Proposed

STATE OF KANSAS

Department of Health and Environment

Notice of Public Hearing on Proposed Administrative Regulations

The Kansas Department of Health and Environment (KDHE), Division of Environment, Bureau of Air, will conduct a public hearing at 10 a.m. Wednesday, October 8, 2014, in the Azure Conference Room, fourth floor, of the Curtis State Office Building, 1000 S.W. Jackson, Topeka, to consider the adoption of proposed amended air quality regulations K.A.R. 28-19-720 and 28-19-750. A summary of the proposed regulations and the estimated economic impact follows.

Summary of Regulations:

K.A.R. 28-19-720. The proposed amendments will align K.A.R. 28-19-720 with current federal New Source Performance Standards (NSPS) as effective and published in the C.F.R. Part 60 up to July 1, 2010. These amendments also include adoption of the June 28, 2011 "Standards of Performance for Stationary Compression Ignition and Spark Ignition Internal Combustion Engine; Final Rule," and the January 30, 2013 "New Source Performance Standards for Stationary Internal Combustion Engines; Final Rule" amendments. KDHE is also proposing to amend the current language in K.A.R. 28-19-720(a)(1)-(6) to reorganize the exclusions from adoption of 40 C.F.R. Part 60 and clarify those provisions that are not delegated by the United States Environmental Protection Agency (USEPA) to the state.

K.A.R. 28-19-750. The state of Kansas proposes adoption by reference of updated federal Hazardous Air Pollutants (HAP); Maximum Achievable Control Technology (MACT) regulations into Kansas air quality regulations, to include certain provisions of 40

C.F.R. Part 63, specifically Subpart ZZZZ addressing Reciprocating Internal Combustion Engines. Approval of Kansas' proposed amendments will align K.A.R. 28-19-750 with the current federal requirements in Subpart ZZZZ as effective and published in the C.F.R. on July 1, 2012, and as amended by the January 30, 2013, "National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines: New Source Performance Standards for Stationary Internal Combustion Engines; Final Rule" and by the March 6, 2013, "National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines; New Source Performance Standards for Stationary Internal Combustion Engines – Correction."

Economic Impact:

The proposed regulations are not anticipated to result in additional costs to KDHE, other state agencies, or the private sector because the impacted facilities are already subject to the costs associated with the current federal standards, which KDHE is proposing to adopt by reference. A detailed economic impact is provided in the regulatory impact statement that is available, as listed below, for each proposed regulation.

The time period between the publication of this notice and the scheduled hearing constitutes a 60-day public comment period for the purpose of receiving written public comments on the proposed amended regulations. All interested parties may submit written comments prior to 5 p.m. on the day of the hearing to Pat Gibbs, Kansas Department of Health and Environment, Bureau of Air, 1000 S.W. Jackson, Suite 310, Topeka, 66612, by e-mail to pgibbs@kdheks.gov, or by fax to (785) 296-7455. During the hearing, all interested parties will be given a reasonable opportunity to present their views orally on the proposed regulations as well as an opportunity to submit their written comments. In order to give each individual an

opportunity to present their views, it may be necessary for the hearing officer to request that each presenter limit an oral presentation to an appropriate time frame.

Copies of the proposed regulations and the corresponding regulatory impact statement may be obtained from the KDHE Bureau of Air at http://www.kdheks.gov/bar/planning/pnplanning.html or by contacting Pat Gibbs at the address above, (785) 291-3278 or fax (785) 296-7455. Copies may also be viewed at the following locations:

- Department of Air Quality, Unified Government of Wyandotte County - Kansas City, Kansas Health Department, 619 Ann Ave., Kansas City, Kansas
- Johnson County Environmental Department, 11811 S. Sunset, Suite 2700, Olathe
- Curtis State Office Building, 1000 S.W. Jackson St., Suite. 310, Topeka
- KDHE Northeast District Office, 800 W. 24th St., Lawrence
- KDHE Northwest District Office, 2301 E. 13th St., Hays
- KDHE North Central District Office, 2501 Market Place, Suite D, Salina
- KDHE South Central District Office, 130 S. Market, Suite 6050, Wichita
- KDHE Southeast District Office, 1500 W. 7th St., Chanute
- KDHE Southwest District Office, 302 W. McArtor Rd., Dodge City
- Wichita-Sedgwick County Dept. of Community Health, 1900 E. 9th St., Wichita

Questions pertaining to the proposed regulations should be directed to Pat Gibbs at (785) 291-3278.

Any individual with a disability may request accommodation in order to participate in the public hearing and may request the proposed regulations and the regulatory impact statements in an accessible format. Requests for accommodation to participate in the hearing should be made

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at least five working days in advance of the hearing by contacting Pat Gibbs.

Robert Moser, M.D.

Secretary of Health and Environment

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28-19-720. New source performance standards. (a)(1) 40 C.F.R. part 60 and its appendices, as revised on July 1, ~~2008~~ 2010 and as amended by 76 fed. reg. 10524 (2011), 76 fed. reg. 37967-37977 (2011), and 78 fed. reg. 6695-6700 (2013), are adopted by reference except for the following:

~~(1) The following sections in subpart A:~~

~~(A) 60.4;~~

~~(B) 60.9;~~

~~(C) 60.10; and~~

~~(D) 60.16;~~

~~(2) subpart B;~~

~~(3) the following mercury provisions in subpart Da:~~

~~(A) 60.45Da;~~

~~(B) in 60.48Da(c), the phrase "and the Hg emission standards under §60.45Da";~~

~~(C) 60.48Da(1);~~

~~(D) in 60.49Da(1), the phrase "or §60.45Da";~~

~~(E) 60.49Da(p), (q), and (r);~~

~~(F) 60.50Da(g) and (h);~~

~~(G) in 60.51Da(a), the phrase "and Hg emissions";~~

~~(H) 60.51Da(g);~~

~~(I) in 60.51Da(k), the phrase "and/or Hg"; and~~

~~(J) 60.52Da;~~

~~(4) the following provisions in subpart Ja:~~

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~~(A) 60.100a(c);~~

~~(B) in 60.101a, the definition of "flare";~~

~~(C) 60.102a(g); and~~

~~(D) 60.107a(d) and (e);~~

~~(5) in 60.2265 and 60.2875, the definitions of "commercial and industrial solid waste incineration (CISWI) unit," "commercial or industrial waste," and "solid waste"; and~~

~~(6) subpart HHHH.~~

(A) Subpart CCCC;

(B) provisions that are not delegable by the USEPA to the state or for which only the USEPA administrator retains authority, including the subparts, sections, and paragraphs containing any of the following:

(i) Alternative methods of compliance approvable only by the USEPA administrator;

(ii) emission guidelines;

(iii) delegation of authority;

(iv) hearing and appeal procedures;

(v) requirements regulating any stationary source located outside of Kansas; or

(vi) requirements regulating any geographic area located outside of Kansas; and

(C) provisions no longer in effect on the effective date of this regulation.

(2) Subpart CCCC in 40 C.F.R. part 60, as in effect on July 1, 2005, is adopted by reference, except for the following:

(A) Provisions that are not delegable by the USEPA to the state or for which only the USEPA administrator retains authority, including the sections and paragraphs containing alternative methods of compliance approvable only by the USEPA administrator; and

(B) provisions no longer in effect on the effective date of this regulation.

(b) ~~The definitions of "commercial and industrial solid waste incineration (CISWI) unit," "commercial or industrial waste," and "solid waste" in 40 C.F.R. 60.2265 and 40 C.F.R. 60.2875, as in effect on July 1, 2005, are adopted by reference.~~

~~(c)~~ The definitions adopted by reference in subsection (a) shall apply only to this regulation. Unless the context clearly indicates otherwise, the following meanings shall be given to these terms as they appear in the portions of 40 C.F.R. part 60~~, as~~ adopted by reference in subsection (a):

(1) The term "administrator" shall mean the secretary or the secretary's authorized representative.

(2) The term "United States environmental protection agency" and any term referring to the United States environmental protection agency shall mean the department.

(3) The term "state" shall mean the state of Kansas.

~~(d)~~ (c) The owner or operator of each source that is subject to this regulation shall submit to the department any required annual reports specified in 40 C.F.R. part 60 within 180 days of the last day of the year for which the report is required, unless the owner or operator is required in this article to submit annual reports on a different schedule. (Authorized by K.S.A. ~~2008~~ 2013 Supp. 65-3005~~, as amended by L. 2009, ch. 141, sec. 23~~; implementing K.S.A. 65-3008, as

amended by L. 2014, ch. 30, sec. 3, and K.S.A. 65-3010; effective Jan. 23, 1995; amended June 6, 1997; amended June 11, 1999; amended Dec. 3, 2004; amended June 15, 2007; amended Nov. 5, 2010; amended P- _____.)

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28-19-750. Hazardous air pollutants; maximum achievable control technology. (a) 40 C.F.R. part 63 and its appendices, as in effect on July 1, 2010, are adopted by reference, except for the following:

(1) The following sections in subpart A:

(A) 63.6(f)(1), (g), (h)(1), and (h)(9);

(B) 63.7(e)(2)(ii) and (f);

(C) 63.8(f);

(D) 63.10(f);

(E) 63.12;

(F) 63.13;

(G) in 63.14(b)(27), the phrase ''and table 5 to subpart DDDDD of this part'';

(H) 63.14(b)(35), (39) through (53), and (55) through (62);

(I) in 63.14(i)(1), the phrase ''table 5 to subpart DDDDD of this part''; and

(J) 63.15;

(2) subpart B;

(3) subpart C;

(4) subpart D;

(5) subpart E;

(6) subpart ZZZZ;

(7) subpart DDDDD;

(8) subpart JJJJJ; and

(9) subpart KKKKK.

(b) 40 C.F.R. part 63, subpart ZZZZ, as in effect on July 1, ~~2009~~ 2012 and as amended by 78 fed. reg. 6700-6724 (2013) and 78 fed. reg. 14457 (2013), is adopted by reference.

(c) Unless the context clearly indicates otherwise, the following meanings shall be given to these terms as they appear in the portions of 40 C.F.R. part 63 adopted by reference in this regulation:

(1) The term ''administrator'' shall mean the secretary or the secretary's authorized representative.

(2) The term ''United States environmental protection agency'' and any term referring to the United States environmental protection agency shall mean the department.

(3) The term ''state'' shall mean the state of Kansas. (Authorized by K.S.A. ~~2011~~ 2013 Supp. 65-3005; implementing K.S.A. 65-3008 and 65-3010; effective Jan. 23, 1995; amended June 6, 1997; amended June 11, 1999; amended Dec. 3, 2004; amended June 15, 2007; amended Nov. 5, 2010; amended Dec. 28, 2012; amended P-_____.)

