



6560-50-P

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 52**

**[EPA-R04-OAR-2016-0312; FRL-9950-81-Region 4]**

**Air Plan Approval;**

**Kentucky; Removal of Stage II Gasoline Vapor Recovery Program.**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule.

**SUMMARY:** The Environmental Protection Agency (EPA) is proposing to approve changes to the Kentucky State Implementation Plan (SIP) submitted by the Commonwealth of Kentucky through its Energy and Environment Cabinet (EEC) on May 3, 2016. This SIP revision seeks to remove Stage II vapor control requirements for new and upgraded gasoline dispensing facilities in the State and allow for the decommissioning of existing Stage II equipment in Boone, Campbell and Kenton Counties in Kentucky. EPA has preliminarily determined that Kentucky's May 3, 2016, SIP revision is approvable because it is consistent with the Clean Air Act (CAA or Act).

**DATES:** Written comments must be received on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**ADDRESSES:** Submit your comments, identified by Docket ID No. EPA-R04-OAR-2016-0312 at <http://www.regulations.gov>. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from Regulations.gov. EPA may

publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. EPA will generally not consider comments or comment contents located outside of the primary submission (i.e. on the web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <http://www2.epa.gov/dockets/commenting-epa-dockets>.

**FOR FURTHER INFORMATION CONTACT:** Kelly Sheckler, Air Regulatory Management Section, Air Planning and Implementation Branch, Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, Region 4, 61 Forsyth Street, SW, Atlanta, Georgia 30303-8960. Ms. Sheckler's phone number is (404) 562-9222. She can also be reached via electronic mail at [sheckler.kelly@epa.gov](mailto:sheckler.kelly@epa.gov).

**SUPPLEMENTARY INFORMATION:**

**I. Background for Federal Stage II Requirements**

Stage I vapor recovery is a type of emission control system that captures gasoline vapors that are released when gasoline is delivered to a storage tank. The vapors are returned to the tank truck as the storage tank is being filled with fuel, rather than released to the ambient air. Stage II and onboard refueling vapor recovery (ORVR) are two types of emission control systems that capture fuel vapors from vehicle gas tanks during refueling. Stage II systems are specifically installed at gasoline dispensing facilities and capture the refueling fuel vapors at the gasoline

pump nozzle. The system carries the vapors back to the underground storage tank at the gasoline dispensing facility to prevent the vapors from escaping to the atmosphere. ORVR systems are carbon canisters installed directly on automobiles to capture the fuel vapors evacuated from the gasoline tank before they reach the nozzle. The fuel vapors captured in the carbon canisters are then combusted in the engine when the automobile is in operation.

Under section 182(b)(3) of the CAA, each state was required to submit a SIP revision to implement Stage II for all ozone nonattainment areas classified as moderate, serious, severe, or extreme, primarily for the control of volatile organic compounds (VOC)— a precursor to ozone formation.<sup>1</sup> However, section 202(a)(6) of the CAA states that the section 182(b)(3) Stage II requirements for moderate ozone nonattainment areas shall not apply after the promulgation of ORVR standards.<sup>2</sup> ORVR standards were promulgated by EPA on April 6, 1994. *See* 59 FR 16262 and 40 CFR parts 86, 88 and 600. As a result, the CAA no longer requires moderate areas

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<sup>1</sup> Section 182(b)(3) states that each State in which all or part of an ozone nonattainment area classified as moderate or above shall, with respect to that area, submit a SIP revision requiring owners or operators of gasoline dispensing systems to install and operate vapor recovery equipment at their facilities. Specifically, the CAA specifies that the Stage II requirements must apply to any facility that dispenses more than 10,000 gallons of gasoline per month or, in the case of an independent small business marketer (ISBM), as defined in section 324 of the CAA, any facility that dispenses more than 50,000 gallons of gasoline per month. Additionally, the CAA specifies the deadlines by which certain facilities must comply with the Stage II requirements. For facilities that are not owned or operated by an ISBM, these deadlines, calculated from the time of State adoption of the Stage II requirements, are: (1) 6 months for facilities for which construction began after November 15, 1990, (2) 1 year for facilities that dispense greater than 100,000 gallons of gasoline per month, and (3) by November 15, 1994, for all other facilities. For ISBMs, section 324(a) of the CAA provides the following three-year phase-in period: (1) 33 percent of the facilities owned by an ISBM by the end of the first year after the regulations take effect; (2) 66 percent of such facilities by the end of the second year; and (3) 100 percent of such facilities after the third year.

