. The calibration procedures provided in section 4.2 of Method 21 **of 40 CFR 60, Appendix A** shall be followed immediately before commencing a surface monitoring survey.

(7) Monitoring of Operations. Except as provided in part (3)(B)2.A.(II) of this rule—

(A) Each owner or operator seeking to comply with part (3)(B)2.B.(I) of this rule for an active gas collection system shall install a sampling port and a thermometer or other temperature measuring device, or an access port for temperature measurements at each wellhead and—

1. Measure the gauge pressure in the gas collection header on a monthly basis as provided in paragraph (6)(A)3. of this rule; *[and]*

2. Monitor nitrogen or oxygen concentration in the landfill gas on a monthly basis as provided in paragraph (6)(A)5. of this rule; and

3. Monitor temperature of the landfill gas on a monthly basis as provided in paragraph (6)(A)5. of this rule;

(B) Each owner or operator seeking to comply with subparagraph (3)(B)2.C. of this rule using an enclosed combustor shall calibrate, maintain, and operate according to the manufacturer's specifications, the following equipment:

1. A temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of plus or minus one percent (±1%) of the temperature being measured expressed in degrees Celsius or plus or minus one-half degree Celsius (±0.5 °C), whichever is greater. A temperature monitoring device is not required for boilers or process heaters with design heat input capacity **equal to or** greater than forty-four (44) megawatts; and

2. A device that records flow to or bypass of the control device. The owner or operator shall either—

A. Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every fifteen (15) minutes; or

B. Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line;

(D) Each owner or operator seeking to demonstrate compliance with subparagraph (3)(B)2.C. of this rule using a device other than an open flare or an enclosed combustor shall provide information satisfactory to the director as provided in part (3)(B)2.A.(II) of this rule describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The director shall review the information and either approve it, or request that additional information be submitted. The director may specify additional appropriate monitoring procedures *[to insure that human health and safety is protected]*;

(E) Each owner or operator seeking to install a collection system that does not meet the specifications in section (10) of this rule or seeking to monitor alternative parameters to those required by sections (4) through (7) of this rule shall provide information satisfactory to the director as provided in parts (3)(B)2.A.(II) and (III) of this rule describing the design and operation of the collection system, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The director may specify additional appropriate monitoring procedures *[to insure that human health and safety is protected]*; or

(8) Reporting Requirements. Except as provided in part (3)(B)2.A.(II) of this rule—

(A) Each owner or operator subject to the requirements of this rule shall submit an initial design capacity report to the director.

1. The initial design capacity report shall be submitted within ninety (90) days of the rule effective date.

2. The initial design capacity report shall contain the following information:

A. A map or plot of the landfill, providing the size and location of the landfill, and identifying all areas where solid waste may be landfilled according to the provisions of the state or local construction or operating permit; and

B. The maximum design capacity of the landfill. Where the maximum design capacity is specified in the state or local construction permit, a copy of the permit specifying the maximum design capacity may be submitted as part of the report. If the maximum design capacity of the landfill is not specified in the permit, the maximum design capacity shall be calculated using good engineering practices. The calculations shall be provided, along with *[such]* **the relevant** parameters *[as depth of solid waste, solid waste acceptance rate, and compaction practices]* as part of the report. The state, local agency, or director may request other reasonable information as may be necessary to verify the maximum design capacity of the landfill.

3. An amended design capacity report shall be submitted to the director providing notification of any increase in the design capacity of the landfill, whether the increase results from an increase in the permitted area or depth of the landfill, a change in the operating procedures, or any other means which results in an increase in the maximum design capacity of the landfill above two and one-half (2.5) million megagrams and two and one-half (2.5) million cubic meters. The amended design capacity report shall be submitted within ninety (90) days of the issuance of an amended construction or operating permit, or the placement of waste in additional land, or the change in operating procedures which will result in an increase in maximum design capacity, whichever occurs first;

(B) Each owner or operator subject to the requirements of this rule shall submit an NMOC emission rate report to the director initially and annually thereafter, except as provided for in subparagraph **(8)(B)1.B. or paragraph** (8)(B)3. of this rule. The director may request such additional information as may be necessary to verify the reported NMOC emission rate.

1. The NMOC emission rate report shall contain an annual or five (5)-year estimate of the NMOC emission rate calculated using the formula and procedures provided in subsection (5)(A) or (B) of this rule, as applicable.

A. The initial NMOC emission rate report shall be submitted within ninety (90) days of the rule effective date and may be combined with the initial design capacity report required in subsection (8)(A) of this rule. Subsequent NMOC emission rate reports shall be submitted annually thereafter, except as provided for in subparagraph (8)(B)1.B. and paragraph (8)(B)3. of this rule.

B. If the estimated NMOC emission rate as reported in the annual report to the director is less than fifty (50) megagrams per year in each of the next five (5) consecutive years, the owner or operator may elect to submit an estimate of the NMOC emission rate for the next five (5)-year period in lieu of the annual report. This estimate shall include the current amount of solid waste-in-place and the estimated waste acceptance rate for each year of the five (5) years for which an NMOC emission rate is estimated. All data and calculations upon which this estimate is based shall be provided to the director. This estimate shall be revised at least once every five (5) years. If the actual waste acceptance rate exceeds the estimated waste acceptance rate in any year reported in the five (5)-year estimate, a revised five (5)-year estimate shall be submitted to the director. The revised estimate shall cover the five (5)-year period beginning with the year in which the actual waste acceptance rate exceeded the estimated waste acceptance rate.

2. The NMOC emission rate report shall include all the data, calculations, sample reports**,** and measurements used to estimate the annual or five (5)-year emissions.

3. Each owner or operator subject to the requirements of this rule is exempted from the requirements of paragraphs (8)(B)1. and 2. of this rule after the installation of a collection and control system

in compliance with paragraph (3)(B)2. of this rule, during such time as the collection and control system is in operation and in compliance with sections (4) and (6) of this rule;

(C) Each owner or operator subject to the provisions of subparagraph (3)(B)2.A. of this rule shall submit a collection and control system design plan to the director within one (1) year of the first report, required under subsection (8)(B) of this rule, in which the emission rate **equals or** exceeds fifty (50) megagrams per year, except as follows:

1. If the owner or operator elects to recalculate the NMOC emission rate after Tier 2 NMOC sampling and analysis as provided in paragraph (5)(A)3. of this rule and the resulting rate is less than fifty (50) megagrams per year, annual periodic reporting shall be resumed, using the Tier 2 determined site-specific NMOC concentration, until the calculated emission rate is equal to or greater than fifty (50) megagrams per year or the landfill is closed. The revised NMOC emission rate report, with the recalculated emission rate based on NMOC sampling and analysis, shall be submitted within one hundred eighty (180) days of the first calculated exceedance of fifty (50) megagrams per year; and

2. If the owner or operator elects to recalculate the NMOC emission rate after determining a site-specific methane generation rate constant k, as provided in Tier 3 in paragraph (5)(A)4. of this rule, and the resulting NMOC emission rate is less than fifty (50) Mg/yr, annual periodic reporting shall be resumed. The resulting site-specific methane generation rate constant k shall be used in the emission rate calculation until such time as the emissions rate calculation results in an exceedance. The revised NMOC emission rate report based on the provisions of paragraph (5)(A)4. of this rule and the resulting site-specific methane generation rate constant k shall be submitted to the director within one (1) year of the first calculated emission rate exceeding fifty (50) megagrams per year;

(D) Each owner or operator of a controlled landfill shall submit a closure report to the director within thirty (30) days of waste acceptance cessation. The director may request additional information as may be necessary to verify that permanent closure has taken place in accordance with the requirements of 40 CFR *[part]* 258.60 *[(incorporated by reference)]*. If a closure report has been submitted to the director, no additional wastes may be placed into the landfill without filing a notification of modification as described under 40 CFR *[part]* 60.7(a)(4) *[(incorporated by reference)]*;

(F) Each owner or operator of a landfill seeking to comply with paragraph (3)(B)2. of this rule using an active collection system designed in accordance with subparagraph (3)(B)2.B. of this rule shall submit to the director annual reports of the recorded information in paragraphs (8)(F)1. through 6. of this rule. The initial annual report shall be submitted within one hundred eighty (180) days of installation and start-up of the collection and control system, and shall include the initial performance test report required under 40 CFR *[part]* 60.8 *[(incorporated by reference)]*. For enclosed combustion devices and flares, reportable exceedances are defined under subsection (9)(C) of this rule.

1. Value and length of time for exceedance of applicable parameters monitored under subsections (7)(A), (B), (C), and (D) of this rule.

2. Description and duration of all periods when the gas stream is diverted from the control device through a bypass line or the indication of bypass flow as specified under section (7) of this rule.

3. Description and duration of all periods when the control device was not operating for a period exceeding one (1) hour and length of time the control device was not operating.

4. All periods when the collection system was not operating in excess of five (5) days.

5. The location of each exceedance of the five hundred (500) ppm methane concentration as provided in subsection (4)(D) of this rule and the concentration recorded at each location for which an exceedance was recorded in the previous month.

6. The date of installation and the location of each well or collection system expansion added pursuant to paragraph (6)(A)3., subsection (6)(B), and paragraph (6)(C)4. of this rule; and

(G) Each owner or operator seeking to comply with subparagraph (3)(B)2.A. of this rule shall include the following information with the initial performance test report required under 40 CFR *[part]* 60.8 *[(incorporated by reference)]*:

1. A diagram of the collection system showing collection system positioning including all wells, horizontal collectors, surface collectors, or other gas extraction devices, including the locations of any areas excluded from collection and the proposed sites for the future collection system expansion;

2. The data upon which the sufficient density of wells, horizontal collectors, surface collectors, or other gas extraction devices and the gas mover equipment sizing are based;

3. The documentation of the presence of asbestos or nondegradable material for each area from which collection wells have been excluded based on the presence of asbestos or nondegradable material;

4. The sum of the gas generation flow rates for all areas from which collection wells have been excluded based on nonproductivity and the calculations of gas generation flow rate for each excluded area;

5. The provisions for increasing gas mover equipment capacity with increased gas generation flow rate, if the present gas mover equipment is inadequate to move the maximum flow rate expected over the life of the landfill; and

6. The provisions for the control of off-site migration.

(9) Record Keeping Requirements. Except as provided in part (3)(B)2.A.(II) of this rule—

(B) Each owner or operator of a controlled landfill shall keep up-to-date, readily accessible records for the life of the control equipment of the data listed in paragraphs (9)(B)1. through 4. of this rule as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of five (5) years. Records of the control device vendor specifications shall be maintained until removal.

1. Where an owner or operator subject to the provisions of this rule seeks to demonstrate compliance with subparagraph (3)(B)2.B. of this rule—

A. The maximum expected gas generation flow rate as calculated in paragraph (6)(A)1. of this rule. The owner or operator may use another method to determine the maximum gas generation flow rate, if the method has been approved by the director **and EPA**; and

B. The density of wells, horizontal collectors, surface collectors, or other gas extraction devices determined using the procedures specified in paragraph (10)(A)1. of this rule.

2. Where an owner or operator subject to the provisions of this rule seeks to demonstrate compliance with subparagraph (3)(B)2.C. of this rule through use of an enclosed combustion device other than a boiler or process heater with a design heat input capacity **equal to or** greater than forty-four (44) megawatts—

A. The average combustion temperature measured at least every fifteen (15) minutes and averaged over the same time period of the performance test; and

B. The percent reduction of NMOC determined as specified in part (3)(B)2.C.(II) of this rule achieved by the control device.

3. Where an owner or operator subject to the provisions of this rule seeks to demonstrate compliance with subpart (3)(B)2.C.(II)(a) of this rule through use of a boiler or process heater of any size—a description of the location at which the collected gas vent stream is introduced into the boiler or process heater over the same time period of the performance testing.

4. Where an owner or operator subject to the provisions of this rule seeks to demonstrate compliance with part (3)(B)2.C.(I) of this rule through use of an open flare, the flare type (that is, steam-assisted, air-assisted, or nonassisted), all visible emission readings, heat

content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in 40 CFR *[part]* 60.18 *[(incorporated by reference)]*; continuous records of the flare pilot flame or flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent;

(10) Specifications for Active Collection Systems.