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Kansas

Department of Health and Environment

Division of Environment

Bureau of Air

REGULATORY IMPACT STATEMENT CONSISTING OF:

I. ENVIRONMENTAL BENEFIT STATEMENT

AND

II. ECONOMIC IMPACT STATEMENT

Pursuant to K.S.A. 77-416

PROPOSED AMENDMENT OF PERMANENT AIR QUALITY REGULATION:

K.A.R. 28-19-720

July 2014

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Background of Proposed Amendments to Existing Regulation

The Bureau of Air of the Kansas Department of Health and Environment (KDHE) is proposing to amend certain Kansas Air Quality Regulations, specifically Kansas Administrative Regulation (K.A.R.) 28-19-720, "New Source Performance Standards" (NSPS). Operating under delegated authority from the Environmental Protection Agency (EPA), the state of Kansas has been designated the primary authority to implement and enforce federal standards that are adopted into the state regulations. An agreement signed in May of 1986 specifically granted the state the authority for the NSPS which are adopted in K.A.R. 28-19-720. This 1986 document spells out the procedures and conditions wherein the authority is automatically delegated to Kansas upon the incorporation of the standard into Kansas regulation.

To date, the state authority for NSPS exists only for the federal rules promulgated by the EPA through June 30, 2008, this is the date of the last adoption of Title 40 of the Code of Federal Regulations, part 60 (40 C.F.R. part 60) by Kansas. Facilities in Kansas are nonetheless subject to provisions of the federal rules adopted after July 1, 2008, which the EPA has full authority to implement and enforce. The state must adopt current federal regulations before it may gain the primary enforcement authority to administer the previously enacted federal provisions. Thus the basic purpose of the proposed amendments are to update K.A.R. 28-19-720 to incorporate the federal changes made to the respective standards since the last update of the state regulations.

K.A.R. 28-19-720 is specifically being updated to incorporate amendments to 40 C.F.R. part 60 up to July 1, 2010 and to also include the June 28, 2011 *Standards of Performance for Stationary Compression Ignition and Spark Ignition Internal Combustion Engine; Final Rule*, and the January 30, 2013 *New Source Performance Standards for Stationary Internal Combustion Engines; Final Rule* amendments.

In addition, KDHE is proposing to amend the current language in K.A.R. 28-19-720(a)(1)-(6) to reorganize the exclusions from adoption of 40 C.F.R. part 60 and to clarify those provisions that are not delegated by the USEPA to the state.

K.A.R. 28-19-720: New Source Performance Standards (NSPS)

K.A.R. 28-19-720 implements the federal NSPS provisions as state requirements under the Kansas Air Quality Act. The pollutants of concern under the NSPS are the criteria pollutants for which national ambient air quality standards (NAAQS) are established in 40 C.F.R. Part 50. These are: sulfur dioxide, nitrogen dioxide, ozone, particulate matter, lead, and carbon monoxide. Section 111 of the Clean Air Act (CAA) directs the EPA to develop regulations implementing emissions standards of the relevant pollutants for new stationary sources. The Federal NSPS provisions are codified at 40 C.F.R. part 60, and regulate new, modified or reconstructed facilities within each of several defined categories. They also establish performance standards for the operation of the facilities, which promotes the facility to reduce emissions of relevant air pollutants.

The NSPS include emissions limitations, work practices, and other enforceable methods for accomplishing the goal of reducing air pollutant emissions from these sources. The following table lists the relevant new NSPS provisions that have been amended or promulgated from July 1, 2008 through June 30, 2010, two additional amendments for Stationary Compression Ignition and Spark Ignition Internal Combustion Engines and one C.F.R. correction. Detailed summaries of amendments determined to cause an economic impact are provided in the Economic Impact Statement of this Regulatory Impact Statement. Summaries for the changes not causing an economic impact are provided in Appendix A.

The table below provides the following information in chronological order: the part or subpart of the rule being amended, the *Federal Register* publication citation and date, and a short description of the rule.

Part/Subpart	Federal Register Publication Citation/ Date	Description
60.100a - 60.109a Subpart Ja	73 FR 43627 July 28, 2008	Petroleum Refineries
60.100a-60.102a and 60.107a Subpart Ja	73 FR 55752 September 26, 2008	Petroleum Refineries
60.4231-60.4248 Subpart JJJJ	73 FR 59175 October 8, 2008	Nonroad Spark-Ignition Engines and Equipment
60.18 and Table 1 Subpart A	73 FR 78209 December 22, 2008	Alternate Work Practice To Detect Leaks From Equipment
60.100a-60.102a and 60.107a Subpart Ja	73 FR 78552 December 22, 2008	Petroleum Refineries
60.17 Subpart A; 60.42-60.46 Subpart D; 60.40Da-60.52Da Subpart Da; 60.40b-60.49b Subpart Db; 60.40c-60.48c Subpart Dc	74 FR 5076 January 28, 2009	Fossil-Fuel-Fired Steam Generators
60.4330, 60.4420 Subpart KKKK	74 FR 11861 March 20, 2009	Stationary Combustion Turbines
Part 60 – Appendix A-7, B and F	74 FR 12580 March 25, 2009	Amendments to Testing and Monitoring Provisions
Part 60 – Appendix B	74 FR 18474 April 23, 2009	Technical Correction
60.671-60.676, Tables 1-3 Subpart OOO	74 FR 19309 April 28, 2009	Nonmetallic Mineral Processing
Part 60 – Appendix A-2 and A-4	74 FR 25667 May 29, 2009	Updates of Continuous Instrumental Test Methods
60.664 Subpart NNN	74 FR 299948 June 24, 2009	C.F.R. Correction
60.17 Subpart A; 60.50c-60.58c, Tables 1A &1B Subpart Ec	74 FR 51402 October 6, 2009	Hospital/Medical/Infectious Waste Incinerators
60.17 Subpart A; 60.250-60.258 Subpart Y	74 FR 51977 October 8, 2009	Coal Preparation and Processing
60.101a, 60.102a and 60.107a Subpart Ja	76 FR 10524 February 25, 2011	C.F.R. Correction
60.4200- 60.4213, 60.4215-60.4217, 60.4219 and Table 3 Subpart IIII; 60.4230-60.4231, 60.4233, 60.4236, 60.4241, 60.4243, 60.4248, Table 1 and 2 Subpart JJJJ	76 FR 37967 June 28, 2011	Stationary Compression Ignition and Spark Ignition Internal Combustion Engines
60.17 Subpart A; 60.4207, 60.4211, 60.4214, 60.4219 Subpart IIII; 60.4231, 60.4243, 60.4245, 60.4248 and Table 2 Subpart JJJJ	78 FR 6695 January 30, 2013	Stationary Compression Ignition and Spark Ignition Internal Combustion Engines

I. Environmental Benefit Statement

1) Need for proposed amendments and environmental benefit likely to accrue.

a) Need

These amendments are needed to maintain the state's authority under existing delegation agreements to administer the federal regulations and to ensure that the Kansas Air Quality Regulations are current and consistent with the federal requirements. The state is delegated primary authority for the NSPS standards adopted under the particular Kansas Air Quality Regulation proposed herein for amendment. However, with respect to federal changes (additions, revocations, or amendments) made to these standards since the last date of state adoption, and in accordance with the state-EPA delegation agreement, the state must adopt these new provisions and notify EPA of the updated state authority to implement and enforce such standards. Currently, the EPA is the implementing authority in the state for the standards promulgated after July 1, 2008. There exists a split in the authority to enforce these rules, with Kansas primacy for rules in effect on July 1, 2008 and EPA for those after. This split or dual regulatory authority for implementation and enforcement of the standards subject to this rule-making could result in loss of consistency of application and possible confusion for the regulated community regarding the relative roles of the state and federal agencies. This adoption of changes, followed by the notice to EPA of the updated delegation and authority, will resolve these potential problems.

b) Environmental benefit

The proposed revisions are not expected to result in specific environmental benefits beyond those already achieved by the federal promulgation. The affected facilities are already subject to the standards. One of the major benefits of state promulgation is that affected facilities will be able to work with the state, rather than the EPA, to achieve compliance. Providing implementation at the state level will enhance the consistency in the application of the regulations.

2) **When applicable, a summary of the research indicating the level of risk to the public health or the environment being removed or controlled by the proposed rules and regulations or amendment.**

For the NSPS, which address criteria pollutants, Section 109 of the CAA directs the EPA Administrator to set the national primary ambient air quality standards (NAAQS) for each of the criteria pollutants at levels "the attainment and maintenance of which ... are requisite to protect the public health." (42 U.S.C. §7409(b)(1)). The EPA has conducted or utilized research on the health effects of the various pollutants that have guided their promulgation of the standards being adopted. This began with the establishment of the NAAQS, and continues with the creation and updating of emissions standards necessary to reduce emissions to attain and maintain the air quality within the NAAQS levels. Each standard has been subjected to peer review and often to litigation.

General criteria pollutant information can be found at EPA's NAAQS website, http://www.epa.gov/ttn/naaqs/. EPA's Air Research homepage provides links to additional tools and information including specific Air Research Reports; http://www.epa.gov/research/airscience/. EPA also provides a website for learning about studies used in EPA's science assessments, which is available at http://hero.epa.gov/index.cfm. Supporting and related materials for individual NSPS standards and amendments are available in their corresponding docket at http://www.regulations.gov.

3) **If specific contaminants are to be controlled by the amendment, a description indicating the level at which the contaminants are considered harmful according to current available research.**

As noted above, development of the NAAQS have been made at the federal level through extensive research; the state rules are no more stringent than the federal rules.

EPA has promulgated NAAQS for each air pollutant for which air quality criteria have been published. To date, NAAQS have been promulgated for six criteria pollutants: ozone, particulate matter, sulfur oxides, nitrogen oxides, carbon monoxide, and lead (see table below). Units of measure for the standards are parts per million (ppm) by volume, parts per billion (ppb) by volume, and micrograms per cubic meter of air ($\mu g/m^3$).

National Ambient Air Quality Standards

Pollutant [final rule cite]		Primary/ Secondary	Averaging Time	Level	Form
Carbon Monoxide [76 FR 54294, Aug 31, 2011]		primary	8-hour	9 ppm	Not to be exceeded more than once per year
			1-hour	35 ppm	
Lead [73 FR 66964, Nov 12, 2008]		primary and secondary	Rolling 3 month average	0.15 $\mu g/m^3$ (1)	Not to be exceeded
Nitrogen Dioxide [75 FR 6474, Feb 9, 2010] [61 FR 52852, Oct 8, 1996]		primary	1-hour	100 ppb	98th percentile, averaged over 3 years
		primary and secondary	Annual	53 ppb (2)	Annual Mean
Ozone [73 FR 16436, Mar 27, 2008]		primary and secondary	8-hour	0.075 ppm (3)	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years
Particle Pollution [78 FR 3086, Jan. 15, 2013]	$PM_{2.5}$	primary	Annual	12 $\mu g/m^3$	annual mean, averaged over 3 years
		secondary	Annual	15 $\mu g/m^3$	annual mean, averaged over 3 years
		primary and secondary	24-hour	35 $\mu g/m^3$	98th percentile, averaged over 3 years
	PM_{10}	primary and secondary	24-hour	150 $\mu g/m^3$	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide [75 FR 35520, Jun 22, 2010] [38 FR 25678, Sept 14, 1973]		primary	1-hour	75 ppb (4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year

Source: http://epa.gov/air/criteria.html as of October 2011

(1) Final rule signed October 15, 2008. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

(2) The official level of the annual NO_2 standard is 0.053 ppm, equal to 53 ppb, which is shown here for the purpose of clearer comparison to the 1-hour standard.

