6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 1090

[EPA-HQ-OAR-2022-0513; FRL-9845-02-OAR]

RIN 2060-AV73

Request From States for Removal of Gasoline Volatility Waiver

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: Pursuant to provisions specified by the Clean Air Act (CAA), the Governors of Illinois, Iowa, Minnesota, Missouri, Nebraska, Ohio, South Dakota, and Wisconsin submitted petitions requesting that EPA remove the 1-pound per square inch (psi) Reid vapor pressure (RVP) waiver for summer gasoline-ethanol blended fuels containing 10 percent ethanol (E10). EPA is acting on those petitions by removing the 1-psi waiver in those states effective April 28, 2025. This action also finalizes regulatory amendments to implement the removal of the 1-psi waiver for E10 in those states, as well as a regulatory process by which a state may request to reinstate the 1-psi waiver. Finally, consistent with a decision issued by the United States Court of Appeals for the D.C. Circuit on July 2, 2021, this action removes regulations that extended the 1-psi waiver to gasoline-ethanol blends between 10 and 15 percent ethanol (E15).

DATES: This rule is effective on **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: EPA has established a docket for this action under Docket ID No. EPA-HQ-OAR-2022-0513. All documents in the docket are listed on the *https://www.regulations.gov* website. Although listed in the index, some information is not publicly available, e.g., confidential business information (CBI) or other information whose disclosure is restricted by statute. Certain other material is not available on the internet and will be publicly available only in hard copy form. Publicly available docket materials are available electronically through *https://www.regulations.gov*.

FOR FURTHER INFORMATION CONTACT: For questions regarding this action, contact Lauren Michaels, Office of Transportation and Air Quality, Compliance Division, Environmental Protection Agency, 2000 Traverwood Drive, Ann Arbor, MI 48105; telephone number: (734) 214-4640; email address: *michaels.lauren@epa.gov*.

SUPPLEMENTARY INFORMATION:

Does this action apply to me?

Entities potentially affected by this final rule are those involved with the production, distribution, and sale of transportation fuels, including gasoline and diesel fuel. Potentially affected categories include:

Category	NAICS[1] Code	Examples of Potentially Affected Entities
Industry	211130	Natural gas liquids extraction and fractionation
Industry	221210	Natural gas production and distribution
Industry	324110	Petroleum refineries (including importers)
Industry	325110	Butane and pentane manufacturers
Industry	325193	Ethyl alcohol manufacturing
Industry	325199	Manufacturers of gasoline additives
Industry	424710	Petroleum bulk stations and terminals
Industry	424720	Petroleum and petroleum products wholesalers
Industry	447110, 447190	Fuel retailers
Industry	454310	Other fuel dealers
Industry	486910	Natural gas liquids pipelines, refined petroleum products pipelines
Industry	493190	Other warehousing and storage – bulk petroleum storage

[1] North American Industry Classification System (NAICS).

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be affected by this action. This table lists the types of entities that EPA is now aware could potentially be affected by this action. Other types of entities not listed in the table could also be affected. To determine whether your entity would be affected by this action, you should carefully examine the applicability criteria in 40 CFR part 1090. If you have any questions regarding the applicability of this action to a particular entity, consult the person listed in the **FOR FURTHER INFORMATION CONTACT** section.

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I. Executive Summary

In this action, EPA is responding to petitions from eight state governors to remove the 1-psi (pound per square inch) waiver for gasoline-ethanol blends containing 10 percent ethanol (E10). The governors made their requests pursuant to Clean Air Act (CAA) section 211(h)(5), which provides that EPA shall remove the 1-psi waiver by regulation upon a demonstration by a governor that the 1-psi waiver increases emissions in their state.