(A) Each owner or operator seeking to comply with subparagraph (3)(B)2.A. of this rule shall site active collection wells, horizontal collectors, surface collectors, or other extraction devices at a sufficient density throughout all gas producing areas using the following procedures unless alternative procedures have been approved by the director **and EPA** as provided in parts (3)(B)2.A.(III) and (IV) of this rule:

1. The collection devices within the interior and along the perimeter areas shall be certified to achieve comprehensive control of surface gas emissions by a professional engineer. The following issues shall be addressed in the design: depths of refuse, refuse gas generation rates and flow characteristics, cover properties, gas system expandability, leachate and condensate management, accessibility, compatibility with filling operations, integration with closure end use, air intrusion control, corrosion resistance, fill settlement, and resistance to the refuse decomposition heat;

2. The sufficient density of gas collection devices determined in paragraph (10)(A)1. of this rule shall address landfill gas migration issues and augmentation of the collection system through the use of active or passive systems at the landfill perimeter or exterior; and

3. The placement of gas collection devices determined in paragraph (10)(A)1. of this rule shall control all gas producing areas, except as provided by subparagraphs (10)(A)3.A. and B. of this rule.

A. Any segregated area of asbestos or nondegradable material may be excluded from collection if documentation is provided as specified under subsection (9)(D)*[.]* of this rule. The documentation shall provide the nature, date of deposition, location and amount of asbestos or nondegradable material deposited in the area, and shall be provided to the director upon request.

B. Any nonproductive area of the landfill may be excluded from control, provided that the total of all excluded areas can be shown to contribute less than one percent (1%) of the total amount of NMOC emissions from the landfill. The amount, location, and age of the material shall be documented and provided to the director upon request. A separate NMOC emissions estimate shall be made for each section proposed for exclusion, and the sum of all such sections shall be compared to the NMOC emissions estimate for the entire landfill. Emissions from each section shall be computed using the following equation:

$$Q_i = 2\ k\ L_o\ M_i\ (e^{-kt_i})\ (C_{NMOC})\ (3.6 \times 10^{-9})$$

where,

Q_i	=	NMOC emission rate from the i^{th} section, megagrams per year
k	=	methane generation rate constant, $year^{-1}$
L_o	=	methane generation potential, cubic meters per megagram solid waste
M_i	=	mass of the degradable solid waste in the i^{th} section, megagram
t_i	=	age of the solid waste in the i^{th} section, years
C_{NMOC}	=	concentration of nonmethane organic compounds, parts per million by volume
3.6×10^{-9}	=	conversion factor

C. The values for k*[,]* and C_{NMOC} determined in field testing shall be used, if field testing has been performed in determining the NMOC emission rate or the radii of influence (the distance from the well center to a point in the landfill where the pressure gradient applied by the blower or compressor approaches zero). If field testing has not been performed, the default values for k, L_o, and C_{NMOC} provided in paragraph (5)(A)1. of this rule or the alternative values from (5)(A)5. of this rule shall be used. The mass of nondegradable solid waste contained within the given section may be subtracted from the total mass of the section when estimating emissions provided the nature, location, age, and amount of the nondegradable material is documented as provided in subparagraph (10)(A)3.A. of this rule.

*AUTHORITY: section 643.050, RSMo [Supp. 1998] **2000**. Original rule filed Jan. 14, 1997, effective Sept. 30, 1997. Amended: Filed Oct. 7, 1999, effective July 30, 2000. Amended: Filed Sept. 26, 2011.*

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars ($500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed amendment will begin at 9:00 a.m., December 8, 2011. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded any interested person. Interested persons, whether or not heard, may submit a written or email statement of their views until 5:00 p.m., December 15, 2011. Written comments shall be sent to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176. Email comments shall be sent to apcprulespn@dnr.mo.gov.

Title 10—DEPARTMENT OF NATURAL RESOURCES
Division 10—Air Conservation Commission
Chapter 6—Air Quality Standards, Definitions, Sampling and Reference Methods and Air Pollution Control Regulations for the Entire State of Missouri

PROPOSED AMENDMENT

10 CSR 10-6.400 Restriction of Emission of Particulate Matter from Industrial Processes. The commission proposes to amend the rule purpose statement. If the commission adopts this rule action, it will be the department's intention to submit this rule amendment to the U.S. Environmental Protection Agency to replace the current rule that is in the Missouri State Implementation Plan. The evidence supporting the need for this proposed rulemaking is available for viewing at the Missouri Department of Natural Resources' Air Pollution Control Program at the address listed in the Notice of Public Hearing at the end of this rule. More information concerning this rulemaking can be found at the Missouri Department of Natural Resources' Environmental Regulatory Agenda website, www.dnr.mo.gov/regs/index.html.

PURPOSE: This regulation restricts the emission of particulate matter in the source gas of an operation or activity except where 10 CSR 10-2.040, 10 CSR 10-3.060, 10 CSR 10-4.040, 10 CSR 10-5.030, and/or 10 CSR 10-6.070 would be applied. The purpose of this rulemaking is to update the references to the area specific indirect heating rules with the new statewide consolidated indirect heating rule. The evidence supporting the need for this proposed rulemaking, per section 536.016, RSMo, is new rule 10 CSR 10-6.405, Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used For Indirect Heating which replaces the area specific indirect heating rules.

*PURPOSE: This regulation restricts the emission of particulate matter in the source gas of an operation or activity except where 10 CSR 10-[2.040, 10 CSR 10-3.060, 10 CSR 10-4.040, 10 CSR 10-5.030]**6.405** and/or 10 CSR 10-6.070 would be applied.*

AUTHORITY: section 643.050, RSMo 2000. Original rule filed Jan. 14, 2000, effective Aug. 30, 2000. Amended: Filed Dec. 22, 2000, effective Sept. 30, 2001. Amended: Filed Sept. 9, 2008, effective May 30, 2009. Amended: Filed July 1, 2010, effective Feb. 28, 2011. Amended: Filed Sept. 16, 2011.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: A public hearing on this proposed amendment will begin at 9:00 a.m., December 8, 2011. The public hearing will be held at the Elm Street Conference Center, 1730 East Elm Street, Lower Level, Bennett Springs Conference Room, Jefferson City, Missouri. Opportunity to be heard at the hearing shall be afforded any interested person. Interested persons, whether or not heard, may submit a written or email statement of their views until 5:00 p.m., December 15, 2011. Written comments shall be sent to Chief, Air Quality Planning Section, Missouri Department of Natural Resources' Air Pollution Control Program, PO Box 176, Jefferson City, MO 65102-0176. Email comments shall be sent to apcprulespn@dnr.mo.gov.

Title 11—DEPARTMENT OF PUBLIC SAFETY
Division 45—Missouri Gaming Commission
Chapter 1—Organization and Administration

PROPOSED AMENDMENT

11 CSR 45-1.015 Code of Ethics. The commission is amending section (7).

PURPOSE: This amendment clarifies the conditions under which commission members and employees may not participate in gaming at a location owned or operated by a licensee or licensee applicant.

(7) Gambling Prohibited *[in Missouri]* **at Certain Properties**. No member or employee of the commission shall participate in any gaming at any location *[in Missouri]* which is owned or operated by a licensee of the commission**, a license applicant,** or under the jurisdiction of the commission.

*AUTHORITY: section 313.004.4, RSMo [1994] **2000**. Original rule filed March 29, 1994, effective Sept. 30, 1994. Emergency rule filed June 14, 1994, effective June 24, 1994, expired Oct. 21, 1994. Amended: Filed Feb. 19, 1998, effective Aug. 30, 1998. Amended: Filed Nov. 10, 1998, effective June 30, 1999. Amended: Filed Sept. 29, 2011.*

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost any private entities more than five hundred dollars ($500) in the aggregate.

*NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Missouri Gaming Commission, PO Box 1847, Jefferson City, MO 65102. To be considered, comments must be received within thirty (30) days after publication of this notice in the **Missouri Register**. A public hearing is scheduled for December 14, 2011, at 10:00 a.m., in the Missouri Gaming Commission's Hearing Room, 3417 Knipp Drive, Jefferson City, Missouri.*

Title 11—DEPARTMENT OF PUBLIC SAFETY
Division 45—Missouri Gaming Commission
Chapter 1—Organization and Administration

PROPOSED AMENDMENT

11 CSR 45-1.080 Participation in Games by Employees of the Commission. The commission is amending section (1).

PURPOSE: This amendment clarifies the conditions under which commission members and employees may not participate in regulated games.

(1) Unless participating in a regulatory investigation, no member of the commission, the director**,** or any employees or agents of the commission may—

(A) Participate *[in Missouri]* in any game or activity**,** which is regulated by the Act**, and is owned or operated by a licensee of the commission or license applicant**;

(C) Accept or request *[complementaries]* **complimentaries** for themselves or others from a Missouri licensee or applicant, **or any properties owned or operated by the licensee or applicant**.

*AUTHORITY: section[s] 313.004, **RSMo 2000,** and **section** 313.805, RSMo [Supp. 1993)] **Supp. 2010**. Emergency rule filed Sept. 1, 1993, effective Sept. 20, 1993, expired Jan. 17, 1994. Emergency rule filed Jan. 5, 1994, effective Jan. 18, 1994, expired Jan. 30, 1994. Original rule filed Sept. 1, 1993, effective Jan. 31, 1994. Amended: Filed Sept. 29, 2011.*

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost any private entities more than five hundred dollars ($500) in the aggregate.

*NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Missouri Gaming Commission, PO Box 1847, Jefferson City, MO 65102. To be considered, comments must be received within thirty (30) days after publication of this notice in the **Missouri Register**. A public hearing is scheduled for December 14, 2011, at 10:00 a.m., in the Missouri Gaming Commission's Hearing Room, 3417 Knipp Drive, Jefferson City, Missouri.*

Title 11—DEPARTMENT OF PUBLIC SAFETY
Division 45—Missouri Gaming Commission
Chapter 5—Conduct of Gaming

PROPOSED AMENDMENT

11 CSR 45-5.030 Participation in Gambling Games by a Holder of a Class A or Supplier License, and the Directors, Officers, Key Persons or Employees of Such Licensees. The commission is amending section (1).

PURPOSE: This amendment establishes standards for participation in games for certain people.

(1) No holder of a Class A **or Class B** license or any director, officer, key person**,** or any other employee of *[any licensed riverboat gaming operation]* **such licensee** shall play or be permitted to play any gambling game in *[the]* **an** establishment *[where the person is so licensed or employed]* **owned or operated by such Class A or Class B licensee and which is licensed by the commission**.

*AUTHORITY: sections 313.004 and 313.807, RSMo 2000**, and section 313.805, RSMo Supp. 2010**. Emergency rule filed Sept. 1, 1993, effective Sept. 20, 1993, expired Jan. 17, 1994. Emergency rule filed Jan. 5, 1994, effective Jan. 18, 1994, expired Jan. 30, 1994. Original rule filed Sept. 1, 1993, effective Jan. 31, 1994. Amended: Filed May 13, 1998, effective Oct. 30, 1998. Amended: Filed Feb. 26, 2001, effective Sept. 30, 2001. Amended: Filed Sept. 29, 2011.*

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost any private entities more than five hundred dollars ($500) in the aggregate.

*NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Missouri Gaming Commission, PO Box 1847, Jefferson City, MO 65102. To be considered, comments must be received within thirty (30) days after publication of this notice in the **Missouri Register**. A public hearing is scheduled for December 14, 2011, at 10:00 a.m., in the Missouri Gaming Commission's Hearing Room, 3417 Knipp Drive, Jefferson City, Missouri.*

Title 11—DEPARTMENT OF PUBLIC SAFETY
Division 45—Missouri Gaming Commission
Chapter 5—Conduct of Gaming

PROPOSED AMENDMENT

11 CSR 45-5.065 Patrons Unlawfully on Excursion Gambling Boat—Not Eligible for Gambling Game Winnings. The commission is amending section (2).

PURPOSE: This amendment clarifies who is not eligible to claim gambling game payouts.