(3) Final rule signed March 12, 2008. The 1997 ozone standard (0.08 ppm, annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years) and related implementation rules remain in place. In 1997, EPA revoked the 1-hour ozone standard (0.12 ppm, not to be exceeded more than once per year) in all areas, although some areas have continued obligations under that standard ("anti-backsliding"). The 1-hour ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is less than or equal to 1.

(4) Final rule signed June 2, 2010. The 1971 annual and 24-hour SO_2 standards were revoked in that same rulemaking. However, these standards remain in effect until one year after an area is designated for the 2010 standard, except in areas designated nonattainment for the 1971 standards, where the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standard are approved.

II. Economic Impact Statement

1) Are the amendments mandated by federal law as a requirement for participating in or implementing a federally subsidized or assisted program?

Yes, under the federal CAA and the EPA-Kansas delegation agreements, the state of Kansas is required to adopt the most recent federal rules as state-enforceable rules in order to gain the authority to administer and enforce the new standards statewide. Additionally, the continued approval of the overall state air quality program is predicated in part upon the state periodically updating its regulations to be on a par with federal regulations promulgated by the EPA.

2) Do the proposed amendments exceed the requirements of applicable federal law?

No, the amendments being proposed for adoption are identical to the federal standards, as the federal standards are adopted *verbatim* by reference.

3) Description of costs to agencies, to the general public and to persons who are affected by, or are subject to, the regulations:

a) Capital and annual costs of compliance with the proposed amendments and the persons who will bear those costs.

For the EPA to approve the state's Title V operating permit program, one condition is that the state periodically update their standards to incorporate new federal regulations. Failure to adopt these proposed state regulation amendments will not result in the federal standards being rendered inapplicable to sources, but, as previously discussed, would instead result in a "split authority" regulatory structure. If the amendments are not implemented and the EPA were to withdraw approval of the state plan, then the CAA provisions, including the Title V operating permit program would be administered by the EPA.

Approval of Kansas's Title V permit program also authorizes Kansas to be the sole collector of application fees and costs. Although minor, these costs provide a source of revenue to the state.

The cost of compliance for facilities is not increased, *per se,* by the proposed state rulemaking, because these rules are already in force at the federal level. There are no anticipated additional costs resulting from these proposed amendments beyond those resulting from the initial federal rule promulgation and implementation. Adoption of Federal CAA regulations means facilities regulated therein, are subject to the costs associated with meeting the respective federal standards regardless of whether or not the state adopts the particular standards. Because the state adopts these *verbatim*, and adds no additional requirements, no additional costs to the regulated community are imposed by the proposed state action.

Some of the amendments are merely technical corrections, with no actual change in requirements, therefore leading to no economic impact. Additionally, some standards adopted or amended by the EPA regulate facilities or groups of facilities that do not currently exist within the state (*e.g.*, large municipal waste combustors).

The table above provided a list of all relevant regulations published in the *Federal Register* for NSPS from July 1, 2008 to July 1, 2010 and two additional amendments for Stationary Compression Ignition and Spark Ignition Internal Combustion Engines and one C.F.R. correction for Petroleum Refineries. A more detailed summary of each action that causes economic impact is provided below. When the EPA created a national economic impact analysis for a regulation, the information regarding the impact has been provided below. To create an impact analysis the EPA uses models to estimate economic, social, and air impacts. For further information concerning proposed amendments not causing or contributing to an economic impact in Kansas, please see Appendix A.

The following are the amendments being proposed for adoption that have been determined to cause an economic impact by implementing EPA's federal rule requirements. They are currently contained in the *Federal Register* 40 C.F.R. Part 60:

Nonroad Spark-Ignition Engines and Equipment:

➢ **60.4231-60.4248 Subpart JJJJ**

October 8, 2008 Volume 73: 59034-59380

EPA set emission standards for new nonroad spark-ignition engines which applied starting in 2010 for new marine spark-ignition engines and starting in 2011 and 2012 for different sizes of new land-based, spark-ignition engines at or below 25 horsepower (HP). EPA also adopted evaporative emission standards for vessels and equipment using any of these engines and made other minor amendments.

This rule will reduce the mobile source contribution to air pollution in the United States from internal combustion engines in nonroad equipment and vehicles. In particular, EPA adopted standards that will require manufacturers to substantially reduce emissions from marine spark-ignition engines and from nonroad spark ignition engines below 25 HP that are generally used in lawn and garden applications. EPA refers to these as Marine SI engines and Small SI engines, respectively. The new emission standards are a continuation of the process of establishing standards for nonroad engines and vehicles as required by Clean Air Act section 213. All the nonroad engines subject to this rule are already regulated under existing emission standards, except sterndrive and inboard marine engines, which are subject to EPA emission standards for the first time. This rule became effective on December 8, 2008.

Cost/Economic Impacts:

There are currently 161 facilities subject to 40 C.F.R. Part 60, subpart JJJJ for SI ICE in Kansas. In assessing the economic impact of setting emission standards, EPA made a best estimate of the costs associated with the technologies they anticipate manufacturers will use in meeting the standards. In making their estimates for the final rule, they relied on their own technology assessment, which includes information developed by EPA's National Vehicle and Fuel Emissions Laboratory (NVFEL). Estimated costs include variable costs (e.g., hardware and assembly time) and fixed costs (e.g., research and development, retooling, engine certification and test cell upgrades to 40 CFR 1065 requirements). The analysis also considers total operating costs, including maintenance and fuel consumption. Full details of EPA's cost analysis can be found in Chapter 6 of the Final Regulatory Impact Analysis[1] (RIA). Estimated costs related to exhaust emissions were also subject to peer review, as described in a set of peer review reports that are available in the docket for this rulemaking.

EPA projected average costs to comply with the new exhaust emission standards for Small SI engines and equipment to range from $9–$11 per Class I equipment to meet the Phase 3 standards. EPA anticipates the manufacturers will meet the emission standard with several technologies including engine improvements and catalysts. For Class II equipment, they project average costs to range from $15– $26 per equipment to meet the new emission standards. EPA anticipates the manufacturers of Class II engines will meet the new exhaust emission standards by engine improvements and adding catalysts and/or electronic fuel injection to their engines. The use of electronic fuel injection is estimated

[1] http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OAR-2004-0008-0929

to provide a fuel savings of 10% over the lifetime of a Class II engine. Using an average garden tractor estimated lifetime of 5.8 years, and the estimate that 6.6% of Class II engines will utilize electronic fuel injection, this calculates to be a lifetime savings of 273 gallons. This translates to a discounted lifetime savings of approximately $496 per engine, at an average fuel price of $1.81 per gallon.

Hospital/Medical/Infectious Waste Incinerators:

➢ **60.17 Subpart A; 60.50c-60.58c,Tables 1A and 1B Subpart Ec**

October 6, 2009 Volume 74: 51368-51415

On September 15, 1997, EPA adopted new source performance standards (NSPS) and emissions guidelines (EG) for hospital/medical/infectious waste incinerators (HMIWI). The NSPS and EG were established under Sections 111 and 129 of the Clean Air Act (CAA or Act). In a response to a suit filed by the Sierra Club and the Natural Resources Defense Council (Sierra Club), the U.S. Court of Appeals for the District of Columbia Circuit (the Court) remanded the HMIWI regulations on March 2, 1999, for further explanation of EPA's reasoning in determining the minimum regulatory ''floors'' for new and existing HMIWI. The HMIWI regulations were not vacated and were fully implemented by September 2002. On February 6, 2007, EPA published a proposed response to the Court's remand. Following recent court decisions and receipt of public comments regarding the proposal, EPA re-assessed their response to the remand and on December 1, 2008, published another proposed response and solicited public comments. This action promulgates EPA's response to the Court's remand and also satisfies the CAA Section 129(a)(5) requirement to conduct a review of the standards every 5 years.

Cost/Economic Impacts:

Impacts of the Final Action for Existing Units

There are no existing units subject to the NSPS in Kansas.

Impacts of the Final Action for New Units

There is one facility in Kansas which was issued a construction permit on July 9, 2012 for the installation of a hospital/medical/infectious waste incinerator (HMIWI) that will be subject to 40 CFR Part 60 Subpart Ec upon startup of the affected facility. While EPA projects that three new HMIWI would be constructed in the absence of the promulgated revisions, EPA believe that, in response to the promulgated revisions, sources may decide against constructing new HMIWI. Nevertheless, EPA estimated the following costs associated with installation and operation of air pollution controls needed to meet the revisions to the NSPS: for new large units, $1.08 million per year; for new medium units, $116,000 per year; and, for new small units, $118,000 per year.

Coal Preparation and Processing:

➢ **60.17 Subpart A ; 60.250-60.258 Subpart Y**

October 8, 2009 Volume 74: 51950-51985

EPA promulgated amendments to the new source performance standards for coal preparation and processing plants. These final amendments include revisions to the emission limits for particulate matter and opacity standards for thermal dryers, pneumatic coal cleaning equipment, and coal handling equipment (coal processing and conveying

equipment, coal storage systems, and coal transfer and loading systems) located at coal preparation and processing plants. These revised limits apply to affected facilities that commence construction, modification, or reconstruction after April 28, 2008. The amendments also establish a sulfur dioxide (SO_2) emission limit and a combined nitrogen oxide (NO_X) and carbon monoxide (CO) emissions limit for thermal dryers located at coal preparation and processing plants. In addition, the amendments establish work practice standards to control fugitive coal dust emissions from open storage piles located at coal preparation and processing plants. The SO_2 limit, the NO_X/CO limit, and the work practice standards apply to affected facilities that commence construction, modification, or reconstruction after May 27, 2009. EPA made modifications to the definitions of thermal dryer, pneumatic coal cleaning equipment, and coal for purposes of subpart Y. The modified definitions will be used to determine whether and how the standards apply to facilities that commence construction, modification, or reconstruction after May 27, 2009.

Cost/Economic Impacts:
There are currently 15 existing facilities in Kansas subject to 40 C.F.R. part 60, subpart Y. EPA estimated that the national total costs for the 22 new coal preparation and processing plants projected to be constructed to comply with requirements of the final rule would be approximately $7.9 million in each of the first 5 years of compliance. This estimate includes the costs of control technology, testing, monitoring, and recordkeeping and reporting. EPA assessed the economic impacts of the amendments to the New Source Performance Standards (NSPS) for coal preparation and processing plants. The costs to comply with the final rule on a facility basis are all projected to be less than one percent of sales. These small costs are not expected to result in a significant market impact whether they are passed on to the purchaser or absorbed.