After review of the modeling results presented by the governors in their petitions, on March 6, 2023, EPA proposed to remove the 1-psi waiver with an effective date of April 28, 2024—and sought comment on delaying the effective date to April 28, 2025—in the following eight states: Illinois, Iowa, Nebraska, Minnesota, Missouri, Ohio, South Dakota, and Wisconsin.[1] On March 21, 2023, EPA held a public hearing on the proposal, at which various perspectives on the proposed action were presented, and subsequently many comments were submitted to EPA on the proposed action. After the close of the public comment period, EPA also received numerous petitions to delay the proposed effective date of the removal of the 1-psi waiver.[2] Following review of public comments on the proposal and the extension petitions received, in this action EPA is removing the 1-psi waiver and instead applying the 9.0 psi RVP (Reid Vapor

[1] 88 FR 13758.
[2] We refer to these petitions as "extension petitions" throughout this preamble.

Pressure) standard under CAA section 211(h)(1) effective April 28, 2025, in the following eight states: Illinois, Iowa, Nebraska, Minnesota, Missouri, Ohio, South Dakota, and Wisconsin.

Throughout this document we discuss key comments provided by stakeholders on the proposal and provide our response. Additional detail is provided in the Response to Comments (RTC) document and Technical Support Document (TSD)[3] for this action.

II. Volatility Control Background and History

EPA first took regulatory action to control the volatility of gasoline in 1987.[4] Because higher gasoline volatility leads to higher evaporative emissions, EPA regulates the RVP—a measure of fuel volatility—of gasoline during summer months in order to reduce volatile organic compound (VOC) emissions that contribute to the formation of smog (ground-level ozone).[5] The volatility of fuel depends on the refinery's decisions in formulating its gasoline. Subsequent to EPA's actions, Congress enacted the CAA Amendments of 1990, which included statutory volatility provisions for summer gasoline. These provisions largely codified EPA's regulatory approach, including establishing a 9.0 psi RVP standard for gasoline volatility in the summer.[6] Because blending ethanol into gasoline increases the volatility of the resulting fuel blend due to

[3] "Request From States for Removal of Gasoline Volatility Waiver: Technical Support Document and Cost Analysis," available in the docket for this action.
[4] See 52 FR 31274 (August 19, 1987); Subsequent regulatory actions occurred in 1989 and 1990. 54 FR 11868 (March 22, 1989); 55 FR 23658 (June 11, 1990).
[5] Gasoline must have volatility in the proper range to prevent driveability, performance, and emissions problems. If the volatility is too low, the gasoline will not ignite properly; if the volatility is too high, the vehicle may experience vapor lock. Importantly for this action, excessively high volatility also leads to increased evaporative emissions from the vehicle. Vehicle evaporative emission control systems are designed and certified on gasoline with a volatility of 9.0 psi RVP. Higher volatility gasoline may overwhelm the vehicle's evaporative control system, leading to a condition described as "breakthrough" of the cannister and mostly uncontrolled evaporative emissions.
[6] CAA section 211(h)(1). CAA section 211(h)(1) requires EPA to establish volatility requirements—that is, a restriction on RVP—during the high ozone season. To implement these requirements, EPA defines "high ozone season" or "summer season" at 40 CFR 1090.80 as "the period from June 1 through September 15 for retailers and wholesale purchaser consumers, and May 1 through September 15 for all other persons, or an RVP control period specified in a state implementation plan if it is longer." In general practice by industry and for purposes of this preamble, the high ozone season is referred to as the "summer" or "summer season" and gasoline produced to be used during the high ozone season is called "summer gasoline." EPA's regulations do not impose any volatility requirements on any type of blend of gasoline outside of the summer season.

chemical differences between ethanol and gasoline, Congress also codified a 1-psi waiver for E10, allowing such blends to have a 1.0-psi higher RVP than otherwise allowed for gasoline, consistent with EPA's prior regulatory approach.[7] This allowance only applies to gasoline-ethanol blends containing between 9 and 10 percent ethanol, and does not extend to gasoline-ethanol blends containing greater than 10 percent ethanol.[8] The 1-psi waiver also does not apply to reformulated gasoline (RFG).