<sup>2</sup> ORVR is a system employed on gasoline-powered highway motor vehicles to capture gasoline vapors displaced from a vehicle fuel tank during refueling events. These systems are required under section 202(a)(6) of the CAA and implementation of these requirements began in the 1998 model year. Currently they are used on all gasoline-powered passenger cars, light trucks and complete heavy trucks of less than 14,000 pounds GVWR. ORVR systems typically employ a liquid file neck seal to block vapor escape to the atmosphere and otherwise share many components with the vehicles' evaporative emission control system including the onboard diagnostic system sensors.

to impose Stage II controls under section 182(b)(3), and such areas were able to submit SIP revisions, in compliance with section 110(l) of the CAA, to remove Stage II requirements from their SIPs. EPA's policy memoranda related to ORVR, dated March 9, 1993, and June 23, 1993, provide further guidance on removing Stage II requirements from certain areas. The policy memorandum dated March 9, 1993, states that “[w]hen onboard rules are promulgated, a State may withdraw its Stage II rules for moderate areas from the SIP (or from consideration as a SIP revision) consistent with its obligations under sections 182(b)(3) and 202(a)(6), so long as withdrawal will not interfere with any other applicable requirement of the Act.”<sup>3</sup>

CAA section 202(a)(6) also provides discretionary authority to the EPA Administrator to, by rule, revise or waive the section 182(b)(3) Stage II requirement for serious, severe, and extreme ozone nonattainment areas after the Administrator determines that ORVR is in widespread use throughout the motor vehicle fleet. On May 16, 2012, in a rulemaking entitled “Air Quality: Widespread Use for Onboard Refueling Vapor Recovery and Stage II Waiver,” EPA determined that ORVR technology is in widespread use throughout the motor vehicle fleet for purposes of controlling motor vehicle refueling emissions. *See* 77 FR 28772. By that action, EPA waived the requirement for states to implement Stage II gasoline vapor recovery systems at gasoline dispensing facilities in nonattainment areas classified as serious and above for the ozone NAAQS. Effective May 16, 2012, states implementing mandatory Stage II programs under section 182(b)(3) of the CAA were allowed to submit SIP revisions to remove this program. *See*

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<sup>3</sup> Memorandum from John S. Seitz, Director, Office of Air Quality Planning and Standards, to EPA Regional Air Directors, *Impact of the Recent Onboard Decision on Stage II Requirements in Moderate Areas* (March 9, 1993), available at: [http://www.epa.gov/ttn/naaqs/aqmguides/collection/cp2/19930309\\_seitz\\_onboard\\_impact\\_stage2\\_.pdf](http://www.epa.gov/ttn/naaqs/aqmguides/collection/cp2/19930309_seitz_onboard_impact_stage2_.pdf).

40 CFR 51.126(b).<sup>4</sup> On April 7, 2012, EPA released the guidance entitled “Guidance on Removing Stage II Gasoline Vapor Control Programs from State Implementation Plans and Assessing Comparable Measures” for states to consider in preparing their SIP revisions to remove existing Stage II programs from state implementation plans.<sup>5</sup>

## **II. Kentucky’s Stage II Requirements for the Northern Kentucky Area**

On November 6, 1991, EPA designated and classified Boone, Campbell and Kenton Counties in Kentucky (hereinafter referred to as the “Northern Kentucky Area” or “Area”) as part of the seven-county area in and around the Cincinnati-Hamilton, OH-KY, area as a moderate nonattainment area for the 1-hour ozone NAAQS.<sup>6</sup> *See* 56 FR 56694, 56764. As mentioned above, the “moderate” classification triggered various statutory requirements for this Area, including the requirement pursuant to section 182(b)(3) of the CAA for the Area to require all owners and operators of gasoline dispensing systems to install and operate a system for gasoline vapor recovery of emissions from the fueling of motor vehicles known as “Stage II.”<sup>7</sup>