While EPA believes it is unlikely that any new thermal dryers will be constructed, these amendments will protect the public health and environment by assuring that appropriate controls will be installed on future new thermal dryers should any be built. EPA estimated the total costs for the model thermal dryers to comply with requirements of the final rule could range from $133,000 per year to $1.54 million per year, with the highest total cost representing a direct contact model thermal dryer using coal with a higher sulfur content (i.e., 3 percent) and that would be subject to PM, SO_2, NO_X, and CO emission limits.

Stationary Compression Ignition and Spark Ignition Internal Combustion Engines:

➢ **60.4200- 60.4213, 60.4215-60.4217, 60.4219 and Table 3 Subpart IIII; 60.4230-60.4231, 60.4233, 60.4236, 60.4241, 60.4243, 60.4248, Table 1 and 2 Subpart JJJJ**

June 28, 2011 Volume 76: 37967-37977

The EPA is finalizing revisions to the standards of performance for new stationary compression ignition internal combustion engines (CI ICE) under section 111(b) of the Clean Air Act. The final rule requires more stringent standards for stationary compression ignition engines with displacement greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder, consistent with recent revisions to standards for similar mobile source marine engines. In addition, the action revises the requirements

for engines with displacement at or above 30 liters per cylinder to align more closely with recent standards for similar mobile source marine engines, and for engines in remote portions of Alaska that are not accessible by the Federal Aid Highway System. The action also provides additional flexibility to owners and operators of affected engines, and corrects minor mistakes in the original standards of performance. Finally, the action makes minor revisions to the standards of performance for new stationary spark ignition internal combustion engines (SI ICE) to correct minor errors and to mirror certain revisions finalized for compression ignition engines, which provides consistency where appropriate for the regulation of stationary internal combustion engines. The final standards will reduce nitrogen oxides by an estimated 1,100 tons per year, particulate matter by an estimated 38 tons per year, and hydrocarbons by an estimated 18 tons per year in the year 2030. This rule was effective on August 29, 2011.

Cost/Economic Impacts:
There are currently 242 facilities subject to 40 C.F.R. Part 60, subpart IIII for CI ICE (81 facilities) and subpart JJJJ for SI ICE (161 facilities) in Kansas. EPA determined the total costs of the final rule based on the cost associated with purchasing and installing controls on non-emergency stationary CI ICE with a displacement between 10 and 30 l/cyl. The costs of after-treatment were based on information developed for CI marine engines. The total national capital cost for the final rule is estimated to be approximately $236,000 in the year 2018, with a total national annual cost of $142,000 in the year 2018. The year 2018 is the first year the emission standards would be fully implemented for stationary CI engines between 10 and 30 l/cyl. The total national capital cost for the final rule in the year 2030 is $235,000, with a total national annual cost of $711,000. All of these costs are in 2009 dollars. Further information on how the EPA estimated the total costs of the final rule can be found in a memorandum included in the docket (Document ID. No. EPA–HQ–OAR–2010–0295-0076)[2].

The EPA expects an economic impact of less than a 0.001 percent increase in price and a similar decrease in product demand associated with this final rule for producers and consumers in 2018. For more information, please refer to the economic impact analysis[3] for this rulemaking in the docket.

b) Initial and annual costs of implementing and enforcing the proposed amendments, including the estimated amount of paperwork, and the state agencies, other governmental agencies or other persons or entities who will bear the costs.

The NSPS that are being proposed will transfer regulation authority from the EPA to the KDHE. The adoption of proposed changes to 40 C.F.R. Part 60 are not expected to increase the KDHE current staff members' regulatory duties. The permitting staff is

[2] http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OAR-2010-0295-0076
[3] http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OAR-2008-0708-1490

already incorporating elements of the existing federal requirements into permits being drafted because the federal regulations will apply and are assumed to be state-regulated eventually.

c) **Costs which would likely accrue if the proposed regulations are not adopted; the persons who will bear the costs and those who will be affected by the failure to adopt the regulations.**

KDHE needs to adopt current regulations and amendments to stay on a par with the national standards. If the proposed amendments are not adopted, the state will not have the authority necessary to implement and enforce the new standards listed in this impact statement, *i.e.*, the EPA would remain as the primary authority for those standards that have been promulgated by the EPA since July 1, 2008. As previously discussed, this would result in a "split authority" regulatory structure for the NSPS. This situation could potentially lower consistency in the application of standards, and burden regulated facilities because they will have to work with both the state and the EPA. This results in confusion for the regulated community regarding the applicable requirements that must be met, as well as the added burden of working with two agencies, instead of one. This would result in the regulated community bearing the cost and the burden of confusion associated with "split authority."

d) **A detailed statement of the data and methodology used in estimating the costs used in the statement.**

The economic impact information contained herein has been obtained through EPA analysis documents, where available, for the respective rulemaking actions, and supplemented where possible with information found in the proposed or final rule notices in the *Federal Register*.

e) **Description of any less costly or less intrusive methods that were considered by the agency and why such methods were rejected in favor of the proposed regulations.**

There are no alternative methods of implementing the federal requirements that would be less costly or less intrusive. The EPA does not finalize a regulation until it has

been subjected to public comment and criticism. When criticism is received, the EPA will evaluate the comments and decide whether to withdraw the rule, or amend it in light of the comment. Therefore, the proposed regulations have all been reviewed and critiqued thoroughly before adoption.

f) Consultation with League of Kansas Municipalities, Kansas Association of Counties, and Kansas Association of School Boards.

Some of the Federal rules being adopted in this rulemaking may affect the constituencies of these organizations; however, the state rulemaking action does not change the requirements for those so affected. Copies of the regulation, the regulatory impact statement, and the notice of hearing will be provided electronically to these organizations at the start of the public comment period.

APPENDIX A

The following are the amendments being proposed for adoption that were determined not to cause or contribute to an economic impact to facilities in Kansas. They are currently contained in the *Federal Register* 40 C.F.R. Part 60:

Petroleum Refineries:

➢ **660.100a through 60.109a Subpart Ja**

July 28, 2008 Volume 73: 43626-43627

On June 24, 2008, EPA promulgated new standards for petroleum refineries. This action stays the effective date of the June 24, 2008 promulgated standards of performance for new, modified, or reconstructed process units at petroleum refineries to September 26, 2008 to be consistent with sections 801 and 808 of the Congressional Review Act.

➢ **60.100a-60.102a and 60.107a Subpart Ja**

September 26, 2008 Volume 73: 55751-55752

This action grants Petitioners' request for reconsideration and Petitioners' request for a stay until December 25, 2008 for certain specific provisions in the June 24, 2008 promulgated standards of performance for new, modified, or reconstructed process units at petroleum refineries.

December 22, 2008 Volume 73: 78549-78552

On June 24, 2008, EPA promulgated new standards for petroleum refineries. Following that action, the Administrator received three petitions for reconsideration. In response to the petitions, EPA granted a stay of certain provisions in the new standards. In this action, EPA is extending the stay of the requirements under reconsideration until a final decision is reached on these issues.

February 25, 2011 Volume 76: 10524

This action corrects the July 1, 2011 C.F.R. by adding the stay language originally promulgated by the December 22, 2008 rule.

Cost/Economic Impacts:

There is no substantial economic cost resulting from these amendments.

General Provisions – Alternate Work Practice To Detect Leaks From Equipment:

➢ **60.18 and Table 1 Subpart A**

December 22, 2008 Volume 73: 78199-78219

Numerous EPA air emissions standards require specific work practices for equipment leak detection and repair. On April 6, 2006, EPA proposed a voluntary alternative work practice for leak detection and repair using a newly developed technology, optical gas imaging. The alternative work practice is an alternative to the current leak detection and repair work practice, which is not being revised. This action revises the General Provisions to incorporate an alternative work practice by adding a requirement to perform monitoring once per year using the current Method 21 leak detection instrument.

Cost/Economic Impacts:
There is no substantial economic cost resulting from this amendment. The EPA expects no significant economic impact from this action. The EPA expects that the alternative work practice will relieve some regulatory burden for those affected by reducing the labor hours necessary to identify equipment leaks.

Instrumental Test Methods:

➢ **Part 60 – Appendix A-7, B and F**

March 25, 2009 Volume 74: 12575-12591

EPA is taking final action to promulgate Performance Specification (PS) 16 for predictive emissions monitoring systems (PEMS). Performance Specification 16 provides testing requirements for assessing the acceptability of PEMS when they are initially installed. Currently, there are no Federal rules requiring the use of PEMS; however, some sources have obtained Administrator approval to use PEMS as alternatives to continuous emissions monitoring systems (CEMS). Other sources may desire to use PEMS in cases where initial and operational costs are less than CEMS and process optimization for emissions control may be desirable. Performance Specification 16 will apply to any PEMS required in future rules in 40 CFR Parts 60, 61, or 63, and in cases where a source petitions the Administrator and receives approval to use a PEMS in lieu of another emissions monitoring system required under the regulation. This action also finalizes minor technical amendments.

➢ **Part 60 – Appendix B**

April 23, 2009 Volume 74: 18474-18476

This action corrects the above March 25, 2009 amendment.

➢ **Part 60 – Appendix A-2 and A-4**

May 29, 2009 Volume 74: 25666-25669

EPA published a final rule on May 22, 2008, that made technical corrections to five test methods. Inadvertent printing errors were made in the publication. Text insertions were misplaced, duplicate insertions were made, and the definition for system bias was inadvertently revised. The purpose of this action is to correct these errors.

Cost/Economic Impacts:
There is no substantial economic cost resulting from these amendments.

Nonmetallic Mineral Processing:

➢ **60.671-60.676, Tables 1-3 Subpart OOO**

April 28, 2009 Volume 74: 19294-19316

These final amendments include revisions to the emission limits for Nonmetallic Mineral Processing (NMPP) affected facilities which commence construction, modification, or reconstruction on or after April 22, 2008. These final amendments for NMPP also include: Additional testing and monitoring requirements for affected facilities that commence construction, modification, or reconstruction on or after April 22, 2008; exemption of affected facilities that process wet material from this final rule; changes to

simplify the notification requirements for all affected facilities; and changes to definitions and various clarifications.

Cost/Economic Impacts:
There are 262 facilities in Kansas subject to 40 C.F.R. part 60, subpart OOO. EPA estimated the overall economic impact of this final rule on the affected industries and their consumers to be negligible. The analyses and the documents supporting EPA's economic impact can be found in Docket ID No. EPA– HQ–OAR–2007–1018[4].

C.F.R. Correction:

➢ **60.664 Subpart NNN**

June 24, 2009 Volume 74: 29948

This action corrects the equation in paragraph (f)(1) of §60.664 in Title 40 of the Code of Federal Regulations, Part 60 (§ 60.1 to end of part 60 sections), revised as of July 1, 2008, to read as follows:

$$TRE = \frac{1}{E_{TOC}}[\, a + b(Q_s)^{0.88} + c(Q_s) + d(Q_s)(H_T) + e(Q_s)^{0.88}(H_T)^{0.88} + f(Y_s)^{0.5}]$$

Cost/Economic Impacts:
There is no substantial economic cost resulting from this correction.