At the time the provision was enacted, the 1-psi waiver applied to a relatively small portion of the gasoline sold in the United States. Today, however, almost all gasoline sold is E10, and thus the 1-psi waiver increases the volatility of most gasoline.

On April 28, 2022, the Governors of Illinois, Iowa, Kansas, Minnesota, Nebraska, North Dakota, South Dakota, and Wisconsin submitted a petition for the removal of the 1-psi waiver for E10 in their states beginning in the summer of 2023, pursuant to CAA section 211(h)(5).[9] On June 10, 2022, the Governor of Ohio also submitted a petition requesting the removal of the 1-psi waiver in that state.[10] On July 21, 2022, the Governor of Kansas notified EPA that they were rescinding their petition for removal of the 1-psi waiver in Kansas.[11] On October 13, 2022, the Governor of North Dakota notified EPA that they were rescinding their petition for removal of the 1-psi waiver in North Dakota.[12] On December 21, 2022, the Governor of Missouri submitted a petition requesting the removal of the 1-psi waiver in that state.[13] This action refers to the eight remaining states of Illinois, Iowa, Minnesota, Missouri, Nebraska, Ohio, South Dakota, and

[7] CAA section 211(h)(4).
[8] The statutory 1-psi waiver is codified at 40 CFR 1090.215(a).
[9] "April 28, 2022 Letter from Eight States," available in the docket for this action.
[10] "June 10, 2022 Letter from Ohio," available in the docket for this action.
[11] "July 21, 2022 Letter from Kansas," available in the docket for this action.
[12] "October 12, 2022 Letter from North Dakota," available in the docket for this action.
[13] "December 21, 2022 Letter from Missouri," available in the docket for this action.

Wisconsin as the "petitioning states." The petitions included modeling results indicating reductions in VOCs, nitrogen oxides (NOx), and carbon monoxide (CO).

III. Statutory Authority and Provisions to Remove the 1-psi Waiver

This rulemaking modifies EPA's fuel quality regulations in 40 CFR part 1090 to remove the 1-psi waiver that is applicable to fuel blends containing gasoline and 10 percent ethanol for the petitioning states. While we proposed to make such a change effective for the summer of 2024, after further careful consideration of comments and consultation with various agencies we are instead finalizing removal of the 1-psi waiver in these states beginning April 28, 2025.

CAA section 211(h)(1) requires EPA to "promulgate regulations making it unlawful … during the high ozone season … to sell … or introduce into commerce gasoline with a Reid Vapor Pressure in excess of 9.0 pounds per square inch (psi)." For nonattainment areas, CAA section 211(h)(1) also allows EPA to set a lower (i.e., more stringent) RVP standard, as well as to define the term "high ozone season." CAA section 211(h)(4) provides in relevant part that "[f]or fuel blends containing gasoline and 10 percent denatured anhydrous ethanol, the Reid vapor pressure limitation under this subsection shall be one pound per square inch (psi) greater than the applicable Reid vapor pressure limitations established under [section 211(h)(1)]." CAA section 211(h)(5), which was enacted as part of the Energy Policy Act of 2005 (EPAct), provides in relevant part that "[u]pon notification, accompanied by supporting documentation, from the Governor of a State that the [waiver in section 211(h)(4)], will increase emissions that contribute to air pollution in any area of the state, the Administrator shall, by regulation, apply, [the volatility limit under section 211(h)(1)]." Thus, regulatory action under CAA section 211(h)(5) would remove the 1-psi waiver for E10 and generally apply the RVP standard under CAA section 211(h)(1).

Prior to the April 28, 2022 petition, no governor had ever submitted a petition under CAA section 211(h)(5) to EPA, and thus we are interpreting this statutory provision for the first time in this action. In this context, we find that the use of the prescriptive statutory language "shall" provides limited, if any, discretion for EPA to consider other issues such as economic impacts of removing the 1-psi waiver. Such impacts may instead be taken into consideration by a governor when deciding whether to submit a petition to EPA.[14] Here, EPA's role is only to evaluate the supporting documentation provided by the governors.[15] If EPA concludes that the supporting documentation, as required by the statute, demonstrates emissions increases with the 1-psi waiver in place, then CAA section 211(h)(5) requires EPA to promulgate regulations to remove the 1-psi waiver as requested.