(2) Patrons that are excluded from excursion gambling boats pursuant to 11 CSR 45-10.115, 11 CSR 45-15 et seq., 11 CSR 45-17 et seq., **and** patrons who are under twenty-one (21) years of age *[and patrons who are otherwise illegally on the excursion gambling boat]* are not eligible to claim gambling game payouts.

*AUTHORITY: sections 313.004, RSMo 2000**, and** 313.805, 313.817, and 313.822, **RSMo Supp. 2010**. Original rule filed Dec. 27, 2000, effective July 30, 2001. Amended: Filed Sept. 29, 2011.*

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars ($500) in the aggregate.

*NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Missouri Gaming Commission, PO Box 1847, Jefferson City, MO 65102. To be considered, comments must be received within thirty (30) days after publication of this notice in the **Missouri Register**. A public hearing is scheduled for December 14, 2011, at 10:00 a.m., in the Missouri Gaming Commission's Hearing Room, 3417 Knipp Drive, Jefferson City, Missouri.*

Title 11—DEPARTMENT OF PUBLIC SAFETY
Division 45—Missouri Gaming Commission
Chapter 12—Liquor Control

PROPOSED AMENDMENT

11 CSR 45-12.090 Rules of Liquor Control. The commission is amending section (5).

PURPOSE: This amendment changes liquor rules for Class A and Class B licensee employees.

(5) Employees.

(A) Except upon written authorization from the director as provided in subsection (5)*[(B)]***(C)**, no **Class B licensee as** holder of an excursion liquor license shall give to, sell or permit to be given to or sold**, any intoxicating liquor, in any quantity,** to any *[gaming]* employee of *[the establishment operated by the licensee, any intoxicating liquor, in any quantity, nor shall the holder of an excursion liquor license permit any patron of the establishment operated by the licensee to give to any gaming employee any intoxicating liquor, in any quantity, or to purchase it for or drink it with any gaming employee in the establishment or on the premises of the licensee.]***—**

1. The Class B licensee;

2. The Class B licensee's parent company, as holder of a Class A license; or

3. An entity owned or operated by the Class A licensee and which is licensed by the commission.

(B) No Class B licensee as holder of an excursion liquor license shall permit any patron to give to any employee any intoxicating liquor, in any quantity, or to purchase it for or drink it with any employee on the premises of the licensee.

*[(B)]***(C)** An excursion liquor licensee may submit to the director a written request for authorization for—

1. Level I licensees or applicants, the licensee's food and beverage director**,** or corporate officers to consume alcoholic beverages in the nongaming areas of the premises for business purposes. The director's authorization or denial shall be in writing;

2. Employees to consume alcoholic beverages in the nongaming areas of the premises at specific functions sponsored by the excursion liquor licensee. The director's authorization or denial shall be in writing; or

3. Training beverage servers in the nongaming areas of the premises by using taste testing in order to inform the beverage server about the characteristics of beverages offered by the licensee. The director's authorization or denial shall be in writing.

(D) Except upon written authorization from the director as provided in subsection (5)(C) or as specifically required to provide intoxicating liquor service to patrons in the performance of one's job functions, no employee of a Class A or Class B licensee shall, while on the premises of a riverboat gaming operation licensed by the commission and which is owned or operated by the Class A or Class B licensee by which so employed, purchase, consume, or otherwise possess any intoxicating liquor in any quantity.

*[(C)]***(E)** An excursion liquor licensee may not permit a person under the age of twenty-one (21) years to sell or assist in the sale or dispensing of intoxicating liquor, except persons **eighteen** (18) years of age or older may, when acting in the capacity of a waiter or waitress, accept payment for or serve intoxicating liquor in areas where

the excursion liquor licensee sells food for on-premises consumption, and if at least fifty percent (50%) of all sales in those areas consists of food or if two hundred thousand dollars ($200,000) in gross sales is from the sale of prepared meals or food. Nothing in this section shall authorize persons under twenty-one (21) years of age to mix or serve intoxicating liquors across the bar.

AUTHORITY: section 313.004, RSMo 2000, and sections 313.805 and 313.840, RSMo Supp. 2010. Emergency rule filed Sept. 1, 1993, effective Sept. 20, 1993, expired Jan. 17, 1994. Emergency rule filed Jan. 5, 1994, effective Jan. 18, 1994, expired Jan. 30, 1994. Original rule filed Sept. 1, 1993, effective Jan. 31, 1994. For intervening history, please consult the ***Code of State Regulations****. Amended: Filed Sept. 29, 2011*

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost any private entities more than five hundred dollars ($500) in the aggregate.

NOTICE OF PUBLIC HEARING AND NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Missouri Gaming Commission, PO Box 1847, Jefferson City, MO 65102. To be considered, comments must be received within thirty (30) days after publication of this notice in the ***Missouri Register****. A public hearing is scheduled for December 14, 2011, at 10:00 a.m., in the Missouri Gaming Commission's Hearing Room, 3417 Knipp Drive, Jefferson City, Missouri.*

Title 13—DEPARTMENT OF SOCIAL SERVICES
Division 70—MO HealthNet Division
Chapter 10—Nursing Home Program

PROPOSED AMENDMENT

13 CSR 70-10.030 Prospective Reimbursement Plan for Nonstate-Operated Facilities for ICF/MR Services. The division is amending section (4).

PURPOSE: This amendment provides for the Fiscal Year 2012 trend factor to be applied to adjust per diem rates for nonstate-operated ICF/MR facilities providing ICF/MR services participating in the Medicaid program.

(4) Prospective Reimbursement Rate Computation.

(A) Except in accordance with other provisions of this rule, the provisions of this section shall apply to all providers of ICF/MR services certified to participate in Missouri's MO HealthNet program.

1. ICF/MR facilities.

A. Except in accordance with other provisions of this rule, the MO HealthNet program shall reimburse providers of these LTC services based on the individual MO HealthNet-participant days of care multiplied by the Title XIX prospective per-diem rate less any payments collected from participants. The Title XIX prospective per-diem reimbursement rate for the remainder of state Fiscal Year 1987 shall be the facility's per-diem reimbursement payment rate in effect on October 31, 1986, as adjusted by updating the facility's allowable base year to its 1985 fiscal year. Each facility's per-diem costs as reported on its Fiscal Year 1985 Title XIX cost report will be determined in accordance with the principles set forth in this rule. If a facility has not filed a 1985 fiscal year cost report, the most current cost report on file with the department will be used to set its per-diem rate. Facilities with less than a full twelve (12)-month 1985 fiscal year will not have their base year rates updated.

B. For state FY-88 and dates of service beginning July 1, 1987, the negotiated trend factor shall be equal to two percent (2%) to be applied in the following manner: Two percent (2%) of the average per-diem rate paid to both state- and nonstate-operated ICF/MR facilities on June 1, 1987, shall be added to each facility's rate.

C. For state FY-89 and dates of service beginning January 1, 1989, the negotiated trend factor shall be equal to one percent (1%) to be applied in the following manner: One percent (1%) of the average per-diem rate paid to both state- and nonstate-operated ICF/MR facilities on June 1, 1988, shall be added to each facility's rate.

D. For state FY-91 and dates of service beginning July 1, 1990, the negotiated trend factor shall be equal to one percent (1%) to be applied in the following manner: One percent (1%) of the average per-diem rate paid to both state- and nonstate-operated ICF/MR facilities on June 1, 1990, shall be added to each facility's rate.

E. FY-96 negotiated trend factor. All nonstate-operated ICF/MR facilities shall be granted an increase to their per-diem rates effective for dates of service beginning January 1, 1996, of six dollars and seven cents ($6.07) per patient day for the negotiated trend factor. This adjustment is equal to four and six-tenths percent (4.6%) of the weighted average per-diem rates paid to nonstate-operated ICF/MR facilities on June 1, 1995, of one hundred thirty-one dollars and ninety-three cents ($131.93).

F. State FY-99 trend factor. All nonstate-operated ICF/MR facilities shall be granted an increase to their per-diem rates effective for dates of service beginning July 1, 1998, of four dollars and forty-seven cents ($4.47) per patient day for the trend factor. This adjustment is equal to three percent (3%) of the weighted average per-diem rate paid to nonstate-operated ICF/MR facilities on June 30, 1998, of one hundred forty-eight dollars and ninety-nine cents ($148.99).

G. State FY-2000 trend factor. All nonstate-operated ICF/MR facilities shall be granted an increase to their per-diem rates effective for dates of service beginning July 1, 1999, of four dollars and sixty-three cents ($4.63) per patient day for the trend factor. This adjustment is equal to three percent (3%) of the weighted average per-diem rate paid to nonstate-operated ICF/MR facilities on April 30, 1999, of one hundred fifty-four dollars and forty-three cents ($154.43). This increase shall only be used for increases for the salaries and fringe benefits for direct care staff and their immediate supervisors.

H. State FY-2001 trend factor. All nonstate-operated ICF/MR facilities shall be granted an increase to their per-diem rates effective for dates of service beginning July 1, 2000, of four dollars and eighty-one cents ($4.81) per patient day for the trend factor. This adjustment is equal to three percent (3%) of the weighted average per-diem rate paid to nonstate-operated ICF/MR facilities on April 30, 2000, of one hundred sixty dollars and twenty-three cents ($160.23). This increase shall only be used for increases for salaries and fringe benefits for direct care staff and their immediate supervisors.

I. State FY-2007 trend factor. All nonstate-operated ICF/MR facilities shall be granted an increase of seven percent (7%) to their per-diem rates effective for dates of service billed for state fiscal year 2007. This adjustment is equal to seven percent (7%) of the per-diem rate paid to nonstate-operated ICF/MR facilities on June 30, 2006.

J. State FY-2008 trend factor. Effective for dates of service beginning July 1, 2007, all nonstate-operated ICF/MR facilities shall be granted an increase to their per-diem rates of two percent (2%) for the trend factor. This adjustment is equal to two percent (2%) of the per-diem rate paid to nonstate-operated ICF/MR facilities on June 30, 2007.

K. State FY-2009 trend factor. Effective for dates of service beginning July 1, 2008, all nonstate-operated ICF/MR facilities shall be granted an increase to their per-diem rates of three percent (3%) for the trend factor. This adjustment is equal to three percent (3%) of the per-diem rate paid to nonstate-operated ICF/MR facilities on June 30, 2008.

L. State FY-2009 catch up increase. Effective for dates of service beginning July 1, 2008, all nonstate-operated ICF/MR facilities shall be granted an increase to their per diem rates of thirteen

and ninety-five hundredths percent (13.95%). This adjustment is equal to thirteen and ninety-five hundredths percent (13.95%) of the per-diem rate paid to nonstate-operated ICF/MR facilities on June 30, 2008. This increase is intended to provide compensation to providers for the years (2003, 2004, 2005, and 2006) where no trend factor was given. The catch up increase was based on the CMS PPS Skilled Nursing Facility Input Price Index (4 quarter moving average).

M. State FY-2012 trend factor. Effective for dates of service beginning October 1, 2011, all nonstate-operated ICF/MR facilities shall be granted an increase to their per diem rates of one and four-tenths percent (1.4%) for the trend factor. This adjustment is equal to one and four tenths-percent (1.4%) of the per diem rate paid to nonstate-operated ICF/MR facilities on September 30, 2011.