On February 3, 1998, the Commonwealth of Kentucky submitted a SIP revision to address the Stage II requirements for the Northern Kentucky Area. EPA approved that SIP revision, containing Kentucky regulation 401 KAR 59:174 – *Stage II controls at gasoline*

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<sup>4</sup> As noted above, EPA found, pursuant to CAA section 202(a)(6), that ORVR systems are in widespread use in the motor vehicle fleet and waived the CAA section 182(b)(3) Stage II vapor recovery requirement for serious and higher ozone nonattainment areas on May 16, 2012. Thus, in its implementation rule for the 2008 ozone NAAQS, EPA removed the section 182(b)(3) Stage II requirement from the list of applicable requirements in 40 CFR 51.1100(o). *See* 80 FR 12264 for additional information.

<sup>5</sup> This guidance document is available at: <http://www.epa.gov/groundlevelozone/pdfs/20120807guidance.pdf>.

<sup>6</sup> The other counties in this nonattainment area were Butler, Clermont, Hamilton and Warren Counties in Ohio. *See* 56 FR 56813.

<sup>7</sup> As discussed above, Stage II is a system designed to capture displaced vapors that emerge from inside a vehicle’s fuel tank when gasoline is dispensed into the tank. There are two basic types of Stage II systems, the balance type and the vacuum assist type.

*dispensing facilities*, in a notice published on February 8, 1999. 63 FR 67586. Northern Kentucky's Stage II rule, as currently incorporated into the SIP, requires that Stage II systems be tested and certified to meet a 95 percent emission reduction efficiency by using a system approved by the California Air Resources Board (CARB). The rule requires sources to verify proper installation and function of Stage II equipment through use of a liquid blockage test and a leak test prior to system operation and every five years or upon major modification of a facility (i.e., 75 percent or more equipment change). The Commonwealth also established an inspection program consistent with that described in EPA's Stage II guidance and has established procedures for enforcing violations of the Stage II requirements.

On December 13, 1999, Kentucky submitted to EPA a request to redesignate the Northern Kentucky Area to attainment for the 1-hour ozone standard and an associated maintenance plan. The maintenance plan, as required under section 175A of the CAA, showed that nitrogen oxides and VOC emissions in the Area would remain below the 1996 "attainment year" levels through the greater than ten-year period from 1996–2010. In making these projections, Kentucky factored in the emissions benefit of the Area's Stage II program, thereby maintaining this program as an active part of its 1-hour ozone SIP. Originally, the redesignation request and maintenance plan were approved by EPA, effective July 5, 2000. *See* 65 FR 37879. However, the United States Court of Appeals for the Sixth Circuit vacated EPA's approval of this redesignation request and maintenance plan and remanded it back to EPA after the Court concluded that EPA erred in one respect pertaining only to the Ohio portion of the Area. On July 31, 2002, EPA reinstated the approval of the redesignation request and maintenance plan for Kentucky. *See* 67 FR 49600.

Subsequently, Boone, Campbell and Kenton Counties in Kentucky (or portions thereof) were designated nonattainment as a part of a larger tri-state nonattainment area which included Kentucky, Ohio and Indiana counties in and around the Cincinnati area for both the 1997 8-hour ozone and 2008 8-hour ozone NAAQS. On August 5, 2010, the Area (i.e., the Kentucky portion of the tri-state Cincinnati-Hamilton Area) was redesignated to attainment of the 1997 8-hour ozone NAAQS. *See* 75 FR 47218. The tri-state Cincinnati-Hamilton Area is attaining the 2008 8-hour ozone NAAQS, and the Commonwealth is in the process of submitting a redesignation request and maintenance plan for the 2008 8-hour ozone NAAQS.