Fossil-Fuel-Fired Steam Generators:

➢ **60.17 Subpart A; 60.42-60.46 Subpart D; 60.40Da-60.52Da Subpart Da; 60.40b-60.49b Subpart Db; 60.40c-60.48c Subpart Dc**

January 28, 2009 Volume 74: 5072-5093

This action amends the new source performance standards (NSPS) for electric utility steam generating units and industrial-commercial-institutional steam generating units. These amendments to the regulations are to add compliance alternatives for owners and operators of certain affected sources, eliminate the opacity standard for facilities with a particulate matter (PM) limit of 0.030 lb/million British thermal units (MMBtu) or less that choose to voluntarily install and use PM continuous emission monitors (CEMS) to demonstrate compliance with that limit, and to correct technical and editorial errors.

Cost/Economic Impacts:
There is no substantial economic cost resulting from this correction.

Stationary Combustion Turbines:

➢ **60.4330, 60.4420 Subpart KKKK**

March 20, 2009 Volume 74: 11858-11862

EPA is taking direct final action on amendments to the sulfur dioxide air emission standards for stationary combustion turbines that burn biogas (landfill gas, digester gas,

4 http://www.regulations.gov/#!searchResults;rpp=25;po=0;s=EPA%25E2%2580%2593%252BHQ%25E2%2580%2593OAR%25E2%2580%25932007%25E2%2580%25931018;fp=true;ns=true

etc.). Without these amendments, owners/operators of new stationary combustion turbines burning biogas containing relatively low amounts of sulfur-containing compounds will be required to install pretreatment facilities to remove the sulfur compounds prior to combustion or to install post combustion controls to lower sulfur dioxide emissions. It was not EPA's intent to require the use of either of these approaches, and the costs associated with either approach are substantially greater than the environmental benefit resulting from the decrease in sulfur dioxide emissions.

This action amends the sulfur dioxide emission limit for the stationary combustion turbine new source performance standards, subpart KKKK of 40 CFR part 60, to account for the lower heating value of biogas relative to distillate oil. Without these amendments, the rule will require owners/operators of new stationary combustion turbines burning biogas containing relatively low concentrations of sulfur-containing compounds to either install pretreatment facilities to remove the sulfur from the gas prior to combustion or post combustion controls to lower sulfur dioxide emissions. This requirement is problematic for a number of reasons. First, EPA did not intend this outcome. Second, since the outcome was not intended, it was not reflected in the proposed rule (70 FR 8314[5]) thereby depriving people of a meaningful opportunity to comment on the requirement. Third, EPA concluded that the costs associated with either of these options are substantially greater than any environmental benefit resulting from the decrease in sulfur dioxide emissions.

Cost/Economic Impacts:
Without these amendments, the rule will require owners/operators of new stationary combustion turbines burning biogas containing relatively low concentrations of sulfur-containing compounds to either install pretreatment facilities to remove the sulfur from the gas prior to combustion or post combustion controls to lower sulfur dioxide emissions. These amendments reduce the burden on sources subject, and therefore has no economic impact.

Stationary Compression Ignition and Spark Ignition Internal Combustion Engines:

➢ **60.17 Subpart A; 60.4207, 60.4211, 60.4214, 60.4219 Subpart IIII; 60.4231, 60.4243, 60.4245, 60.4248 and Table 2 Subpart JJJJ**

January 30, 2013 Volume 78: 6695-6700

This action finalizes amendments to the national emission standards for hazardous air pollutants (NESHAP) for stationary reciprocating internal combustion engines (RICE) in 40 C.F.R. part 63, subpart ZZZZ (these amendments are addressed in a concurrent KDHE regulatory proposal). This action also finalizes amendments to the new source performance standards (NSPS) for stationary engines in 40 CFR part 60, subparts IIII and JJJJ.

This action finalizes amendments to address several petitions for reconsideration, legal challenges, and new technical information submitted by stakeholders through lawsuits, several petitions for reconsideration of the 2010 RICE NESHAP amendments. The EPA is also finalizing revisions to 40 C.F.R. part 60, subparts IIII and JJJJ for consistency with

[5] http://www.gpo.gov/fdsys/pkg/FR-2005-02-18/pdf/05-3000.pdf#page=1

the RICE NESHAP and to make minor corrections and clarifications. The final amendments include alternative testing options for certain large spark ignition (generally natural gas-fueled) stationary reciprocating internal combustion engines, management practices for a subset of existing spark ignition stationary reciprocating internal combustion engines in sparsely populated areas and alternative monitoring and compliance options for the same engines in populated areas.

These amendments to NSPS for stationary compression ignition (CI) and spark ignition (SI) engines in 40 C.F.R. part 60, subparts IIII and JJJJ, respectively, provide the same limitation for stationary emergency engines for emergency demand response and system reliability operation as for engines subject to the RICE NESHAP. The NSPS regulations did not include such a provision for emergency demand response or system reliability operation; the issue was not raised during the original promulgation of the NSPS. The EPA is adding an emergency demand response and system reliability provision under the NSPS regulations in these final amendments. The amendments revise the existing language to specify that emergency engines must limit operation for engine maintenance and testing and emergency demand response to a maximum of 100 hours per year; 50 of the 100 hours may be used to operate to mitigate local reliability issues.

The EPA is also finalizing amendments to the NSPS regulations that require owners and operators of stationary emergency engines larger than 100 HP that operate or are contractually obligated to be available for more than 15 hours per year (up to a maximum of 100 hours per year) for emergency demand response to report the dates and times the engines operated for emergency demand response annually to the EPA, beginning with operation during the 2015 calendar year.

Cost/Economic Impact:

The EPA did not estimate costs associated with the changes to the NSPS for stationary CI and SI engines. The changes to the NSPS are minor and are not expected to impact the costs of those rules; therefore there is no substantial economic impact to those sources in Kansas subject to 40 C.F.R. part 60, subparts IIII and JJJJ due to these amendments.

Proposed

Kansas
Department of Health
and Environment

Division of Environment

Bureau of Air

REGULATORY IMPACT STATEMENT CONSISTING OF:

I. ENVIRONMENTAL BENEFIT STATEMENT

AND

II. ECONOMIC IMPACT STATEMENT

Pursuant to K.S.A. 77-416

PROPOSED AMENDMENT OF PERMANENT AIR QUALITY REGULATIONS:

K.A.R. 28-19-750

Adoption by Reference of 40 C.F.R. Part 63, Subpart ZZZZ

National Emission Standards for Hazardous Air Pollutants for

Reciprocating Internal Combustion Engines

July 2014

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Proposed

List of Acronyms

2SLB	Two-stroke lean burn
4SLB	Four-stroke lean burn
4SRB	Four-stroke rich burn
C.F.R.	Code of Federal Regulations
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CI	Compression ignition
CO	Carbon monoxide
CPMS	Continuous parametric monitoring system
DOC	Diesel oxidation catalyst
EPA	U.S. Environmental Protection Agency
FR	Federal Register
HAP	Hazardous air pollutant
HP	Brake horsepower
K.A.R.	Kansas Administrative Regulations
KDHE	Kansas Department of Health and Environment
MACT	Maximum Achievable Control Technology
NESHAP	National Emission Standards for Hazardous Air Pollutants
NOx	Nitrogen oxides
NSCR	Non-selective catalytic reduction
O2	Oxygen
OCV	Open crankcase ventilation
PM	Particulate matter
ppm	Parts per million
ppmvd	Parts per million by volume, dry basis
RICE	Reciprocating internal combustion engine
SBEAP	Small Business Environmental Assistance Program
SI	Spark ignition
SOx	Sulfur oxides
THC	Total hydrocarbons
ULSD	Ultra low sulfur diesel
VOC	Volatile organic compound

Background of Proposed Amendments

The Bureau of Air, within the Kansas Department of Health and Environment (KDHE), is proposing to amend Kansas Administrative Regulation (K.A.R.) 28-19-750, "Hazardous Air Pollutants; Maximum Achievable Control Technology" (MACT) – adoption by reference of 40 C.F.R. Part 63. Specifically, an amendment is proposed for adoption by reference of 40 C.F.R. Part 63 Subpart ZZZZ (4Z), Reciprocating Internal Combustion Engines (RICE).

Under delegated authority from the Environmental Protection Agency (EPA), the state of Kansas is the primary authority to implement and enforce federal standards that are adopted into the state regulations. Currently, this state authority exists for the Part 63 Subpart 4Z federal rule promulgated through July 1, 2009, the date of the last adoption of this federal regulation by Kansas. Kansas facilities, however, are subject to the provisions of the federal rule adopted after this date, which the EPA has full authority to implement and enforce. The state must adopt the current federal regulation to gain the primary enforcement authority to administer the provisions of the standards. The purpose of the proposed amendment is to incorporate the federal changes to the standards since the last update of K.A.R. 28-19-750. Once the state adopts the proposed changes, consisting of six federal rule amendments, Kansas will be granted the authority to administer the federal provisions of the Part 63 Subpart 4Z standards as effective and published in the Code of Federal Regulations on July 1, 2012 and as amended by the January 30, 2013, *National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines; New Source Performance Standards for Stationary Internal Combustion Engines; Final Rule* (78 FR 6674 at 6700-6724) and by the March 6, 2013, *National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines; New Source Performance Standards for Stationary Internal Combustion Engines – Correction* (78 FR 14457).

K.A.R. 28-19-750: Hazardous Air Pollutants; Maximum Achievable Control Technology (MACT)

Prior to the 1990 Clean Air Act Amendments (CAAA), the authorizing statute, section 112 (42 U.S.C. § 7412), directed the EPA Administrator to identify HAPs for regulation. Under this, a limited number of regulations were developed to address specific compounds originating in certain industries. In the 1990 CAAA, Congress established a list of 189 HAPs for which the Administrator was to develop controls. (This list since has been modified to 187 HAPs.) These

are now administered under 40 C.F.R. Part 63, which the state implements in K.A.R. 28-19-750, Hazardous Air Pollutants; Maximum Achievable Control Technology. RICE HAP emissions are regulated under 40 C.F.R. Part 63 Subpart ZZZZ, which is adopted by reference in K.A.R. 28-19-750.

Federal Provisions Amended or Promulgated

The proposed amended regulation consists of six revisions to 40 C.F.R. Part 63 Subpart ZZZZ (4Z). Amendments to 40 C.F.R. Part 63 Subpart 4Z for Reciprocating Internal Combustion Engines (RICE) were published in the *Federal Register* and are listed below.

The table below provides the following information in chronological order: the part or subpart of the rule being regulated, the *Federal Register* citation and publication date, and whether applicable to major sources or area sources.