2. Adjustments to rates. The prospectively determined reimbursement rate may be adjusted only under the following conditions:

A. When information contained in a facility's cost report is found to be fraudulent, misrepresented, or inaccurate, the facility's reimbursement rate may be reduced, both retroactively and prospectively, if the fraudulent, misrepresented, or inaccurate information as originally reported resulted in establishment of a higher reimbursement rate than the facility would have received in the absence of this information. No decision by the MO HealthNet agency to impose a rate adjustment in the case of fraudulent, misrepresented, or inaccurate information in any way shall affect the MO HealthNet agency's ability to impose any sanctions authorized by statute or rule. The fact that fraudulent, misrepresented, or inaccurate information reported did not result in establishment of a higher reimbursement rate than the facility would have received in the absence of the information also does not affect the MO HealthNet agency's ability to impose any sanctions authorized by statute or rules;

B. In accordance with subsection (6)(B) of this rule, a newly constructed facility's initial reimbursement rate may be reduced if the facility's actual allowable per diem cost for its first twelve (12) months of operation is less than its initial rate;

C. When a facility's MO HealthNet reimbursement rate is higher than either its private pay rate or its Medicare rate, the MO HealthNet rate will be reduced in accordance with subsection (2)(B) of this rule;

D. When the provider can show that it incurred higher cost due to circumstances beyond its control, and the circumstances are not experienced by the nursing home or ICF/MR industry in general, the request must have a substantial cost effect. These circumstances include, but are not limited to:

(I) Acts of nature, such as fire, earthquakes, and flood, that are not covered by insurance;

(II) Vandalism, civil disorder, or both; or

(III) Replacement of capital depreciable items not built into existing rates that are the result of circumstances not related to normal wear and tear or upgrading of existing system;

E. When an adjustment to a facility's rate is made in accordance with the provisions of section (6) of this rule; or

F. When an adjustment is based on an Administrative Hearing Commission or court decision.

*AUTHORITY: section 208.159, RSMo 2000, and sections 208.153 and 208.201, RSMo Supp. [2007] **2010**. This rule was previously filed as 13 CSR 40-81.083. Original rule filed Aug. 13, 1982, effective Nov. 11, 1982. For intervening history, please consult the **Code of State Regulations**. Emergency amendment filed Sept. 20, 2011, effective Oct. 1, 2011, expires March 29, 2012. Amended: Filed Sept. 20, 2011.*

PUBLIC COST: This proposed amendment will cost public entities or political subdivisions approximately sixty-two thousand four hundred twelve dollars ($62,412) for SFY 2012.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars ($500) in the aggregate.

*NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Department of Social Services, MO HealthNet Division, 615 Howerton Court, Jefferson City, MO 65109. To be considered, comments must be received within thirty (30) days after publication of this notice in the **Missouri Register**. If to be hand-delivered, comments must be brought to the MO HealthNet Division at 615 Howerton Court, Jefferson City, Missouri. No public hearing is scheduled.*

Title 13—DEPARTMENT OF SOCIAL SERVICES
Division 70—MO HealthNet Division
Chapter 35—Dental Program

PROPOSED AMENDMENT

13 CSR 70-35.010 Dental Benefits and Limitations, MO HealthNet Program. The division is amending section (1), adding a new section (5), and renumbering sections (5)–(7).

PURPOSE: This amendment updates incorporated by reference material and adds criteria for orthodontic services to the regulation.

(1) Administration. The MO HealthNet dental program shall be administered by the MO HealthNet Division, Department of Social Services. The dental services covered and not covered, the limitations under which services are covered, and the maximum allowable fees for all covered services shall be determined by the MO HealthNet Division and shall be included in the MO HealthNet *Dental Provider Manual*, which is incorporated by reference and made part of this rule as published by the Department of Social Services, MO HealthNet Division, 615 Howerton Court, Jefferson City, MO 65109, at its website at www.dss.mo.gov/mhd, *[September 15, 2009]* **November 1, 2011**. This rule does not incorporate any subsequent amendments or additions. Dental services covered by the MO HealthNet program shall include only those which are clearly shown to be medically necessary. The division reserves the right to effect changes in services, limitations, and fees with proper notification to MO HealthNet dental providers.

(5) Orthodontia Services. When an eligible recipient is believed to have a condition that may require orthodontic treatment, the attending dentist should refer the recipient to a qualified dentist or orthodontist for preliminary examination to determine if the treatment will be approved based upon the screening requirements of the *Handicapping Labio-Lingual Deviation Index*.

(A) The determination whether or not an individual will be approved for orthodontic services shall be initially screened using the *Handicapping Labio-Lingual Deviation Index*. The *Handicapping Labio-Lingual Deviation Index* must be fully completed in accordance with the instructions. The division will approve orthodontic services when a correctly scored total of twenty-eight (28) points or greater is calculated from the preliminary assessment and when the individual meets all of the criteria in paragraphs 1., 2., and 3. below—

1. Is under twenty-one (21) years of age; and

2. Has good oral hygiene documented in the child's treatment plan; and

3. Is over the age of thirteen (13) or has no deciduous teeth (unless the primary teeth are retained due to ectopic position of the underlying permanent tooth or a missing permanent tooth in this area).

(B) The division will also approve orthodontic services when the individual meets all of the criteria in paragraphs 1., 2., and

3. below and one of the criteria listed in paragraphs 4. to 9. below—

1. Is under twenty-one (21) years of age; and

2. Has good oral hygiene documented in the child's treatment plan; and

3. Is over the age of thirteen (13) or has no deciduous teeth (unless the primary teeth are retained due to ectopic position of the underlying permanent tooth or a missing permanent tooth in this area); and

4. Has a cleft palate; or

5. Has a deep impinging overbite; or

6. Has a cross-bite of individual anterior teeth when damage of soft tissue is present; or

7. Has severe traumatic deviations; or

8. Has an over-jet greater than nine millimeter (9 mm) or reverse over-jet of greater than three and one-half millimeter (3.5 mm); or

9. Has an impacted maxillary central incisor.

(C) If the total score is calculated as less than twenty-eight (28) points according to the *Handicapping Labio-Lingual Deviation Index*, the division will consider whether orthodontic services should be provided based upon other evidence that orthodontic services are medically necessary.

1. Other evidence shall include information of a substantial nature about the presence of a medical condition which affects the mouth and underlying structures and which has a direct effect on the individual's physical health such that the eligible recipient is subject to pain, infection, illness, or significant interference with a major life function. Orthodontic treatment shall be considered to be medically necessary, if the medical condition were left untreated, the medical condition would cause irreversible damage to the teeth and underlying structures and would result in pain, infection, illness, or significant and immediate impact on the normal function of the body and the individual's ability to function. In addition, such orthodontic treatment must be demonstrated to be 1) Of clear clinical benefit to the eligible recipient; 2) Appropriate for the injury or illness in question; and 3) Conform to the standards of generally accepted orthodontic practice as supported by applicable medical and scientific literature. The fact that a dentist or orthodontist has recommended orthodontic treatment does not mean by itself that the treatment is medically necessary if the recommendation is not supported by documented evidence of a medical condition provided by a licensed medical doctor.

2. In addition, the division may consider information of a substantial nature about the presence of mental, emotional, and/or behavioral problems, disturbances, or dysfunctions, as defined in the most current edition of the *Diagnostic Statistical Manual of Mental Disorders* of the American Psychiatric Association, and which may be caused by the recipient's daily functioning as it relates to a dentofacial deformity. The department will only consider cases where a diagnostic evaluation has been performed by a licensed psychiatrist or a licensed psychologist who has accordingly limited his or her practice to child psychiatry or child psychology. The evaluation must clearly and substantially document how the dentofacial deformity is related to the child's mental, emotional, and/or behavioral problems and must clearly and substantially document that orthodontic treatment is medically necessary and will significantly ameliorate the problems.

(D) Orthondontic treatment shall not be considered to be medically necessary when—

1. The orthondontic treatment is for aesthetic or cosmetic reasons only; or

2. The orthondontic treatment is to correct crowded teeth only, if the child can adequately protect the periodontium with reasonable oral hygiene measures; or

3. The child has demonstrated a lack of motivation to maintain reasonable standards of oral hygiene and oral hygiene is deficient.

(E) A recipient who becomes MO HealthNet eligible and is already receiving orthodontic treatment must demonstrate that the need for service requirements specified in subsections (5)(A), (B), or (C) of these regulations were met before orthodontic treatment commenced, meaning that prior to the onset of treatment the recipient would have met the need for service requirements.

*[(5)]***(6)** Services, Covered and Noncovered. The MO HealthNet *Dental Manual* shall provide the detailed listing of procedure codes for services covered by the MO HealthNet Dental Program. Pricing information can be obtained from the fee schedule posted at www.dss.mo.gov/mhd/providers/pages/cptagree.htm.

*[(6)]***(7)** General Regulations. General regulations of the MO HealthNet program apply to the dental program.

*[(7)]***(8)** Records Retention. Sanctions may be imposed by the MO HealthNet agency against a provider for failing to make available, and disclosing to the MO HealthNet agency or its authorized agents, all records relating to services provided to MO HealthNet participants or records related to MO HealthNet payments, whether or not the records are comingled with non-MO HealthNet records in compliance with 13 CSR 70-3.030. These records must be retained for five (5) years from the date of service. Fiscal and medical records coincide with and fully document services billed to the MO HealthNet agency. Providers must furnish or make the records available for inspection or audit by the Department of Social Services or its representative upon request. Failure to furnish, reveal, or retain adequate documentation for services billed to the MO HealthNet program, as specified above, is a violation of this regulation.

*AUTHORITY: sections 208.152, 208.153, and 208.201, RSMo Supp. [2008] **2010**. This rule was previously filed as 13 CSR 40-81.040. Original rule filed Jan. 21, 1964, effective Jan. 31, 1964. For intervening history, please consult the **Code of State Regulations**. Amended: Filed Sept 28, 2011.*

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars ($500) in the aggregate.

*NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this amendment with the Department of Social Services, MO HealthNet Division, 615 Howerton Court, Jefferson City, MO 65109. To be considered, comments must be delivered by regular mail, express or overnight mail, in person, or by courier within thirty (30) days after publication of this notice in the **Missouri Register**. If to be hand delivered, comments must be brought to the MO HealthNet Division at 615 Howerton Court, Jefferson City, Missouri. No public hearing is scheduled.*

Title 15—ELECTED OFFICIALS
Division 60—Attorney General
Chapter 13—*[Rules for the Establishment of a]* Missouri No-Call *[Database]*

PROPOSED AMENDMENT

15 CSR 60-13.060 Methods by Which a Person or Entity Desiring to Make Telephone Solicitations Will Obtain Access to the Database of Residential Subscribers' Notices of Objection to Receiving Telephone Solicitations and the Cost Assessed for Access to the Database. The Office of the Attorney General is

amending sections (1) and (2) and adding a new section (3).

PURPOSE: This amendment provides headers for sections (1) and (2), clarifies how a request is made for the no-call database, specifies who must the required confidentiality agreement, revises the language concerning payments for computer disk copies of the no-call database, provides for online access to the no-call database and the charges for such access, and adds a new section concerning provisions of forms by the attorney general necessary to comply with the rule.

(1) **Access to No-Call Database.** A person or entity desiring to make telephone solicitations to residential subscribers residing or living in Missouri may obtain a copy of the no-call database for his, her**,** or its lawful use, or for the lawful use by his, her**,** or its employees, or for the lawful use by his, her**,** or its independent contractors for use in their business, so long as the independent contractor is regularly associated with the person or entity and is engaged in the same or related type of business as the person or entity, by *[doing]* **submitting a request to the Attorney General's Office, which includes** the following:

(A) *[Signing a]* **A** written confidentiality agreement prepared by the Attorney General's Office **and signed by the person or authorized agent of the entity** that 1) restricts use of the no-call database exclusively for the purpose of compliance with sections 407.1095 to 407.1113, RSMo 2000, as amended from time-to-time, and 2) prohibits the transfer of the copy of the no-call database to any person or entity who has not submitted the signed written confidentiality agreement and payment to the Attorney General's Office for receipt of a copy of the no-call database; and

(B) *[Submitting the signed confidentiality agreement along with payment in an amount equal to]* **The appropriate fee as follows:**

1. Computer disk copy of the no-call database. For delivery of a computer disk copy with access to each Missouri area code, payment of fifty dollars ($50) per quarter *[for each Missouri area code to the Attorney General's Office for providing a computer disk copy of the no-call database]*. Those persons or entities desiring to obtain access to only part of the no-call database may do so by submitting *[the signed confidentiality agreement along with]* a request designating by area code the portion or portions of the no-call database they desire and providing payment *[in the amount]* of fifty dollars ($50) per quarter per area code to the Attorney General's Office *[for providing a computer disk copy of the requested portion of the no-call database.]***; and/or**

2. Online access to the no-call database. For twelve (12) months access to the no-call database through a secure portal with the Attorney General's Office at https://www.nocall.ago.mo.gov/, an annual processing fee of forty dollars ($40), along with payment of fifty dollars ($50) per quarter for access to each Missouri area code. Those persons or entities desiring to obtain access to only part of the no-call database may do so by a request designating by area code the portion or portions of the no-call database they desire and providing payment of the annual processing fee and fifty dollars ($50) per quarter per area code to the Attorney General's Office.