### **III. Analysis of the Commonwealth's Submittal**

On May 3, 2016, the Commonwealth of Kentucky submitted a SIP revision to EPA seeking modifications of the Stage II requirements in the Northern Kentucky Area. Specifically, it seeks the removal of the Stage II requirements in Kentucky regulation 401 KAR 59:174 – *Stage II Controls at gasoline dispensing facilities*. These modifications would remove Stage II vapor control requirements for new and upgraded gasoline dispensing facilities in the State and allow for the decommissioning of existing Stage II equipment.

EPA's primary consideration for determining the approvability of the Commonwealth of Kentucky's request is whether this requested action complies with section 110(l) of the CAA.<sup>8</sup> Section 110(l) requires that a revision to the SIP not interfere with any applicable requirement concerning attainment and reasonable further progress (as defined in section 171), or any other applicable requirement of the Act. EPA evaluates each section 110(l) noninterference

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<sup>8</sup>CAA section 193 is not relevant because Kentucky's Stage II rule was not included in the SIP before the 1990 CAA amendments.

demonstration on a case-by-case basis, considering the circumstances of each SIP revision. EPA interprets 110(l) as applying to all NAAQS that are in effect, including those that have been promulgated but for which the EPA has not yet made designations. The degree of analysis focused on any particular NAAQS in a noninterference demonstration varies depending on the nature of the emissions associated with the proposed SIP revision. EPA's analysis of Kentucky's May 3, 2016, SIP revision pursuant to section 110(l) is provided below.

In its May 3, 2016, SIP revision, Kentucky used EPA's guidance entitled "Guidance on Removing Stage II Gasoline Vapor Control Programs from State Implementation Plans and Assessing Comparable Measures" to conduct a series of calculations to determine the potential impact on air quality of removing the Stage II program.<sup>9</sup> Kentucky's analysis focused on VOC emissions because, as mentioned above, Stage II requirements affect VOC emissions and because VOC are a precursor for ozone formation.<sup>10</sup> The results of Kentucky's analysis are provided in the table below.

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<sup>9</sup> EPA, Guidance on Removing Stage II Gasoline Vapor Control Programs from State Implementation Plans and Assessing Comparable Measures, EPA-457/B-12-001 (Aug. 7, 2012), available at <https://www.epa.gov/ozone-pollution/ozone-stage-two-vapor-recovery-rule-and-guidance>. This guidance document notes that "the potential emission control losses from removing Stage II VRS are transitional and relatively small. ORVR-equipped vehicles will continue to phase in to the fleet over the coming years and will exceed 80 percent of all highway gasoline vehicles and 85 percent of all gasoline dispensed during 2015. As the number of these ORVR-equipped vehicles increase, the control attributed to Stage II VRS will decrease even further, and the potential foregone Stage II VOC emission reductions are generally expected to be no more than one percent of the VOC inventory in the area."

<sup>10</sup> Two counties in Kentucky are currently designated nonattainment for the 1997 Annual fine particulate matter (PM<sub>2.5</sub>) standard: Bullitt and Jefferson. While VOC is one of the precursors for particulate matter (NAAQS) formation, studies have indicated that, in the southeast, emissions of direct PM<sub>2.5</sub> and the precursor sulfur oxides are more significant to ambient summertime PM<sub>2.5</sub> concentrations than emissions of nitrogen oxides and anthropogenic VOC. See, e.g., *Quantifying the sources of ozone, fine particulate matter, and regional haze in the Southeastern United States*, Journal of Environmental Management (2009), available at: <http://www.sciencedirect.com/science/article/pii/S0301479709001893>.

**Table 1: VOC emissions difference between Stage II VRS in place and removed**

<b>Year</b>	<b>VOC emissions (tons per day)</b>
2011	N/A
2014	-0.21
2017	-0.15
2020	-0.10

Table 1 shows that the removal of Stage II vapor recovery systems in the Northern Kentucky Area starting in 2014 would have resulted and will result in a VOC emission decrease. If instead Stage II requirements are kept in place, VOC emissions will decrease by less, and it will be less beneficial to air quality in Northern Kentucky to keep Stage II systems in operation.<sup>11</sup>

The affected sources covered by Kentucky’s Stage II vapor recovery requirements are sources of VOC. Other criteria pollutants (carbon monoxide, sulfur dioxide, nitrogen dioxide, particulate matter, and lead) are not emitted by gasoline dispensing facilities and will not be affected by the removal of Stage II controls.