Part/Subpart	Federal Register Citation/Date	M = Major A = Area
63.6590, 63.6595, 63.6600-63.6605, 63.6612, 63.6620, 63.6625, 63.6640, 63.6645, 63.6650, 63.6655, 63.6660, 63.6665, 63.6675 & Tables 1a, 2a, 2b, 2c, 2d, 3-8 Subpart ZZZZ	75 FR 9648 March 3, 2010	M, A
63.6590 Subpart ZZZZ	75 FR 37732 June 30, 2010	M, A
63.6590, 63.6595, 63.6601-63.6604, 63.6611-63.6612, 63.6625, 63.6640, 63.6645, 63.6655, 63.6675, Tables 1a, 1b, 2b, 2c, 2d, 3-7 Subpart ZZZZ & Appendix A to Part 63	75 FR 51570 August 20, 2010	M, A
63.6603, 63.6625, 63.6635, 63.6675, & Tables 1b, 2b, & 6 Subpart ZZZZ	76 FR 12863 March 9, 2011	M, A
63.14 Subpart A; 63.6585, 63.6590, 63.6595, 63.6602-63.6605, 63.6620, 63.6625, 63.6630, 63.6640, 63.6645, 63.6650, 63.6655, 63.6675, & Tables 1b, 2b, 2c, 2d, 3-8, & Appendix A Subpart ZZZZ	78 FR 6674 January 30, 2013	M, A
63.6655 & Table 2c Subpart ZZZZ	78 FR 14457 March 6, 2013	M, A

I. Environmental Benefit Statement

1) Need for proposed amendments and environmental benefit likely to accrue.

a) Need

These amendments are needed to maintain the state's authority under existing delegation agreements to administer the federal regulations and to ensure that the Kansas Air Quality Regulations are current and consistent with the federal requirements. The state is delegated primary authority for the MACT standards adopted under the particular Kansas Air Quality Regulation proposed herein for amendment. However, with respect to federal changes (additions, revocations, or amendments) made to these standards since the last date of state adoption, and in accordance with the state-EPA delegation agreement, the state must adopt these new provisions and notify EPA of the updated state authority to implement and enforce such standards. Currently, the EPA is the implementing authority in the state for the RICE MACT standards promulgated after July 1, 2009. There exists a split in the authority to enforce these rules, with Kansas primacy for rules in effect on July 1, 2009 and EPA for those after. This split or dual regulatory authority for implementation and enforcement of the standards subject to this rule-making could result in loss of consistency of application and possible confusion for the regulated community regarding the relative roles of the state and federal agencies. This adoption of changes, followed by the notice to EPA of the updated delegation and authority, will resolve these potential problems.

b) Environmental benefit

The proposed revisions are not expected to result in specific environmental benefits beyond those already achieved by the federal promulgation. The affected facilities are already subject to the standards. One of the major benefits of state promulgation is that facilities will be able to work with the state, rather than the EPA, to achieve compliance. Providing implementation at the state level will enhance consistency in the application of the regulations.

2) When applicable, a summary of the research indicating the level of risk to the public health or the environment being removed or controlled by the proposed rules and regulations or amendment.

For the MACT standards, which address HAPs, Section 112 of the Clean Air Act (CAA) directs the EPA Administrator to "promulgate regulations establishing emission standards for each category or subcategory of major sources and area sources of HAP" (42 U.S.C. § 7412(d)(1)). Under Section 112(b) of the CAA, Congress established the list of HAPs that were shown to provide a threat of adverse human health effects. The EPA has conducted or utilized research on the health effects of the various HAPs, which has guided their promulgation of the standards being adopted. Emission standards are necessary to reduce emissions released into the atmosphere to attain the air quality standards that are specified in the CAA. Each standard has been subjected to peer review and often to litigation.

General air toxics information can be found at EPA's Air Toxics website, http://www.epa.gov/ttn/atw. EPA also provides a website for learning about studies used in EPA's science assessments, which is available at http://hero.epa.gov/index.cfm. Supporting and related materials for the RICE MACT are available in the docket at http://www.regulations.gov under EPA-HQ-OAR-2008-0708. EPA provides a Summary of Environmental, Energy and Economic impacts in the preambles to the March 3, 2010, and August 20, 2010, RICE MACT amendments in the *Federal Register* at 75 FR 9669-9671 and 75 FR 51582-51584, respectively.[1,2] There is also a web page of RICE MACT rulemaking and supporting documents at www.epa.gov/ttn/atw/icengines.

3) **If specific contaminants are to be controlled by the amendment, a description indicating the level at which the contaminants are considered harmful is provided according to current available research.**

As noted above, these determinations have been made at the federal level through extensive research; the state rules are no more stringent than the federal rules.

[1] "National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines," *Federal Register* Volume 75, pages 9648-9690, March 3, 2010.
[2] "National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines," *Federal Register* Volume 75, pages 51570-51608, August 20, 2010.

II. Economic Impact Statement

1) Are the amendments mandated by federal law as a requirement for participating in or implementing a federally subsidized or assisted program?

Yes, under the federal CAA and the EPA-Kansas delegation agreements, the state of Kansas is required to adopt the most recent federal rules as state-enforceable rules in order to gain the authority to administer and enforce the new standards statewide. Additionally, the continued approval of the overall state air quality program is based in part upon the state periodically updating its regulations to coincide with federal regulations promulgated by the EPA.

2) Do the proposed amendments exceed the requirements of applicable federal law?

No, the standards are identical to the federal standards, as the federal standards are adopted *verbatim* by reference. Under section 112 of the CAA (42 U.S.C. § 7412(l)(1)), the NESHAP and MACT standards adopted by the state must be no less stringent than the federal requirements. Additionally, pursuant to K.S.A. 2010 Supp. 65-3005, the standards are no more stringent, restrictive, or expansive than those required under the federal clean air act.

3) Description of costs to agencies, to the general public and to persons who are affected by, or are subject to, the regulations:

a) Capital and annual costs of compliance with the proposed amendments and the persons who will bear those costs.

It is a condition of the EPA's approval of the state's Title V operating permit program that the state periodically update these state standards to incorporate new federal regulations. Failure to adopt these proposed state regulation amendments will not result in the federal standards being rendered inapplicable to sources, but, as previously discussed, would instead result in a dual regulatory structure. If the amendments are not implemented and the EPA were to withdraw approval of the state plan, then the CAA provisions, including the Title V operating permit program, would be administered solely by the EPA.

It is important that the state continue to maintain the regulations in a current status, as the state's air program achieves a level of economic efficiency in the administration of the Title V permit program. This results in direct financial savings to the regulated facilities within Kansas.

Approval of Kansas' Title V permit program also authorizes Kansas to be the sole collector of application fees and costs. Although minor, these costs provide a source of revenue to the state.

The cost of compliance for facilities will not be increased, *per se,* by the proposed state rulemaking, because these rules are already in force at the federal level. Regardless of whether the state adopts the amendments, facilities are already subject to the costs associated with the federal standards. Because the state adopts these *verbatim*, and adds no additional requirements, no additional costs to the regulated community are imposed by the proposed state action. Although these facilities will already be subject to regulation, cost estimates for affected facilities are provided when the proposed regulation produces an economic impact.

In certain cases, the rules incorporated into the state standards by the proposed amendments have the effect of reducing or delaying the economic impacts on sources, or have no economic impact. Although some of the rules require stricter emission standards or add-on controls, often there is ultimately no economic change because the existing MACT standards already require the technology needed to implement the new rules. Two of the rules listed are merely technical corrections, with no actual change in requirements, therefore leading to no economic impact (*e.g.*, 75 *Federal Register* 37732, 6/30/2010, correction to replace inadvertently removed paragraphs in regulatory text; 78 *Federal Register* 14457, 3/6/2013, correction to regulatory text, table headings).

The table above provided a list of all the RICE MACT (40 C.F.R. Part 63 Subpart 4Z) provisions that have been amended or promulgated since July 2, 2009 and up to January 30, 2013. A detailed summary of each action is provided below. Where EPA collected data regarding national economic and cost impacts of a regulation, the analysis has been provided in the summary. To create an impact analysis, the EPA uses models to estimate economic, social, and air impacts. Kansas impact estimates are provided based on best available information through research and outreach to the Kansas regulated community, including information exchanges with the Kansas Power Pool, Kansas Municipal Utilities, and oil and gas industry representatives.

The following are the six amendments to 40 C.F.R. Part 63 Subpart ZZZZ being proposed for adoption:

Reciprocating Internal Combustion Engines

1. March 3, 2010 Volume 75: 9648-9690

➢ **63.6590, 63.6595, 63.6600-63.6605, 63.6612, 63.6620, 63.6625, 63.6640, 63.6645, 63.6650, 63.6655, 63.6660, 63.6665, 63.6675 & Tables 1a, 2a, 2b, 2c, 2d, 3-8 Subpart ZZZZ**

This action promulgates national emission standards for hazardous air pollutants (NESHAP) for existing stationary compression ignition reciprocating internal combustion engines (CI RICE) with a site rating of less than or equal to 500 brake horsepower (HP) located at major sources, existing non-emergency CI engines with a site rating greater than 500 HP at major sources, and existing stationary CI RICE of any power rating located at area sources. EPA promulgated NESHAP for existing, new, and reconstructed stationary RICE greater than 500 HP located at major sources on June 15, 2004. EPA promulgated NESHAP for new and reconstructed stationary RICE that are located at area sources of HAP emissions and for new and reconstructed stationary RICE that have a site rating of less than or equal to 500 HP that are located at major sources of HAP emissions on January 18, 2008.

This final rule will limit emissions of HAPs through emissions standards for carbon monoxide (CO) for existing stationary CI RICE. In addition to reducing HAPs and CO, this rule will result in the reduction of PM emissions from existing stationary diesel engines. Aftertreatment technologies expected to be used to reduce HAPs and CO emissions also reduce PM emissions from diesel engines. The final rule also requires the use of ultra low sulfur diesel (ULSD) for diesel-fueled stationary non-emergency CI engines greater than 300 HP with a displacement of less than 30 liters per cylinder, which is expected to result in lower emissions of sulfur oxides (SOx) and sulfate particulate from these engines.

Existing Stationary RICE at Major Sources: Numerical emission standards finalized in this action for stationary non-emergency CI RICE located at major sources are shown in the table below. Numerical emission standards are in units of parts per million by volume, dry basis (ppmvd) or percent reduction.

Numerical Emission Standards for Existing Stationary CI RICE Located at Major Sources

Subcategory	Except during periods of startup
Non-Emergency CI 100≤HP≤300	230 ppmvd CO at 15% O2.
Non-Emergency CI 300<HP≤500	49 ppmvd CO at 15% O2 or 70% CO reduction.
Non-Emergency CI >500 HP	23 ppmvd CO at 15% O2 or 70% CO reduction.

In addition, owners and operators of existing stationary non-emergency CI engines greater than 300 HP with a displacement of less than 30 liters per cylinder located at major sources that use diesel fuel must use only diesel fuel having a maximum sulfur content of 15 ppm and either a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent. Work practice standards are finalized by this rule for existing stationary emergency CI RICE less than or equal to 500 HP located at major sources and existing stationary non-emergency CI RICE less

than 100 HP located at major sources and include standards for oil and filter changes, inspections, oil viscosity, and water content. EPA also includes additional capture and collection requirements to reduce metallic HAP emissions. For existing stationary non-emergency CI engines greater than 300 HP at major sources, owners and operators must do one of the following if the engine is not already equipped with a closed crankcase ventilation system: (1) install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or (2) install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates, and metals.