(2) **Notice of Claimed Exclusion.** A person or entity who initiates any voice communication over a telephone line from a live operator, through the use of ADAD equipment or by other means for the purpose of encouraging the purchase or rental of, or investment in, property, goods**,** or services and who claims that such communication falls under one **(1)** of the exclusions to the definition of telephone solicitation appearing in section 407.1095(3), RSMo, as amended, may provide notice in the form of a notarized affidavit to the Attorney General's Office of that person or entity's intention to utilize the claimed exclusion along with an explanation of the basis for that person's claimed exclusion. That Attorney General's Office may investigate the claim exclusion using the powers available under section 407.1110, RSMo, as amended. Submitting an affidavit to the Attorney General of intention to utilize a claimed exclusion shall not, in and of itself, establish the section 407.1110.4 RSMo, defense to an action brought for violation of section 407.1098, RSMo, or section 407.1107, RSMo.

(3) Availability of Forms. The Attorney General's Office on request will supply in printed format the forms listed in this rule. Accurate reproduction of the forms may be utilized for filing in lieu of the printed forms. All forms referenced herein are available at https://www.nocall.ago.mo.gov/.

AUTHORITY: section 407.1101, RSMo 2000. Original rule filed Sept. 28, 2000, effective March 30, 2001. For intervening history, please consult the ***Code of State Regulations****. Amended: Filed Sept. 21, 2011.*

PUBLIC COST: This proposed amendment will cost state agencies or political subdivisions less than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed amendment will cost private entities less than five hundred dollars ($500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Interested persons may submit a written statement in support of or in opposition to the proposed amendment. Written statements shall be sent to Ronald Holliger, General Counsel, Office of the Attorney General, PO Box 899, Jefferson City, MO 65102. To be considered, comments must be received within thirty (30) days after publication of this notice in the ***Missouri Register****. No public hearing is scheduled.*

Title 16—RETIREMENT SYSTEMS
Division 20—Missouri Local Government Employees' Retirement System (LAGERS)
Chapter 2—Administrative Rules

PROPOSED AMENDMENT

16 CSR 20-2.085 Disability Retirement Applications and Other Relief. LAGERS is amending sections (1)–(3).

PURPOSE: This amendment modifies the procedures to be followed by members filing applications for disability retirement benefits or other types of relief including the time limits in which disability applications must be filed.

(1) A member who makes a written application for disability retirement benefits pursuant to section 70.680, RSMo *[1994]*, or for other relief pursuant to section 70.605.16**,** RSMo *[1994]*, shall file the application within *[six (6) months]* **one (1) year** from the date of alleged disability*[,]* or within *[six (6) months]* **one (1) year** of the date of the event from which relief is sought under section 70.605.16**, RSMo**.

(2) For good cause shown, the time period for filing an application for disability retirement benefits, or application for other relief, may be extended, at the sole discretion of the board, except as otherwise limited herein.

(A) Requests for extension of time for filing an application for disability retirement benefits or other relief shall be in writing; shall be filed by the member or on the member's behalf; and shall state the reason(s) why the member did not file the application within the *[six (6) month]* **one (1)-year** time period specified in section (1).

(B) Requests for extension of time for filing shall be accompanied by the completed application for disability retirement benefits or

other relief filed by the member or on the member's behalf*[,]* and shall include all medical information required by section 70.680, RSMo *[1994],* if applicable.

(C) In no event shall requests for extension of time for filing an application for disability retirement benefits or other relief be considered after *[one (1) year]* **two (2) years** from the date of the alleged disability or event from which other relief is sought.

(3) Upon receipt of a request for extension of time to file an application for disability retirement benefits or other relief, the board may grant the extension of time, or deny the request in accordance with the provisions of this rule. If the request is granted, the board will review the application and make its determination. If the request is denied, the member may request a hearing pursuant to the provisions of rule 16 CSR 20-3.010. A member may appeal an adverse determination following such a hearing, in accordance with the provisions of section 70.605.16, RSMo *[1994]*.

AUTHORITY: sections 70.605.16[,] ***and*** *70.605.21****, RSMo Supp. 2010,*** *and* ***section*** *70.680.1, RSMo [1994]* ***2000****. Original rule filed Feb. 16, 1999, effective July 30, 1999. Amended: Filed Sept. 26, 20I1*.

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars ($500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Any interested person or entity may submit written comments in support of or in opposition to the proposed amendment. Comments should be directed to the Missouri Local Government Employees Retirement System (LAGERS), ATTN: Robert Franson, Chief Counsel, PO Box 1665, Jefferson City, MO 65l02-1665. To be considered, comments must be received within thirty (30) days of publication of this notice in the ***Missouri Register****. No public hearing is scheduled.*

Title 16—RETIREMENT SYSTEMS
Division 20—Missouri Local Government Employees' Retirement System (LAGERS)
Chapter 4—Actuarial Assumptions

PROPOSED AMENDMENT

16 CSR 20-4.010 Actuarial Assumptions. LAGERS is amending sections (1)–(6) and Tables 1 and 2.

PURPOSE: This amendment updates the actuarial assumptions in the rule.

(1) The investment return rate used in making the valuations is *[seven percent (7%)]* **seven and twenty-five hundredths percent (7.25%)** per year, compounded annually*[, before retirement and four percent (4%) per year, compounded annually, after retirement]*. This rate of return is not the assumed real rate of return. The real rate of return is the rate of investment return in excess of the inflation rate. Considering other financial assumptions, the *[seven percent (7%)]* **seven and twenty-five hundredths percent (7.25%)** investment return rate translates to an assumed real rate of return of *[three percent (3%)]* **three and seventy-five hundredths percent (3.75%)**. Adopted *[1986]* **2011**.

(2) The mortality table used in evaluating allowances to be paid is *[the 1984 Group Annuity Mortality Table set back no years for men and six (6) years for women]* **one hundred five percent (105%) of the 1994 Group Annuity Mortality Table setback zero (0) years for men and zero (0) years for women**. Adopted *[1990]* **2011**.

(3) The probabilities of retirement with an age and service allowance are shown in Table 1**, included herein**. Adopted *[1996]* **2011**.

(4) The probabilities of withdrawal from service together with individual pay increase assumptions are shown in Table 2**, included herein**. Adopted *[1996]* **2011**.

(5) Total active member payroll is assumed to increase *[four percent (4%)]* **three and fifty hundredths percent (3.5%)** per year, which is the portion of the individual pay increase assumptions attributable to inflation. In effect, this assumes no change in the number of active members per employer. Adopted *[1986]* **2011**.

(6) An individual entry-age *[actuarial]* **normal** cost method of valuation is used in determining age and service allowance actuarial liabilities and normal cost. Adopted 1986.

[TABLE 1

Percent of Eligible Active Members Retiring Within Next Year
Without Rule of 80 Eligibility

Retirement Ages	General Members Men	Women	Retirement Ages	Police	Fire
60	30%	30%	55	35%	35%
61	20	15	56	15	20
62	35	20	57	10	12
63	30	15	58	15	10
64	30	25	59	15	20
65	45%	40%	60	15%	20%
66	35	30	61	20	20
67	30	20	62	40	45
68	20	25	63	35	40
69	30	30	64	40	35
70	100	100	65	100	100

Percent of Eligible Active Members Retiring Within Next Year
With Rule of 80 Eligibility

Retirement Ages	Men	Women	Police	Fire
50	15%	15%	25%	20%
51	15	15	25	20
52	15	15	25	20
53	15	15	25	20
54	15	15	25	20
55	15	15	25	20
56	15	15	25	20
57	15	15	15	10
58	15	15	25	15
59	15	15	20	10
60	25	30	20	20
61	25	20	25	15
62	35	25	30	45
63	25	20	25	35
64	40	35	50	70
65	55	50	100	100
66	45	35		
67	35	30		
68	25	25		
69	35	50		
70	100	100]		

Table 1

PERCENT OF ELIGIBLE ACTIVE MEMBERS RETIRING WITHIN THE NEXT YEAR

	Without Rule of 80 Eligibility				With Rule of 80 Eligibility			
	General*				General			
Ages	Men	Women	Police*	Fire*	Men	Women	Police	Fire
50			3.0%	2.5%	15%	15%	25%	25%
51			3.0	2.5	15	15	25	15
52			3.0	2.5	15	15	15	15
53			3.0	2.5	15	15	15	15
54			3.0	2.5	15	15	15	15
55	2.5%	3.0%	10	15	15	15	15	15
56	2.5	3.0	10	15	15	15	15	15
57	2.5	3.0	10	10	15	15	15	15
58	2.5	3.0	10	15	15	15	15	15
59	2.5	3.0	10	15	15	15	15	20
60	10	10	10	20	15	15	15	30
61	10	10	10	10	15	15	25	30
62	25	15	25	30	30	15	30	45
63	25	15	20	30	30	15	30	45
64	20	15	20	25	30	20	30	45
65	25	20	100	100	30	25	100	100
66	25	25			30	25		
67	20	20			30	25		
68	20	20			30	25		
69	20	15			30	25		
70	100	100			100	100		

***First 5 years of retirement pattern only apply to early retirement. Early retirement rates are also applicable if Rule of 80 is adopted.**

[TABLE 2

Withdrawal From Active Employment Before Age and Service Retirement and Individual Pay Increase Assumptions

Percent of Active Members Separating Within Next Year

Sample Ages	*Years of Service*	*General Members*		*Police*	*Fire*	*Percent Increase in Individual's Pay During Next Year*
		Men	*Women*			
All	*0*	*25.00%*	*26.00%*	*25.00%*	*19.00%*	
	1	*17.00*	*22.00*	*21.00*	*12.00*	
	2	*14.00*	*17.00*	*18.00*	*9.00*	
	3	*12.00*	*16.00*	*16.00*	*7.00*	
	4	*10.00*	*12.00*	*14.00*	*6.00*	
25	*5 & over*	*7.76%*	*11.35%*	*11.56%*	*5.46%*	*8.0%*
30		*6.67*	*10.05*	*9.57*	*4.47*	*6.4*
35		*5.50*	*8.77*	*7.80*	*3.50*	*5.7*
40		*4.75*	*7.50*	*6.65*	*2.55*	*5.4*
45		*4.17*	*6.14*	*5.97*	*1.97*	*5.2*
50		*3.89%*	*5.24%*	*4.29%*	*1.49%*	*5.0%*
55		*3.28*	*3.74*	*1.88*	*0.98*	*4.8*
60		*2.51*	*2.32*	*1.21*	*1.21*	*4.5*
65		*1.95*	*1.10*	*1.95*	*1.95*	*4.0]*

Table 2

All Divisions
Separations from Active Employment Before Age & Service Retirement
& Individual Pay Increase Assumptions

Sample Ages	Years of Service	Percent of Active Members Separating within the Next Year: Death [1] Men	Death [1] Women	Other: General Men	General Women	Other Police	Other Fire	Pay Increase Assumptions for an Individual Employee: Fire	Others [2]
ALL	0			18.00%	21.00%	18.00%	8.00%		
	1			16.00	20.00	17.00	7.00		
	2			14.00	16.00	16.00	6.00		
	3			11.00	13.00	13.00	6.00		
	4			9.00	12.00	12.00	5.00		
25	5 & Over	0.03%	0.02%	7.50	10.70	10.10	5.00	8.6%	6.8%
30		0.03	0.02	6.50	9.40	8.00	4.00	6.7	6.0
35		0.06	0.04	5.10	7.20	6.10	2.80	5.4	5.5
40		0.08	0.05	3.80	5.50	4.70	2.20	4.7	5.0
45		0.11	0.08	3.00	4.20	3.60	1.80	4.4	4.5
50		0.16	0.13	2.40	3.40	1.80	1.00	4.1	4.1
55		0.27	0.20	1.80	2.50	1.00	0.50	3.9	3.9
60		0.51	0.38	1.00	1.20	0.00	0.00	3.8	3.8
65		0.96	0.73	0.00	0.00	0.00	0.00	3.5	3.5

1 General, Police, Fire
2 General, Police

*AUTHORITY: section 70.605.14, RSMo [1994] **Supp. 2010**. Original rule filed Dec. 29, 1975, effective January 8, 1976. For intervening history, please consult the **Code of State Regulations**. Amended: Filed Sept. 26, 2011.*

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars ($500) in the aggregate.