The proposed revisions to 401 KAR 59:174 include that gasoline dispensing facilities located in Boone, Campbell and Kenton Counties shall decommission and remove the systems no later than December 31, 2018. Kentucky noted in its submission that the decommissioning procedures in the revised version of 401 KAR 59:174 follow Petroleum Equipment Institute

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<sup>11</sup> The emissions-reduction disbenefit associated with continued implementation of Stage II requirements is due to the incompatibility of some Stage II and ORVR systems. Compatibility problems can result in an increase in emissions from the underground storage tank (UST) vent pipe and other system fugitive emissions related to the refueling of ORVR vehicles with some types of vacuum assist-type Stage II systems. This occurs during refueling an ORVR vehicle when the vacuum assist system draws fresh air into the UST rather than an air vapor mixture from the vehicle fuel tank. Vapor flow from the vehicle fuel tank is blocked by the liquid seal in the fill pipe which forms at a level deeper in the fill pipe than can be reached by the end of the nozzle spout. The fresh air drawn into the UST enhances gasoline evaporation in the UST which increases pressure in the UST. Unless it is lost as a fugitive emission, any tank pressure in excess of the rating of the pressure/vacuum valve is vented to the atmosphere over the course of a day. *See* EPA, Guidance on Removing Stage II Gasoline Vapor Control Programs from State Implementation Plans and Assessing Comparable Measures, EPA-457/B-12-001 (Aug. 7, 2012), available at: <https://www.epa.gov/ozone-pollution/ozone-stage-two-vapor-recovery-rule-and-guidance>. Thus, as ORVR technology is phased in, the amount of emission control that is gained through Stage II systems decreases.

(PEI) guidance, “Recommended Practices for Installation and Testing of Vapor Recovery Systems at Vehicle Refueling Sites,” PEI/RP300-09.

EPA is proposing to determine that Kentucky’s technical analysis is consistent with EPA’s guidance on removing Stage II requirements from a SIP, including as it relates to the decommissioning and phasing out of the Stage II requirements for the Northern Kentucky Area. EPA is also making the preliminary determination that Kentucky’s SIP revision is consistent with the CAA and with EPA’s regulations related to removal of Stage II requirements from the SIP and that these changes will not interfere with any applicable requirement concerning attainment or any other applicable requirement of the CAA, and therefore satisfy section 110(l).

#### **IV. Incorporation by Reference**

In this rule, EPA is proposing to include in a final EPA rule regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, EPA is proposing to incorporate by reference Kentucky Regulation 401 KAR 59:174 – *Stage II controls at gasoline dispensing facilities*, effective March 4, 2016. EPA has made, and will continue to make, these materials generally available through [www.regulations.gov](http://www.regulations.gov) and/or at the EPA Region 4 office (please contact the person identified in the “For Further Information Contact” section of this preamble for more information).

#### **V. Proposed Action**

EPA is proposing to approve the Commonwealth of Kentucky’s May 3, 2016, SIP revision that changes Kentucky’s Stage II rule, 401 KAR 59:174, to allow for the removal of the Stage II requirement and the orderly decommissioning of Stage II equipment. EPA is proposing this approval because the Agency has made the preliminary determination that the

Commonwealth of Kentucky's May 3, 2016, SIP revision related to the Commonwealth's Stage II rule is consistent with the CAA and with EPA's regulations and guidance.

## **VI. Statutory and Executive Order Reviews**

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable federal regulations. *See* 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this proposed action merely proposes to approve state law as meeting federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this proposed action:

- is not a "significant regulatory action" subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);

- is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), nor will it impose substantial direct costs on tribal governments or preempt tribal law.

**List of Subjects in 40 CFR Part 52**

Environmental protection, Air pollution control, Incorporation by reference, Nitrogen dioxide, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

Authority: 42 U.S.C. 7401 *et seq.*

Dated: August 8, 2016.

Heather McTeer Toney

Regional Administrator,

Region 4

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