In response to the proposal, we received comments suggesting that the governors cannot meet the statutory criteria in CAA section 211(h)(5) because E10 is now the dominant fuel in the marketplace. Commenters suggested that the statutory language that the 1-psi waiver "will increase emissions" cannot be satisfied, because any emissions impacts from the 1-psi waiver have already occurred. We disagree with the comment. CAA section 211(h)(5)(A)—which was promulgated in 2005—requires EPA to remove the 1-psi waiver if it "will increase emissions that contribute to air pollution . . . during the high ozone season." The term "will" connotes consideration of emissions that are expected in the future and as relevant here during the "high

[14] Considerations like this were cited by the Governors of Kansas and North Dakota in rescinding their petitions.
[15] Legislative history suggests that the supporting documentation need not be as stringent as that called for under CAA section 211(c)(4)(C). See Senate Report 106-426 at 12 (September 28, 2000). Under CAA section 211(c)(4)(C) a state must make a "necessity" showing prior to EPA approval of a fuel measure into the state implementation plan. The "Guidance on Use of Opt-in to RFG and Low RVP Requirements in Ozone SIPs," August 1997, gives further guidance on factors EPA is likely to consider in making a finding of "necessity" under CAA section 211(c)(4)(C).

ozone season."[16] Further, as instructed in CAA section 211(h)(1), we have defined "high ozone season" as the period from "June 1 through September 15 for retailers and [whole purchaser consumers], and May 1 through September 15 for all other persons."[17] We therefore read the phrase as calling for the consideration of emissions that are expected in the petitioning states during future high ozone seasons and conclude that because the governors have demonstrated that the 1-psi waiver will increase VOC emissions during the high ozone season, the statutory criteria for removal of the 1-psi waiver has been met. We further address this comment in the RTC document.

Additionally, as we posited in the proposal, we do not interpret this provision as requiring a demonstration of a reduction in emissions of all pollutants that contribute to air pollution in the petitioning states, as advocated for by some commenters. Such a demonstration could not have been contemplated by Congress, as lowering the volatility of fuel was specifically the intent set out in CAA section 211(h)(1), which calls for EPA to set RVP standards to address "evaporative emissions." As such, reducing the volatility of gasoline would be expected to have differing impacts on emissions of different pollutants.[18] Further, Congress was silent on the air pollutants that EPA should consider in responding to petitions for removal of the 1-psi waiver. Specifically, under CAA section 211(h)(5), EPA is to remove the 1-psi waiver if it "increase[s] emissions that contribute to air pollution." This contrasts with, for example, CAA section 110(a)(2)(D)(i), which prohibits sources in a state from emitting "any air pollutant which will contribute

[16] This reading is like, for example, our reading of "will" in CAA section 110(a)(2)(D)(i). (The term "will" in CAA section 110(a)(2)(D) means that State implementation plans are required to eliminate the appropriate amounts of emissions that presently, or that are expected in the future, contribute significantly to nonattainment downwind. 63 FR 57375 (October 27, 1998)).
[17] 40 CFR 1090.80.
[18] For an example of analysis and modeling of emission impacts available at the time CAA section 211(h)(5) was enacted, see "User's Guide to MOBILE6.1 and MOBILE6.2: Mobile Source Emission Factor Model," EPA-420-R-02-028, October 2002.