*NOTICE TO SUBMIT COMMENTS: Any interested person or entity may submit written comments in support of or in opposition to the proposed amendment. Comments should be directed to the Missouri Local Government Employees Retirement System (LAGERS), ATTN: Robert Franson, Chief Counsel, PO Box 1665, Jefferson City, MO 65102-1665. To be considered, comments must be received within thirty (30) days of publication of this notice in the **Missouri Register**. No public hearing is scheduled.*

Title 20—DEPARTMENT OF INSURANCE, FINANCIAL INSTITUTIONS AND PROFESSIONAL REGISTRATION
Division 2150—State Board of Registration for the Healing Arts
Chapter 2—Licensing of Physicians and Surgeons

PROPOSED AMENDMENT

20 CSR 2150-2.004 Postgraduate Training Requirements for Permanent Licensure. The board is proposing to amend section (3).

PURPOSE: This amendment removes references to examinations that are no longer available to the board and applicants.

(3) Notwithstanding the provisions of sections (1) and (2) of this rule, the board may waive any portion of the postgraduate training requirements of this rule if the applicant is American Specialty Board-eligible to take an American Specialty Board-certifying examination and the applicant has achieved a passing score (as defined in this chapter) on a licensing examination administered in a state or territory of the United States or the District of Columbia. The board also may waive any of the postgraduate training requirements of this rule if the applicant is a graduate of a program approved and accredited to teach medical education by the Canadian Royal College of Physicians and Surgeons and has one (1) year of postgraduate training in a program approved and accredited to teach postgraduate medical education by the Canadian Royal College of Physicians and Surgeons. The board may also waive any of the postgraduate training requirements of this rule if the applicant has served for three (3) or more years as a full-time faculty member of a medical college approved and accredited by the AMA or its Liaison Committee on Medical Education, or an osteopathic college approved and accredited by the AOA. Prior to waiving any of the postgraduate training requirements of this rule, the board may require the applicant to achieve a passing score on *[one (1) of the following: T]*the Appropriate Specialty Board's certifying examination in the physician's field of specialization*[, Component 2 of the Federation Licensing Examination (FLEX) by December 31, 1993, Step 3 of the United States Medical Licensing Examination (USMLE),]* or the Federation of State Medical Boards' Special Purpose Examination (SPEX). If the board waives any of the postgraduate training requirements of this rule, then the license issued to the applicant may be limited or restricted to the specialty area for which the applicant is American Specialty Board eligible.

*AUTHORITY: sections **334.031,** 334.035, [RSMo Supp. 1987] and 334.125, RSMo [1986] **2000, and section 334.040, HB 265, First Regular Session, Ninety-sixth General Assembly, 2011**. This rule originally filed as 4 CSR 150-2.004. Emergency rule filed Nov. 16, 1987, effective Dec. 31, 1987, expired April 29, 1988. Original rule filed Feb. 17, 1988, effective April 28, 1988. For intervening history, please consult the **Code of State Regulations**. Amended: Filed Sept. 28, 2011.*

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars ($500) in the aggregate.

*NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Board of Registration for the Healing Arts, PO Box 4, Jefferson City, MO 65102, by facsimile at 573-751-3166 or via email at healingarts@pr.mo.gov. To be considered, comments must be received within thirty (30) days after publication of this notice in the **Missouri Register**. No public hearing is scheduled.*

Title 20—DEPARTMENT OF INSURANCE, FINANCIAL INSTITUTIONS AND PROFESSIONAL REGISTRATION
Division 2150—State Board of Registration for the Healing Arts
Chapter 2—Licensing of Physicians and Surgeons

PROPOSED AMENDMENT

20 CSR 2150-2.005 Examination Requirements for Permanent Licensure. The board is proposing to amend sections (1)–(4) and delete section (5).

PURPOSE: This amendment mirrors test score requirements and waiver criteria changes made to section 334.040, RSMo, effective August 28, 2011, for applicants seeking licensure by examination.

(1) The board shall not issue a permanent license as a physician and surgeon to any applicant who has not met the qualifications set forth under either subsection (1)(A), (B)**,** or (C) of this rule:

(A) Applicant has received a passing score on *[either]* any of the following:

1. A licensing examination administered in one (1) or more states or territories of the United States or the District of Columbia;

2. Components 1 and 2 of the Federation Licensing Examination (FLEX) before January 1, 1994; or

3. Each of the three (3) Steps of the United States Medical Licensing Examination (USMLE) within a seven (7)-year period. Applicant shall not be deemed to have received a passing score on any Step of the USMLE unless applicant has received a passing score on that Step within three (3) attempts. Failure to pass any USMLE Step shall be considered a failure to pass that Step for purposes of Missouri licensure, regardless of the jurisdiction in which the Step was administered; or

4. One (1) of the hybrid combinations of FLEX, USMLE, NBME (National Board of Medical Examiners) and NBOE (National Board of Osteopathic Examiners) examinations as set forth here, if completed before January 1, 2000:

NBOE Part I, NBME Part I or USMLE
Step 1
plus
NBOE Part II, NBME Part II or USMLE
Step 2
plus

NBOE Part III, NBME Part III or USMLE Step 3
or
FLEX Component I
plus
USMLE Step 3
or
NBOE Part I, NBME Part I or USMLE
Step 1
plus
NBOE Part II, NBME Part II or USMLE
Step 2
plus
FLEX Component 2; or

(C) Applicant has received *[both]* a passing score on the Licentiate of the Medical Council of Canada (LMCC) *[and the medalist award in either medicine or surgery from the Royal College of Physicians and Surgeons]*.

(2) Beginning January 1, 1994, the licensing examination administered by Missouri shall be *[Part]* **Step** 3 of the USMLE.

(3) To receive a passing score, the applicant must achieve a weighted average score of not less than seventy-five *[percent (75%)]* **(75)** on the FLEX, a two-digit scaled score of not less than seventy-five (75) on the USMLE, or an average score of not less than seventy-five **percent** (75**%**) on any other licensing examination. Applicants who have taken the FLEX examination prior to 1985 may not average scores from a portion of the examination taken at one (1) test administration with scores from any other portion of the examination taken at another test administration to achieve a passing score. Applicants may not average scores from different Steps of the USMLE or from portions of different examinations in order to achieve a passing score.

(4) The board shall not issue a permanent license as a physician and surgeon or allow the Missouri State Board examination to be administered to any applicant who has failed to achieve a passing score cumulatively three (3) times or more on licensing examinations administered in one (1) or more states or territories of the United States, the District of Columbia**,** or Canada **unless they meet the waiver criteria stated in section 334.040, RSMo**.

[(5) The board shall not allow any applicant, who has failed to achieve a passing score cumulatively two (2) times or more on licensing examinations administered in one (1) or more states or territories of the United States, the District of Columbia or Canada to take the licensing examination administered by the board until the applicant has successfully completed one (1) additional year of postgraduate training in a program which is approved and accredited to teach postgraduate medical education by the accreditation counsel on graduate medical education of the American Medical Association or the education committee of the American Osteopathic Association following the second unsuccessful attempt to pass a licensing examination.]

AUTHORITY: sections 334.031, [334.040 and] 334.125, [RSMo Supp. 1999] and 334.043, RSMo [1994] ***2000, and section 334.040, HB 265, First Regular Session, Ninety-sixth General Assembly, 2011****. This rule originally filed as 4 CSR 150-2.005. Original rule filed Feb. 17, 1988, effective May 12, 1988. For intervening history, please consult the* ***Code of State Regulations****. Amended: Filed Sept. 28, 2011.*

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars ($500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Board of Registration for the Healing Arts, PO Box 4, Jefferson City, MO 65102, by facsimile at 573-751-3166 or via email at healingarts@pr.mo.gov. To be considered, comments must be received within thirty (30) days after publication of this notice in the ***Missouri Register****. No public hearing is scheduled.*

Title 20—DEPARTMENT OF INSURANCE, FINANCIAL INSTITUTIONS AND PROFESSIONAL REGISTRATION
Division 2150—State Board of Registration for the Healing Arts
Chapter 2—Licensing of Physicians and Surgeons

PROPOSED RESCISSION

20 CSR 2150-2.015 Determination of Competency. This rule complied with the provisions of section 334.100.2(24), RSMo, and specified the procedures to be followed under this statute in determining competency.

PURPOSE: This rule is being rescinded and readopted to update the existing rule to reflect the procedures to be followed in determining competency as stated in section 334.099, RSMo, which went into effect on August 28, 2011.

AUTHORITY: section 334.100, RSMo Supp. 1990. This rule originally filed as 4 CSR 150-2.015. Original rule filed Oct. 14, 1976, effective Jan. 13, 1977. Rescinded and readopted: Filed Dec. 13, 1989, effective April 1, 1990. Moved to 20 CSR 2150-2.015, effective Aug. 28, 2006. Rescinded: Filed Sept. 28, 2011.

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed rescission will not cost private entities more than five hundred dollars ($500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rescission with the Board of Registration for the Healing Arts, PO Box 4, Jefferson City, MO 65102, by facsimile at 573-751-3166 or via email at healingarts@pr.mo.gov. To be considered, comments must be received within thirty (30) days after publication of this notice in the ***Missouri Register****. No public hearing is scheduled.*

Title 20—DEPARTMENT OF INSURANCE, FINANCIAL INSTITUTIONS AND PROFESSIONAL REGISTRATION
Division 2150—State Board of Registration for the Healing Arts
Chapter 2—Licensing of Physicians and Surgeons

PROPOSED RULE

20 CSR 2150-2.015 Determination of Competency

PURPOSE: This rule complies with the provisions of section 334.099, RSMo, and specifies the procedures to be followed under this statute in determining competency.

(1) For purposes of this rule, the following terms shall mean:

(A) "Medical or osteopathic incompetency"—being unable to practice medicine with reasonable skill or safety due to lack of knowledge, ability, or impairment;

(B) "Mental incapacity"—suffering from a mental illness or disorder to such an extent that he or she lacks the capacity to practice his or her profession; and

(C) "Physical incapacity"—suffering from a physical disorder to such an extent that he or she lacks the ability to practice his or her profession.

(2) The board shall review any information before it that it determines is reliable in deciding to convene a reasonable cause hearing. This may include, but is not limited to medical records of patients, medical records of the licensee, statements of witnesses, and any investigation.

(3) Approved Facilities.

(A) The board shall maintain a list of approved facilities for the conduct of examinations.

(B) All facilities considered approved facilities by the board as of the effective date of this rule are considered "approved facilities."

(C) The board may review information submitted by any facility offering evaluations that may meet its needs under this section. The decision of whether to adopt a facility as an "approved facility" shall be by majority vote of the board.

(D) The board may remove a facility from the list by majority vote of the board.

(4) If a licensee wishes to apply for reconsideration pursuant to 334.099.4, RSMo, they shall submit a letter to the board explaining their request along with any supporting documentation, which may include affidavits, medical records, evaluations, or other relevant information.

(A) Information received more than thirty (30) days before a regularly scheduled meeting of the board shall be reviewed at the upcoming regularly scheduled meeting.

(B) Information received less than thirty (30) days before a regularly scheduled meeting of the board may be reviewed at the upcoming regularly scheduled meeting. If the information is not reviewed at the upcoming regularly scheduled meeting, it shall be reviewed at the next regularly scheduled meeting.

(C) The board may request that the licensee appear for a personal interview with the board before making a decision.

(D) The board shall issue its decision regarding the application for reconsideration in writing.

(5) The provisions of Chapter 536, RSMo, for a contested case, except those provisions or amendments which are in conflict with 334.099, RSMo, shall apply to and govern the proceedings contained in 334.099, RSMo, and the rights and duties of the parties involved. The person appealing such an action shall be entitled to present evidence under Chapter 536, RSMo, relevant to the allegations.