Existing Stationary RICE at Area Sources: Numerical emission standards finalized in this action for stationary CI RICE located at area sources are shown in the table below. Existing stationary emergency engines at area sources located at residential, commercial, or institutional facilities are not part of the source category and are not subject to any requirements under this rule.

Numerical Emission Standards for Existing Stationary RICE Located at Area Sources

Subcategory	Except during periods of startup
Non-Emergency CI 300<HP≤500	49 ppmvd CO at 15% O2 or 70% CO reduction.
Non-Emergency CI >500 HP	23 ppmvd CO at 15% O2 or 70% CO reduction.

In addition, owners and operators of existing stationary non-emergency CI engines greater than 300 HP with a displacement of less than 30 liters per cylinder located at major sources that use diesel fuel must use only diesel fuel having a maximum sulfur content of 15 ppm and either a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent. Work practice standards are finalized by this rule for existing stationary emergency CI RICE located at area sources and existing stationary non-emergency CI RICE less than or equal to 300 HP located at area sources and include standards for oil and filter changes and inspections. In order to reduce metallic HAP emissions, existing stationary non-emergency CI engines greater than 300 HP at area sources must do one of the following if the engine is not already equipped with a closed crankcase ventilation system: (1) install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or (2) install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates, and metals.

Startup Requirements: Owners and operators must minimize the engine's time spent at idle and minimize the engine's startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the engine must meet the otherwise applicable emission standards. These requirements will limit the HAP emissions during periods of engine startup. Owners and operators may petition for approval of an alternative work practice.

Operating Limitations: Owners and operators of CI RICE greater than 500 HP that are equipped with oxidation catalyst must maintain the catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test. Owners and operators must also maintain the temperature of the exhaust so that the catalyst inlet temperature is between 450 and 1350 degrees Fahrenheit (°F). Owners and operators may petition to operate below the

temperature range specified by the rule but must demonstrate why it is operationally necessary and appropriate. Owners and operators of existing stationary non-emergency CI RICE greater than 300 HP meeting the requirement to use open or closed crankcases must follow the manufacturer's specified maintenance requirements or may request approval of different maintenance requirements that are as protective.

Compliance: Owners and operators of CI RICE that are subject to management practices must develop a maintenance plan that specifies how the management practices will be met. Initial performance tests are required for engines that are subject to numerical emission standards. For engines using an oxidation catalyst, sources must continuously monitor and record the catalyst inlet temperature and measure the pressure drop across the catalyst monthly. For engines not using an oxidation catalyst, owners and operators must continuously monitor and record the approved operating parameters (if any). Reporting and recordkeeping requirements include initial notification, notification of performance test, notification of compliance, manufacturer's recommended maintenance procedures for crankcase systems, operating hours, oil and filter change records, and inspection and repair documentation.

Cost/Economic Impact:

The EPA estimates that there are over 900,000 stationary CI engines nationwide that will be subject to this rule. The table below identifies industries in which CI RICE are found and includes a count of Kansas facilities:

Industry Category	**Kansas Facilities (2007 Economic Census)**
Electric Power Generation, Transmission, and Distribution (NAICS 2211)	142
Oil and Gas Extraction (NAICS 211111)	302
Pipeline Transportation of Natural Gas (NAICS 211112)	7
Natural Gas Transmission (NAICS 48621)	74
Welding Equipment (NAICS 335312 & 333992)	5
General Medical and Surgical Hospitals (NAICS 622110)	134
	Kansas Number of Irrigation Points of Diversion Supplied by Diesel-Fueled Energy
Irrigation Sets	4611**

**KDA provided data from the 2008 water use reports.

Most of the engines in these industry categories, other than irrigation pump engines, are already regulated under existing maximum achievable control technology (MACT) requirements. Irrigation service providers have indicated that most irrigation engines are less than 250 HP and therefore would be subject only to management practices, such as inspection and maintenance, and not to emissions testing. Most new diesel irrigation engines sold in Kansas are between 100 and 200 HP and cost between $10,000 and $15,000.

For engines that will need to add control technology to meet the numerical emission standards, the EPA analysis uses the following equations to estimate capital and annual control costs:

Technology	Capital Cost (2008 $)	Annual Cost (2008 $)
Diesel Oxidation Catalyst (DOC)	$27.4 x HP - $939	$4.99 x HP + $480
Open Crankcase Ventilation (OCV)	$0.26 x HP + $997	$0.065 x HP + $254

(Uses cost data obtained from a California Resources Board (CARB) study).

Non-emergency engines greater than 500 HP that have add-on controls are required to use a continuous parametric monitoring system (CPMS) to monitor catalyst inlet temperature and pressure drop across the catalyst. The estimated capital cost for a CPMS for a large engine facility is $531. Initial performance testing required for nonemergency engines greater than 100 HP at major sources and greater than 300 HP at area sources is estimated at $1,165 per day of testing or $583 per engine using a portable analyzer (assuming two engines could be tested per day). Costs for performing management practices for nonemergency CI engines less than 100 HP at major sources and less than or equal to 300 HP at area sources is assumed to be negligible as these practices are based on engine maintenance procedures that owners and operators already perform regardless of the regulation. Annualized compliance costs are estimated to be no more than 0.07 percent of total revenue.[3]

For a Kansas perspective of compliance costs for the electric power generation and distribution sector, Kansas municipal utilities have evaluated the cost of retrofitting their existing RICE units and have shared with KDHE estimates ranging between $43,000 and $175,000 per unit.

2. June 30, 2010 Volume 75: 37732-37733

- **63.6590 Subpart ZZZZ**

A March 3, 2010, document amending the emission standards for compression ignition reciprocating internal combustion engines inadvertently removed paragraphs from the regulation. This action corrects this error.

Cost/Economic Impact:

There is no cost or economic impact from this action.

3. August 20, 2010 Volume 75: 51570-51608

- **63.6590, 63.6595, 63.6601-63.6604, 63.6611-63.6612, 63.6625, 63.6640, 63.6645, 63.6655, 63.6675, & Tables 1a, 1b, 2b, 2c, 2d, 3-7 Subpart ZZZZ**

This action promulgates national emission standards for hazardous air pollutants (NESHAP) for existing stationary spark ignition reciprocating internal combustion engines (SI RICE) with a site rating of less than or equal to 500 HP located at major sources and existing stationary SI RICE of any site rating located at area sources. In addition to reducing HAPs, the emission control technologies that will be installed on stationary SI RICE to reduce HAPs will also reduce

[3] "Regulatory Impact Analysis (RIA) for Existing Stationary Compression Ignition Engines," U.S. EPA, February 2010.

carbon monoxide (CO) and volatile organic compounds (VOC), and for rich burn engines will also reduce nitrogen oxides (NO_x). This action also promulgates Method 323 and allows it as an option for measuring formaldehyde in 40 C.F.R. Part 63 Subpart ZZZZ.

Existing Stationary SI RICE Less Than or Equal to 500 HP at Major Sources: Numerical emission standards finalized in this action for existing stationary non-emergency SI RICE less than or equal to 500 HP located at major sources of HAPs are shown in the table below. Numerical emission standards are in units of parts per million by volume, dry basis (ppmvd).

Numerical Emission Standards for Existing Stationary SI RICE ≤ 500 HP at Major Sources of HAPs

Subcategory	Except during periods of startup
2SLB Non-Emergency 100≤HP≤500	225 ppmvd CO at 15% O_2
4SLB Non-Emergency 100≤HP≤500	47 ppmvd CO at 15% O_2
4SRB Non-Emergency 100≤HP≤500	10.3 ppmvd formaldehyde at 15% O_2
Landfill/Digester Gas Non-Emergency 100≤HP≤500	177 ppmvd CO at 15% O_2

Work practice standards are finalized by this rule for existing emergency stationary SI RICE less than or equal to 500 HP located at major sources of HAPs and existing non-emergency stationary SI RICE less than 100 HP located at major sources of HAPs and include standards for oil and filter changes, inspections, and the option of an oil analysis program.

Existing Stationary SI RICE at Area Sources of HAPs: Numerical emission standards finalized in this action for non-emergency 4SLB stationary SI RICE and non-emergency 4SRB stationary SI RICE located at area sources of HAPs are shown in the table below.

Numerical Emission Standards for Existing Stationary SI RICE >500 HP at Area Sources of HAPs

Subcategory	Except during periods of startup
4SLB Non-Emergency >500 HP that operate more than 24 hours per calendar year	47 ppmvd CO at 15% O_2 or 93% CO reduction
4SRB Non-Emergency >500 HP that operate more than 24 hours per calendar year	2.7 ppmvd formaldehyde at 15% O_2 or 76% formaldehyde reduction

Management practices are finalized by this rule for existing non-emergency 4SLB stationary SI RICE less than or equal to 500 HP located at area sources of HAPs, existing non-emergency 4SLB stationary SI RICE greater than 500 HP located at area sources of HAPs that operate 24 hours or less per calendar year, existing non-emergency 4SRB stationary SI RICE less than or equal to 500 HP located at area sources of HAPs, existing non-emergency 4SRB stationary SI RICE greater than 500 HP located at area sources of HAPs that operate 24 hours or less per calendar year, existing 2SLB non-emergency stationary SI RICE located at area sources of HAPs, existing non-emergency landfill and digester gas stationary RICE located at area sources of HAPs, and existing emergency stationary SI RICE located at area sources of HAPs. Management practices include oil and filter changes, inspections, and the option of an oil analysis program.

Startup Requirements: Owners and operators must minimize the engine's time spent at idle and minimize the engine's startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the engine must meet the otherwise applicable

emission standards. Owners and operators may petition for approval of an alternative management practice.

Operating Limitations: Owners and operators of engines that are equipped with oxidation catalyst or non-selective catalytic reduction (NSCR) must maintain the catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test. If the engine is equipped with oxidation catalyst, owners and operators must also maintain the temperature of the stationary RICE exhaust so that the catalyst inlet temperature is between 450 and 1350 degrees Fahrenheit (°F). If the engine is equipped with NSCR, owners and operators must maintain the temperature of the stationary RICE exhaust so that the NSCR inlet temperature is between 750 and 1250 °F. Owners and operators may petition for a different temperature range. Owners and operators of engines that are not using oxidation catalyst or NSCR must comply with any operating limitations approved by the Administrator.

Compliance for Existing Stationary SI RICE ≤500 HP at Major Sources of HAPs: Owners and operators of existing stationary non-emergency SI RICE located at major sources that are less than 100 HP and existing stationary emergency SI RICE located at major sources must operate and maintain their stationary RICE and aftertreatment control device (if any) according to the manufacturer's emission-related written instructions or develop their own maintenance plan. Owners and operators of existing stationary non-emergency SI RICE located at major sources that are less than 100 HP and existing stationary emergency SI RICE located at major sources do not have to conduct any performance testing.