significantly to nonattainment" in another state. Air pollution could result from a myriad of sources, including listed hazardous air pollutants, criteria pollutants, and greenhouse gases, and thus would appear to be a rather expansive term. Reducing RVP, however, is a volatility control measure as explained earlier in section II. In short, CAA section 211(h)(1) requires EPA to set RVP standards to address "evaporative emissions." Additionally, EPA has consistently explained that adding 10 percent ethanol to gasoline causes roughly a 1.0 psi RVP increase in the blend's volatility, which is the premise for the 1-psi waiver contained in CAA section 211(h)(4) and the subject of this action.[19] EPA is of the view, therefore, that it is reasonable to consider "air pollution" emanating from emissions of such gasoline and thus, that it may be most appropriate to evaluate the impact of the 1-psi waiver for E10 on VOC emissions in addressing petitions to remove the 1-psi waiver under CAA section 211(h)(5). We thus find that demonstration of increased VOC emissions with the 1-psi waiver in place is sufficient to grant the petitions for removal of the waiver. Even were EPA to look at the modeled emissions impacts on several other pollutants (e.g., CO and NOx), those reductions, in addition to the reduction in VOCs, also satisfy the requirements of the statute and justify granting the petitions.

Further, EPA views the Motor Vehicle Emissions Simulator (MOVES) as an appropriate tool for use in modeling the emission impacts required by CAA section 211(h)(5). The MOVES runs performed by the petitioning states compared emissions from motor vehicles and nonroad vehicles and equipment with and without the 1-psi waiver for E10 in each state in the summer. In

[19] See, e.g., 52 FR 31274 at 31292 (August 19, 1987).

the past, similar analyses have been used to support prior EPA actions for federal and state fuel programs.[20]

IV. Petitions for Removal of the 1-psi Waiver and Supporting Documentation

A. Petition Background and History

During the fall of 2021, EPA received several letters from states requesting that EPA engage in a dialogue about mechanisms to provide parity between E10 and E15 with respect to gasoline volatility standards.[21] Specifically, the letters referred to CAA section 211(h)(5) and inquired about as to what type of "supporting documentation" should accompany such a request. EPA organized and participated in a series of meetings with representatives from various Midwestern states that had expressed interest in removing the 1-psi waiver. In those meetings, EPA indicated that MOVES modeling would be an appropriate tool to use for this purpose given its ability to model the emissions impacts of changes in gasoline volatility and given our past reliance on MOVES modeling runs in similar contexts.

On April 28, 2022, the Governors of Illinois, Iowa, Kansas, Minnesota, Nebraska, North Dakota, South Dakota, and Wisconsin submitted a joint petition to EPA for the removal of the 1-psi waiver for E10 in their respective states. The petition specifically requested the removal of the 1-psi waiver for E10 as a permanent solution for providing year-round E15 in those states beginning in the summer of 2023. As accompanying documentation, the petition provided quantified reductions in VOC, NOx, and CO emissions as a result of removing the 1-psi waiver in each state based on MOVES modeling. Subsequent to this submittal, the Governors of Kansas

[20] For example, on June 7, 2017, EPA published a final rule to relax the federal 7.8 psi RVP standard in the Nashville, TN area (82 FR 26354) and on March 12, 2021, EPA published two final rules that removed approved regulations from the Kansas and Missouri SIPs that required the sale of 7.0 psi RVP gasoline in the Kansas City, KS-MO area (86 FR 14000 and 86 FR 14007).

[21] See "October 13, 2021 Letter from Kansas," and "November 4, 2021 Letter from Seven States," available in the docket for this action.

and North Dakota rescinded their petitions to remove the 1-psi waiver for E10 in those states.[22] Therefore, we are not taking any action on the 1-psi waiver for E10 in Kansas and North Dakota in this action.

On June 10, 2022, the Governor of Ohio also submitted a petition requesting the removal of the 1-psi waiver for E10 beginning in the summer of 2023. The petition provided quantified reductions in VOC, NOx, and CO emissions in Ohio based on MOVES modeling.

On December 21, 2022, the Governor of Missouri also submitted a petition requesting the removal of the 1-psi waiver for E10 beginning in the summer of 2023. The petition provided quantified reductions in VOC, NOx, and CO emissions in Missouri based on MOVES modeling.