AUTHORITY: sections 334.099 and 334.100, HB 265, First Regular Session, Ninety-sixth General Assembly, 2011. This rule originally filed as 4 CSR 150-2.015. Original rule filed Oct. 14, 1976, effective Jan. 13, 1977. For intervening history, please consult the ***Code of State Regulations****. Rescinded and readopted: Filed Sept. 28, 2011.*

PUBLIC COST: This proposed rule will cost state agencies or political subdivisions approximately six thousand forty-nine dollars ($6,049) to six thousand eight hundred thirty-two dollars ($6,832) annually for the life of the rule. It is anticipated that the costs will recur for the life of the rule, may vary with inflation and are expected to increase at the rate projected by the Legislative Oversight Committee.

PRIVATE COST: This proposed rule will cost private entities approximately forty-three thousand four hundred ninety-six dollars ($43,496) annually for the life of the rule. It is anticipated that the costs will recur for the life of the rule, may vary with inflation and are expected to increase at the rate projected by the Legislative Oversight Committee.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rule with the Board of Registration for the Healing Arts, PO Box 4, Jefferson City, MO 65102, by facsimile at 573-751-3166 or via email at healingarts@pr.mo.gov. To be considered, comments must be received within thirty (30) days after publication of this notice in the ***Missouri Register****. No public hearing is scheduled.*

PUBLIC FISCAL NOTE

I. RULE NUMBER

Title 20 - Department of Insurance, Financial Institutions and Professional Registration
Division 2150 - State Board of Registration for the Healing Arts
Chapter 2 - Licensing of Physicians and Surgeons
Proposed Rule - 20 CSR 2150-2.015 Determination of Competency
Prepared September 28, 2011 by the Division of Professional Registration

II. SUMMARY OF FISCAL IMPACT

Affected Agency or Political Subdivision	Estimated Cost of Compliance	
State Board of Registration for the Healing Arts		$6,049.21 to $6,832.07
	Annual Cost of Compliance for the Life of the Rule	**$6,049.21 to $6,832.07**

III. WORKSHEET

The following positions will be reviewing the applicable information including patient medical records, licensee medical records, witness statements, and any investigation in order to decide whether or not to convene a contested hearing to determine if reasonable cause exists to believe that a licensee or applicant is unable to practice his or her profession with reasonable skill and safety to the public by reason of medical or osteopathic incompetency, mental, or physical incapacity, or due to the excessive use or abuse of alcohol or controlled substances.

For licensees who wish to apply for reconsideration of a contested hearing decision, they will need to review applicable information submitted by those licensees.

These same individuals will then need to meet with the licensee for a personal interview with the board prior to making a decision on reconsideration.

Principle Assistant (Executive Director) - serves as the senior executive officer of the licensing agency.
Medical Director - directs medical review program for physicians licensed by the State Board of Registration for the Healing Arts.
Investigation Manager - directs or assists in the overall planning, development, and administration of a the State Board of Registration for the Healing Arts investigative program.
Legal Counsel - provides legal assistance to the board.

Personal Service Dollars

STAFF	ANNUAL SALARY RANGE	SALARY TO INCLUDE FRINGE BENEFIT	HOURLY SALARY	COST PER MINUTE	TIME PER LICENSEE	COST PER APPLICATION	NUMBER OF ITEMS	TOTAL COST
Executive Director	$70,000 to $77,000	$106,638 to $117,302	$51.27 to $56.40	$0.85 to $0.94	2.5 hours	$128.17 to $140.99	10 Licensees	$1,281.71 to $1,409.88
Medical Director	$109,524 to $116,028	$166,849 to $176,757	$80.22 to $84.98	$1.34 to $1.42	2.5 hours	$200.54 to $212.45	10 Licensees	$2,005.39 to $2,124.48
Investigation Manager	$38,700 to $62,952	$58,956 to $95,901	$28.34 to $46.11	$0.47 to $0.77	2.5 hours	$70.86 to $115.27	10 Licensees	$708.60 to $1,152.66
Legal Counsel	$50,000 to $55,000	$76,170 to $83,787	$36.62 to $40.28	$0.61 to $0.67	2.5 hours	$91.55 to $100.71	10 Licensees	$915.50 to $1,007.06
9 Board Members	n/a	n/a	$6.25	$0.10	2 hours	$12.50 per board member	10 Licensees	$1,125.00
								$6,036.21 to
							Total Personal Service Costs	**$6,819.07**

Expense and Equipment Dollars

Item	Cost	Quantity	Total Cost Per Item
Correspondence Mailing	$0.65	20	$13.00
	Total Expense and Equipment Costs		**$13.00**

IV. ASSUMPTIONS

1. Employee's salaries were calculated using the annual salary multiplied by 52.34% for fringe benefits and then divided by 2080 hours per year to determine the hourly salary. The hourly salary was then divided by 60 minutes to determine the cost per minute. The cost per minute was then multiplied by the amount of time individual staff spent on the processing of the specified item. The total cost was based on the cost per item multiplied by the estimated number of items.
2. The board assumes that it will send at least two correspondence mailings to individuals under board review.
3. It is anticipated that the total costs will recur annually for the life of the rule, may vary with inflation, and is expected to increase at the rate projected by the Legislative Oversight Committee.

PRIVATE FISCAL NOTE

I. RULE NUMBER

Title 20 - Department of Insurance, Financial Institutions and Professional Registration
Division 2150 - State Board of Registration for the Healing Arts
Chapter 2 - Licensing of Physicians and Surgeons
Proposed Rule - 20 CSR 2150-2.015 Determination of Competency
Prepared September 28, 2011 by the Division of Professional Registration

II. SUMMARY OF FISCAL IMPACT

Estimate the number of entities by class which would likely be affected by the adoption of the proposed rule:	Classification by type of the business entities which would likely be affected:	Estimated cost of compliance with the rule by affected entities:
10	Licensees Applying for Reconsideration (Postage @ $0.44)	$4.40
10	Licensees Applying for Reconsideration (Travel Expenses @ $99.16)	$991.60
5	Licensees Applying for Reconsideration (Assessment @ $8,500)	$42,500.00
	Estimated Annual Cost of Compliance for the Life of the Rule	**$43,496.00**

III. WORKSHEET

See Table Above

IV. ASSUMPTIONS

1. The figures reported above are based on FY2010 - FY2011 actuals.
2. The travel expenses are based on gas expenses for an average trip of 134 miles one way at $0.37 per mile. It is not possible to estimate all costs (i.e. meals and lodging) that an applicant could incur in attending a meeting of the board. However, the board anticipates that this will be a one day trip for the licensee, therefore, costs should be minimal.
3. In determining competency, the board could require some licensees to undergo an evaluation/assessment. The board estimates that approximately 5 individuals annually will be required to obtain an evaluation/assessment under the terms of this rule. Expenses related to the assessment are the responsiblity of the licensee applying for reconsideration.
4. Licensees or applicants called into question under the terms of this rule could incur legal costs. It is not possible to estimate legal costs for these individuals as these costs could vary widely according to individual needs or preferences, therefore, no estimates are included here.
5. It is anticipated that the total cost will recur annually for the life of the rule, may vary with inflation and is expected to increase at the rate projected by the Legislative Oversight Committee.

Title 20—DEPARTMENT OF INSURANCE, FINANCIAL INSTITUTIONS AND PROFESSIONAL REGISTRATION
Division 2150—State Board of Registration for the Healing Arts
Chapter 2—Licensing of Physicians and Surgeons

PROPOSED RESCISSION

20 CSR 2150-2.020 Examination. This rule provided specific instructions to applicants regarding examination procedures.

PURPOSE: This rule is being rescinded as the board is no longer responsible for administering the physician licensing examination which makes this rule obsolete.

AUTHORITY: sections 334.043, RSMo 1994, and 334.125, RSMo Supp. 1995. This rule originally filed as 4 CSR 150-2.020. This version of rule filed Dec. 19, 1975, effective Dec. 29, 1975. For intervening history, please consult the ***Code of State Regulations****. Rescinded: Filed Sept. 28, 2011.*

PUBLIC COST: This proposed rescission will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed rescission will not cost private entities more than five hundred dollars ($500) in the aggregate.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rescission with the Board of Registration for the Healing Arts, PO Box 4, Jefferson City, MO 65102, by facsimile at 573-751-3166 or via email at healingarts@pr.mo.gov. To be considered, comments must be received within thirty (30) days after publication of this notice in the ***Missouri Register****. No public hearing is scheduled.*

Title 20—DEPARTMENT OF INSURANCE, FINANCIAL INSTITUTIONS AND PROFESSIONAL REGISTRATION
Division 2150—State Board of Registration for the Healing Arts
Chapter 2—Licensing of Physicians and Surgeons

PROPOSED AMENDMENT

20 CSR 2150-2.030 Licensing by Reciprocity. The board is proposing to amend sections (1)–(3), (9), (12), and (13) and add sections (14)–(16).

PURPOSE: This amendment mirrors waiver criteria and practice requirement changes made to section 334.040, RSMo, effective August 28, 2011, for applicants desiring licensure by reciprocity.

(1) The applicant shall furnish a postgraduate reference letter **to the board** from each institution where they are a house officer, meaning either intern or resident.

(2) The applicant shall furnish *[a certificate]* **proof** of graduation **to the board** from an accredited high school*[.]* **and** *[S]*satisfactory evidence of completion of pre-professional education consisting of a minimum of sixty (60) semester hours of college credit in acceptable subjects from a reputable college or university approved by the board.

(3) The applicant shall furnish satisfactory evidence **to the board** of having attended throughout at least four (4) terms of thirty-two (32) weeks of actual instructions in each term of a professional college recognized as reputable by the board and of having received a diploma from a professional college recognized as reputable by the board.

(9) The fee for reciprocity shall be *[an]* **the** appropriate fee *[to be]* as established *[by the board]* **in 20 CSR 2150-2.080**. The fee shall be sent in the form of a bank draft or post office money order or express money order. *[Personal checks will not be accepted.]*

(12) When an applicant has filed their application and *[an]* **the** appropriate fee*[, to be]* **as** established *[by the board,]* **in 20 CSR 2150-2.080** for licensure by reciprocity and the application is denied by the board or subsequently withdrawn by the applicant, *[an]* **the** appropriate fee established by the board will be retained by the State Board of Registration for the Healing Arts as a service charge.

(13) An applicant who cumulatively three (3) times or more has failed a licensing examination administered in one (1) or more states or territories of the United States or the District of Columbia will not be licensed by reciprocity in this state by the board **unless they meet the waiver criteria in section 334.040, RSMo**.

(14) At the discretion of the board, applicants may be exempt from sections (1) and (2) of this rule and from providing a copy of their professional diploma if they provide proof of the following:

(A) Current licensure in any state or territory of the United States or the District of Columbia;

(B) Having actively engaged in the practice of clinical medicine or held a teaching or faculty position in a medical school approved by the American Medical Association (AMA), Liaison Committee on Medical Education (LCME), or American Osteopathic Association (AOA) for the five (5)-year period immediately preceding the application for licensure;

(C) Holding current certification in their area of specialty by the American Board of Medical Specialties (ABMS) or AOA; and

(D) No license issued to the applicant in any state or territory of the United States or the District of Columbia has been disciplined or has a pending complaint.

(15) Applicants who have not actively engaged in the practice of clinical medicine or held a teaching or faculty position in a medical or osteopathic school approved by the AMA, LCME, or the AOA for any two (2) years in the three (3)-year period immediately preceding the filing of their application for licensure may be required to complete continuing medical education, additional training, an assessment from a board-approved facility, or a reexamination. Reexaminations may include the Federation of State Medical Board's Special Purpose Examination (SPEX), the National Board of Osteopathic Examiners Comprehensive Osteopathic Medical Variable-Purpose Examination (COMVEX), or specialty or certification examinations recognized by the AOA or the ABMS.

(16) The term "actively engaged in the practice of clinical medicine" as used in this rule shall mean proof of practicing medicine the equivalent of four hundred (400) hours per year.

AUTHORITY: sections ***334.031, 334.035, 334.043, and*** *334.125, RSMo 2000****, and section 334.040, HB 265, First Regular Session, Ninety-sixth General Assembly, 2011****. This rule originally filed as 4 CSR 150-2.030. This version of rule filed Dec. 19, 1975, effective Dec. 29, 1975. For intervening history, please consult the* ***Code of State Regulations****. Amended: Filed Sept. 28, 2011.*

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate.