Owners and operators of existing stationary non-emergency SI RICE located at major sources that are greater than or equal to 100 HP and less than or equal to 500 HP must conduct an initial performance test to demonstrate that they are achieving the required emission standards.

Compliance for Existing Stationary SI RICE at Area Sources of HAPs: Owners and operators of existing stationary RICE located at area sources of HAPs that are subject to management practices do not have to conduct any performance testing. However, they must develop a maintenance plan that specifies how the management practices will be met and provides to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practices for minimizing emissions.

Owners and operators of existing 4SLB and 4SRB non-emergency stationary SI RICE that are greater than 500 HP, located at an area source of HAPs, and operated more than 24 hours per calendar year must conduct an initial performance test and must conduct subsequent performance testing every 8760 hours of operation or 3 years, whichever comes first. They must continuously monitor and record the inlet temperature of the oxidation catalyst or NSCR and also take monthly measurements of the pressure drop across the oxidation catalyst or NSCR. If an oxidation catalyst or NSCR is not being used, the owner or operator must continuously monitor and record the approved operating parameters (if any). This action finalizes performance specification requirements for the continuous parametric monitoring systems used for continuous catalyst inlet temperature monitoring.

Reporting Requirements: Reporting requirements include initial notification, notification of performance test, and notification of compliance for each stationary RICE that must comply with specified emission limitations. Owners and operators of existing stationary non-emergency SI RICE greater than or equal to 100 HP and less than or equal to 500 HP located at major sources of HAPs and existing stationary 4SLB and 4SRB non-emergency SI RICE greater than 500 HP

located at area sources of HAPs that operate more than 24 hours per calendar year must submit semiannual compliance reports.

Cost/Economic Impact:

In preparing this rulemaking, the EPA estimated that approximately 330,000 stationary SI engines would be subject to this final rule. The table below identifies industries in which SI RICE are found and includes a count of Kansas facilities:

Industry Category	**Kansas Facilities (2007 Economic Census)**
Electric Power Generation, Transmission, and Distribution (NAICS 2211)	142
Oil and Gas Extraction (NAICS 211111)	302
Pipeline Transportation of Natural Gas (NAICS 211112)	7
Natural Gas Transmission (NAICS 48621)	74
Welding Equipment (NAICS 335312 & 333992)	5
General Medical and Surgical Hospitals (NAICS 622110)	134
	Kansas Number of Irrigation Points of Diversion Supplied by Gasoline, Propane, & Natural Gas Energy
Irrigation Sets	10,794**

**KDA provided data from the 2008 water use reports.

Most SI RICE located at area sources, including most irrigation engines, are less than 500 HP and are subject to management practice requirements. These engines do not require notifications or performance testing. For existing SI RICE that will need to add control technology to meet numerical emission standards, the EPA analysis uses the following equations to estimate capital and annual control costs:[4]

Technology	**Capital Cost (2009 $)**	**Annual Cost (2009 $)**
2SLB Oxidation Catalyst	$47.1 x HP + $41,603	$11.4 x HP + $13,928
4SLB Oxidation Catalyst	$12.8 x HP + $3,069	$1.81 x HP + $3,442
NSCR	$24.9 x HP + $13,118	$4.77 x HP + $5,679

For a Kansas perspective of cost, the following information was provided by a Kansas source with 60 natural gas compressor station engines. The source has six 4SRB engines greater than 500 HP at an area source of HAPs that are subject to catalyst and temperature monitoring requirements. The remaining 54 engines are not subject to the catalyst and temperature requirements because they are: SI RICE over 500 HP and located at major sources of HAPs, 2SLB SI RICE located at area sources of HAPs, other SI RICE less than 500 HP located at area sources of HAPs, or emergency SI RICE. The source determined a project cost of approximately $233,000 per engine to install catalysts and temperature monitoring on the six 4SRB engines.

[4] "Regulatory Impact Analysis (RIA) for Stationary Spark Ignition (SI) RICE NESHAP," U.S. EPA, August 2010.

4. March 9, 2011 Volume 76: 12863-12873
   - **63.6603, 63.6625, 63.6635, 63.6675, & Tables 1b, 2b, 5, & 6 Subpart ZZZZ**

This action promulgates amendments to the final rule published on August 20, 2010, that provided national emission standards for hazardous air pollutants for existing stationary spark ignition reciprocating internal combustion engines. This direct final action amends certain regulatory text to clarify compliance requirements related to continuous parameter monitoring systems and also corrects minor typographical errors.

Cost/Economic Impact:

There is no cost or economic impact from this action.

5. January 30, 2013 Volume 78: 6674-6724
   - **63.14 Subpart A; 63.6585, 63.6590, 63.6595, 63.6602-63.6605, 63.6620, 63.6625, 63.6630, 63.6640, 63.6645, 63.6650, 63.6655, 63.6675, Tables 1b, 2b, 2c, 2d, & 3-8 Subpart ZZZZ**

This action finalizes amendments to address several petitions for reconsideration, legal challenges, and new technical information submitted by stakeholders, including industry and environmental groups, which were brought to attention after the 2010 standards were published. The final amendments generally apply to the following:

- engines typically used in sparsely populated areas for oil and gas production
- engines in remote areas of Alaska (not relevant to KS)
- engines scheduled to be replaced in the next few years due to state or local requirements (not KS), and certain engines installed in 2006
- engine testing requirements for formaldehyde emissions
- engines for offshore vessels operating on the Outer Continental Shelf (not relevant to KS)
- engines used in emergency demand response programs

This action finalizes management practices for owners and operators of existing stationary 4-stroke spark ignition (SI) engines greater than 500 HP that are area sources of HAP emissions and where the engines are remote from human activity. These engines are not subject to numeric emission limits and associated testing and monitoring. Existing stationary 4-stroke SI engines greater than 500 HP that are area sources in populated areas are subject to an equipment standard that requires the installation of HAP-reducing aftertreatment. Sources are required to test their engines to demonstrate initial compliance, perform catalyst activity check-ups and either monitor the catalyst inlet temperature continuously or employ high temperature shutdown devices to protect the catalyst.

The EPA specifies that any existing compression ignition (CI) greater than 300 HP at an area source of HAP emissions that was certified to meet the Tier 3 engine standards and was installed before June 12, 2006, is in compliance with the NESHAP.

This action adds an alternative compliance demonstration option for stationary 4SRB SI engines subject to a 76 percent or more formaldehyde reduction requirements. Owners and operators of 4SRB engines will be permitted to demonstrate compliance with the 76 percent formaldehyde reduction emission standard by testing emissions of total hydrocarbons (THC) and

showing that the engine is achieving at least a 30 percent reduction of THC emissions. This alternative is less expensive and less complex, but it is equally effective for demonstrating compliance.

This action also finalizes limitations on the operation of emergency engines for emergency demand response programs. Operation of stationary emergency engines for emergency demand response programs is limited to within the 100 hours per year already permitted for maintenance and testing of the engines. This rule limits operation of certain emergency engines used to avert potential voltage collapse or line overloads that could lead to interruption of power supply in a local area or region to 50 hours per year as part of the 100 hours of year permitted for maintenance and testing of the engine. Emergency engines greater than 100 HP used for this purpose or used (or contractually obligated to be available) for more than 15 hours of emergency demand response per calendar year are subject to ultra low sulfur diesel (ULSD) fuel requirements and reporting requirements.

Cost/Economic Impact:

These amendments will reduce costs and economic impact to the regulated community. Based on the Kansas example provided above for the August 20, 2010 SI RICE rule, a 4SRB SI RICE greater than 500 HP that is located at an area source of HAPs in a sparsely populated area (i.e., with five or fewer buildings intended for human occupancy within 0.25 mile radius of the engine) would be subject to management practices rather than numeric emission limits with testing and monitoring requirements and would avoid an estimated $233,000 retrofit project.

6. March 6, 2013 Volume 78: 14457
   - **63.6655 & Table 2c Subpart ZZZZ**

This is a minor correction to regulatory text. There is no impact from this correction.

b) Initial and annual costs of implementing and enforcing the proposed amendments, including the estimated amount of paperwork, and the state agencies, other governmental agencies or other persons or entities who will bear the costs.

The NESHAP and MACT standards that are being proposed will transfer regulating authority from the EPA to the KDHE. The implementation of regulations for certain area source MACTs, with a large number of sources and relatively small amount of emissions, deserves fair consideration and forethought as there has been no increase in resources from the EPA. However, the Bureau of Air maintains that Kansas sources are best regulated by Kansas rather than by the EPA. Adoption of these regulations will necessitate a different regulatory approach, such as more vigorous public outreach and education efforts. Kansas State University's Small Business Environmental Assistance Program (SBEAP) has been successful in outreach and

education of small business, including municipal utilities, and it is expected that their role will continue to be vital and to grow with respect to area sources.

c) Costs which would likely accrue if the proposed regulations are not adopted, the persons who will bear the costs and those who will be affected by the failure to adopt the regulations.

KDHE needs to adopt current regulations and amendments to stay current with the national standards. If the proposed amendments are not adopted, the state will not have the authority necessary to implement and enforce the new standards listed in this impact statement, *i.e.*, the EPA would remain as the primary authority for those 40 C.F.R. Part 63 Subpart 4Z standards that have been promulgated by the EPA since July 2, 2009. As previously discussed, this would result in a dual regulatory structure for the RICE MACT standards. This situation could potentially result in the loss of consistency in applying standards and would burden regulated facilities because they will have to work with both the state and the EPA. This results in confusion for the regulated community regarding the applicable requirements that must be met, as well as the added burden of working with two agencies instead of one. In addition, KDHE can implement these regulations in an appropriate, consistent, and cost-effective manner for both the agency and the affected Kansas facilities.

d) A detailed statement of the data and methodology used in estimating the costs used in the statement.

The economic impact information contained herein has been obtained through EPA analysis documents, where available, for the respective rulemaking actions, and has been supplemented where possible with information found in the proposed or final rule notices in the *Federal Register* and in the regulatory dockets (www.regulations.gov). EPA analysis typically provides cost and economic estimates that would affect an entire industry. Some information has been obtained from affected Kansas sources in response to outreach efforts and used to further demonstrate cost impacts.

e) Description of any less costly or less intrusive methods that were considered by the agency and why such methods were rejected in favor of the proposed regulations.

There are no alternative methods of implementing the federal requirements that would be less intrusive; however, implementation and administering of these regulations in Kansas by KDHE rather than by EPA will be less costly.

The EPA does not finalize a regulation until it has been subjected to public comment and assessment. In addition, the RICE regulations have been subject to petitions for reconsideration, legal challenges, and public submissions of technical data and analyses leading up to the final amendments proposed here for adoption by reference. Therefore, the proposed regulations have all been reviewed and critiqued before adoption.

f) Consultation with League of Kansas Municipalities, Kansas Association of Counties, and Kansas Association of School Boards.

Some of the federal rules being adopted in this rulemaking may affect the constituencies of these organizations; however, the state rulemaking action does not change the requirements for those so affected. Copies of the regulation, the regulatory impact statement, and the notice of hearing will be provided electronically to these organizations at the start of the public comment period.