Subsequent to submission of the petitions, all petitioning states except Missouri provided EPA with additional emissions modeling documentation, including for particulate matter (PM) and benzene.[23] The original data submitted showed a decrease in VOC, NOx, and CO emissions with removal of the 1-psi waiver for E10, while the additional data demonstrated an increase in PM for both nonroad and on-road emissions with removal of the 1-psi waiver. The benzene results demonstrated an increase in benzene on-road emissions and a decrease in benzene nonroad emissions. While the additional data on modeled emissions impacts on other pollutants

[22] See "July 21, 2022 Letter from Kansas," and "October 12, 2022 Letter from North Dakota," available in the docket for this action.

[23] See "Emissions Impacts of the Elimination of the 1-psi RVP Waiver for E10," May 9, 2022; and "Emissions Impacts of the Elimination of the 1-psi RVP Waiver for E10 in Ohio," June 10, 2022, available in the docket for this action. While we did not receive additional information from Missouri about other pollutants as we received from the other petitioning states, we anticipate directionally similar trends as shown in the information from the other states. RVP reduction is a volatility control measure and EPA has consistently explained that adding 10 percent ethanol to gasoline causes roughly a 1.0 psi RVP increase in the blend's volatility. As EPA explained in its rulemakings to regulate volatility of fuel that preceded enactment of CAA section 211(h), evaporative hydrocarbon emissions are VOCs and contribute to the formation of ozone in the atmosphere, particularly in the summer months due to direct sunlight and high ambient temperatures. EPA regulated the volatility of gasoline to control the emissions of VOCs. Congress, in enacting CAA section 211(h), which largely codified EPA's volatility regulations, thus also logically intended to address VOCs by requiring volatility controls. It is therefore reasonable and most appropriate to evaluate the impact of the 1-psi volatility waiver for E10 on VOC emissions in addressing petitions to remove the 1-psi waiver under CAA section 211(h)(5). See also 52 FR 31274 (August 19, 1987); 54 FR 11868 (March 22, 1989); and 55 FR 23658 (June 11, 1990).

may not be necessary to make the statutory demonstration, it does provide additional information about the potential emissions impacts of this action.

All the petitioning states requested removal of the 1-psi waiver in all areas within their state where the limitation under CAA section 211(h)(4) applies. Therefore, the requests did not include areas within the states where RFG is required because the 1-psi waiver does not apply to RFG. The petitioning states also requested that the removal of the 1-psi waiver should take effect for the 2023 high ozone season, without further discussion. The states noted that rescinding the 1-psi waiver for E10 would support year-round sales of E15.

B. Evaluation of Petitions for Removal of the 1-psi Waiver

The petitioning states provided technical documentation with their petitions to demonstrate the reduction of emissions with the removal of the 1-psi waiver as required by CAA section 211(h)(5) in the form of MOVES modeling results.[24] The results for each state were based on a single day in July 2023, which is during the high ozone season. Comparative results demonstrate the change in emissions from the current 10.0 psi RVP standard to the alternative 9.0 psi RVP standard as contemplated by the statute.[25] A summary of the emissions impacts of removing the 1-psi waiver for E10 for each state is provided in Table V-1.[26]

[24] EPA developed MOVES to estimate air pollution emissions from on-road and nonroad mobile sources.
[25] Further information about the MOVES runs, including inputs and nonroad data, is available in the docket for this action.
[26] EPA's evaluation of the MOVES model input data and assumptions, and results, can be found in the TSD.