PRIVATE COST: This proposed amendment will cost private entities approximately nineteen thousand dollars ($19,000) annually for the life of the rule. It is anticipated that the costs will recur for the life of the rule, may vary with inflation and are expected to increase at the rate projected by the Legislative Oversight Committee.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed amendment with the Board of Registration for the Healing Arts, PO Box 4, Jefferson City, MO 65102, by facsimile at 573-751-3166 or via email at healingarts@pr.mo.gov. To be considered, comments must be received within thirty (30) days after publication of this notice in the ***Missouri Register****. No public hearing is scheduled.*

PRIVATE FISCAL NOTE

I. RULE NUMBER

Title 20 - Department of Insurance, Financial Institutions and Professional Registration

Division 2150 - State Board of Registration for the Healing Arts
Chapter 2 - Licensing of Physicians and Surgeons
Proposed Amendment - 20 CSR 2150-2.030 Licensing by Reciprocity
Prepared September 28, 2011 by the Division of Professional Registration

II. SUMMARY OF FISCAL IMPACT

Estimate the number of entities by class which would likely be affected by the adoption of the proposed amendment:	Classification by type of the business entities which would likely be affected:	Estimated cost of compliance with the amendment by affected entities:
2	Reciprocity Applicants taking SPEX (Exam @ $1,250)	$2,500.00
2	Reciprocity Applicants taking COMVEX (Exam @ $750)	$1,500.00
2	Reciprocity Applicants taking Specialty or Certification Exam (Exam @ $2,000)	$4,000.00
1	Reciprocity Applicants taking Continuing Medical Education (50 Credit Hours CME @ $50/credit hour)	$2,500.00
1	Reciprocity Applicants Assessment (Assessment @ $8,500)	$8,500.00
	Estimated Annual Cost of Compliance for the Life of the Rule	**$19,000.00**

III. WORKSHEET

See Table Above

IV. ASSUMPTIONS

1. The figures reported above are based on FY 2010 - FY2011 actuals.
2. For reciprocity applicants taking continuing medical education, fifty credit hours is a reasonable estimate, however, this could vary greatly based on applicant needs.
3. It is anticipated that the total costs will recur annually for the life of the rule, may vary with inflation and is expected to increase at the rate projected by the Legislative Oversight Committee.

Title 20—DEPARTMENT OF INSURANCE, FINANCIAL INSTITUTIONS AND PROFESSIONAL REGISTRATION
Division 2150—State Board of Registration for the Healing Arts
Chapter 2—Licensing of Physicians and Surgeons

PROPOSED RULE

20 CSR 2150-2.035 Licensing by Endorsement

PURPOSE: This rule provides information to those applicants desiring licensure by endorsement of the certificate of the National Board of Medical Examiners, the National Board of Examiners for Osteopathic Physicians and Surgeons, or of the Licentiate of the Medical Counsel of Canada.

(1) The applicant shall furnish a postgraduate reference letter to the board from each institution located in any state or territory of the United States, the District of Columbia, or Canada where they trained as an intern, resident, or fellow.

(2) The applicant shall furnish proof of graduation to the board from an accredited high school and satisfactory evidence of completion of pre-professional education consisting of a minimum of sixty (60) semester hours of college credit in acceptable subjects from a reputable college or university approved by the board.

(3) The applicant shall furnish satisfactory evidence to the board of having attended throughout at least four (4) terms of thirty-two (32) weeks of actual instruction in each term of a professional college recognized as reputable by the board and of having received a diploma from a professional college recognized as reputable by the board.

(4) The applicant shall furnish to the board proof of obtaining a certificate of the National Board of Medical Examiners, the National Board of Examiners for Osteopathic Physicians and Surgeons, or the Licentiate of the Medical Counsel of Canada.

(5) The applicant is required to make application (see 20 CSR 2150-2.040) upon a form prepared by the board.

(6) No application will be considered unless fully and completely made out on the specified form properly attested.

(7) An applicant for licensure by endorsement shall present, attached to the application, a recent photograph, not larger than three and one-half inches by five inches (3 1/2" × 5").

(8) Applications shall be sent to the executive director of the State Board of Registration for the Healing Arts, PO Box 4, Jefferson City, MO 65102.

(9) The fee for licensure by endorsement shall be the appropriate fee as established in 20 CSR 2150-2.080. The fee shall be sent in the form of a bank draft or post office money order or express money order.

(10) The applicant shall furnish, on a form prescribed by the board, verification of licensure from every state, territory, or international country in which the applicant has ever been licensed to practice medicine or any other profession.

(11) The professional diploma and verification of licensure shall be sent to the executive director of the State Board of Registration for the Healing Arts for verification. Photocopies of the documents may be accepted at the discretion of the board.

(12) When an applicant has filed their application and the appropriate fee as established in 20 CSR 2150-2.080 for licensure by endorsement and the application is denied by the board or subsequently withdrawn by the applicant, the appropriate fee established by the board will be retained by the State Board of Registration for the Healing Arts as a service charge.

(13) An applicant who has failed a licensing examination administered in one (1) or more states or territories of the United States or the District of Columbia cumulatively three (3) times or more will not be licensed by endorsement in this state by the board unless they meet the waiver criteria in section 334.040, RSMo.

(14) At the discretion of the board, applicants may be exempt from sections (1) and (2) of this rule and from providing a copy of their professional diploma if they provide proof of the following:

(A) Current licensure in any state or territory of the United States or the District of Columbia;

(B) Having actively engaged in the practice of clinical medicine or held a teaching or faculty position in a medical school approved by the American Medical Association (AMA), Liaison Committee on Medical Education (LCME), or American Osteopathic Association (AOA) for the five (5)-year period immediately preceding the application for licensure;

(C) Holding current certification in their area of specialty by the American Board of Medical Specialties (ABMS) or AOA; and

(D) No license issued to the applicant in any state or territory of the United States or the District of Columbia has been disciplined or has a pending complaint.

(15) Applicants who have not actively engaged in the practice of clinical medicine or held a teaching or faculty position in a medical or osteopathic school approved by the AMA, LCME, or the AOA for any two (2) years in the three (3)-year period immediately preceding the filing of their application for licensure may be required to complete continuing medical education, additional training, an assessment from a board-approved facility or a reexamination. Reexaminations may include the Federation of State Medical Board's Special Purpose Examination (SPEX), the National Board of Osteopathic Examiners Comprehensive Osteopathic Medical Variable-Purpose Examination (COMVEX), or specialty or certification examinations recognized by the AOA or the ABMS.

(16) The term "actively engaged in the practice of clinical medicine" as used in this rule shall mean proof of practicing medicine the equivalent of four hundred (400) hours per year.

AUTHORITY: sections 334.031, 334.035, 334.043, and 334.125, RSMo 2000, and section 334.040, HB 265, First Regular Session, Ninety-sixth General Assembly, 2011. Original rule filed Sept. 28, 2011.

PUBLIC COST: This proposed rule will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate. These costs were accounted for under the current examination, application, and reciprocity rules; therefore, no new costs are shown here. This rule is just organizing information differently in order to assist interested parties to find the information they are looking for more easily.

PRIVATE COST: This proposed rule will not cost private entities more than five hundred dollars ($500) in the aggregate. These costs were accounted for under the current examination, application, and reciprocity rules; therefore, no new costs are shown here. This rule is just organizing information differently in order to assist interested parties to find the information they are looking for more easily.

NOTICE TO SUBMIT COMMENTS: Anyone may file a statement in support of or in opposition to this proposed rule with the Board of Registration for the Healing Arts, PO Box 4, Jefferson City, MO 65102, by facsimile at 573-751-3166 or via email at healingarts@pr.mo.gov. To be considered, comments must be received within thirty (30) days after publication of this notice in the ***Missouri Register****. No public hearing is scheduled.*

Title 20—DEPARTMENT OF INSURANCE, FINANCIAL INSTITUTIONS AND PROFESSIONAL REGISTRATION
Division 2150—State Board of Registration for the Healing Arts
Chapter 2—Licensing of Physicians and Surgeons

PROPOSED AMENDMENT

20 CSR 2150-2.100 Licensing of International Medical Graduates—Reciprocity. The board is proposing to amend sections (1) and (2).

PURPOSE: This amendment mirrors waiver criteria and practice requirement changes made to section 334.040, RSMo, effective August 28, 2011, for international medical graduate applicants desiring licensure by reciprocity.

(1) Notwithstanding any other provision of law, an individual who has graduated from a school of medicine which is located outside the United States may be eligible for licensure to practice the healing arts in this state by reciprocity if he/she has satisfied the **requirements of 20 CSR 2150-2.010, 20 CSR 2150-2.030, 20 CSR 2150-2.040, and the** following requirements:

(B) An applicant must meet the academic and postgraduate training requirements for licensure to practice medicine in the country in which the applicant's school of graduation is located; **and**

(C) An applicant must be certified by the Educational Commission for Foreign Medical Graduates (ECFMG) and *[be either American Specialty Board-eligible or]* have completed three (3) years of American Medical Association (AMA)-approved postgraduate training in one (1) recognized specialty area of medicine. **The board may waive the three (3) years of postgraduate training if the applicant is American Specialty Board-eligible.**

1. ECFMG certification may be waived for a foreign graduate who is currently **certified by the** American *[Specialty Board-certified]* **Board of Medical Specialties**.

2. ECFMG certification may be waived for a foreign medical graduate who holds a current state/provincial medical license based on a required examination, if that license was issued prior to January 1, 1959.

[(D) An applicant must have been successfully examined (by passing the Federation Licensing Examination (FLEX) within three (3) attempts or by passing the United States Medical Licensing Examination (USMLE) within seven (7) years and without having made more than three (3) attempts at passing any one Step) by any professional board of any state or territory of the United States, recognized by the Missouri State Board of Registration for the Healing Arts and having received grades not less than those required by the Missouri board and possess a valid and current license from that state or territory of the United States.]

(2) As used in this rule, the term fifth pathway shall mean a candidate for licensure who, on or before December 31, 2009, has successfully completed four (4) years of medical education in Mexico and then completes a training program in the United States at a medical college approved and accredited by the AMA or its Liaison Committee on Medical Education or an osteopathic college approved and accredited by the American Osteopathic Association (AOA) in lieu of completing a year of internship and social service work in Mexico.

(A) A fifth pathway candidate may be eligible for licensure to practice the healing arts in this state if he/she satisfies the following requirements:

1. An applicant must have completed all of the prescribed curriculum at his/her school of medicine and the curriculum in this state and the applicant must have completed training at a medical school whose curriculum has been approved by the proper Mexican government agency;

2. An applicant must meet the academic requirements for licensure in Mexico; and

3. An applicant must *[be either American Specialty Board-eligible or]* have completed three (3) years of postgraduate training in one (1) recognized specialty area of medicine in a program which is approved and accredited to teach postgraduate medical education by the accreditation council on graduate medical education of the AMA or the education committee of the AOA. **The board may waive the three (3) years of postgraduate training if the applicant is American Specialty Board eligible.**

AUTHORITY: sections 334.031, 334.035, [334.040,] and 334.125, RSMo 2000, ***and section 334.040, HB 265, First Regular Session, Ninety-sixth General Assembly, 2011****. This rule originally filed as 4 CSR 150-2.100. Original rule filed July 12, 1984, effective Jan. 1, 1987. For intervening history, please consult the* ***Code of State Regulations****. Amended: Filed Sep. 28, 2011.*

PUBLIC COST: This proposed amendment will not cost state agencies or political subdivisions more than five hundred dollars ($500) in the aggregate. These costs were accounted for under the current examination, application, and reciprocity rules; therefore, no new costs are shown here. This rule is just organizing information differently in order to assist interested parties to find the information they are looking for more easily.

PRIVATE COST: This proposed amendment will not cost private entities more than five hundred dollars ($500) in the aggregate. These costs were accounted for under the current examination, application, and reciprocity rules; therefore, no new costs are shown here. This rule is just organizing information differently in order to assist interested parties to find the information they are looking for more easily.

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