Table V-1: Change of Mobile Source Emissions in 2023 MOVES3.01 Sources From 10.0 psi to 9.0 psi RVP

	Pollutant/Precursor								
State	**VOCs**	**CO**	**NOx**	**PM2.5**	**PM10**	**Benzene**	**Toluene**	**Ethylbenzene**	**Xylene**
Illinois	-0.9%	-0.19%	-0.05%	0.09%	0.10%	-0.2%	-1.5%	-0.9%	-0.9%
Iowa	-1.8%	-0.44%	-0.09%	0.14%	0.15%	-0.1%	-3.3%	-2.1%	-2.1%
Minnesota	-2.7%	-0.52%	-0.09%	0.15%	0.16%	-1.3%	-4.2%	-3.0%	-3.1%
Missouri	-0.66%	-0.41%	-0.14%	N/A	N/A	N/A	N/A	N/A	N/A
Nebraska	-2.6%	-0.48%	-0.09%	0.17%	0.18%	-0.6%	-4.4%	-2.9%	-3.0%
Ohio	-1.6%	-0.45%	-0.13%	0.30%	0.32%	0.08%	-2.8%	-2.0%	-2.0%
South Dakota	-2.9%	-0.53%	-0.06%	0.08%	0.08%	-1.1%	-4.8%	-3.4%	-3.3%
Wisconsin	-1.7%	-0.44%	-0.10%	0.21%	0.22%	-0.3%	-2.7%	-1.8%	-1.8%

As with the proposal, we have assessed the supporting documentation provided by the petitioning states and find that the MOVES modeling results submitted to EPA demonstrate a reduction in emissions of multiple pollutants (e.g., VOCs, CO, and NOx) that contribute to air pollution within each state upon removal of the 1-psi waiver for E10, as required under CAA section 211(h)(5).[27] We note that the same documentation also shows an increase in emissions of other pollutants such as PM. As discussed in section III., we do not interpret the statute as requiring reductions in all pollutants. Documentation of air pollutant emissions reductions—particularly VOCs—is sufficient. While some commenters suggested that EPA should not focus on particular pollutants and ignore others, we instead conclude that demonstration of a decrease in VOC emissions is sufficient to satisfy the statutory requirements and justify granting the petitions.

Therefore, based on the governors' petitions and the supporting documentation provided, we are removing the 1-psi waiver for E10 sold in the petitioning states and, as required by CAA

[27] Evaporative emissions from gasoline—specifically VOCs—are precursors to the formation of tropospheric ozone and contribute to the nation's ground-level ozone problem. NOx and CO can also be ozone precursors. Exposure to ground level ozone can reduce lung function (thereby aggravating asthma or other respiratory conditions), increase susceptibility to respiratory infection, and may contribute to premature death in people with heart and lung disease.

section 211(h)(5), promulgating the 9.0 psi RVP standard contained in CAA section 211(h)(1) for the petitioning states. For the reasons discussed in section VIII., such a change will be effective on April 28, 2025, given our determination of insufficient supply in 2023 and the renewal of that extension for one year based on a determination of insufficient supply in 2024.

V. Fuel System Impacts

In this section, we discuss the potential impacts of removing the 1-psi waiver in the petitioning states on the fuel production and distribution system, including impacts that would potentially affect gasoline refineries, pipelines, fuel terminals, retail outlets, and, ultimately, consumers.[28] Significant portions of this discussion were provided in the proposal, and have now been updated based on additional information provided from commenters and discussions with industry. We received comment from ethanol interests suggesting that gasoline supply concerns were overstated and manageable, even for 2023. We also received comment and supporting analysis from refining and pipeline stakeholders expressing concern over the gasoline supply and resulting cost and price impacts in support of their requests to further delay implementation of the 1-psi waiver removal, as well as additional petitions requesting delay to 2025 or later. The discussion in this section is not specific to a particular year or determination of sufficiency of supply. Section VI. provides our determination of insufficient supply for 2024.

In short, this action will require a lower-volatility conventional gasoline before oxygenate blending (CBOB)[29] to be produced by refineries and distributed by pipelines and terminals,

[28] Further detail on this topic is available in the TSD.

[29] Gasoline before oxygenate blending (BOB) means gasoline for which a gasoline manufacturer has accounted for oxygenate (e.g., denatured fuel ethanol) added downstream. See 40 CFR 1090.90. BOB is subject to all requirements and standards that apply to gasoline under EPA's fuel quality regulations, and refineries typically formulate their BOBs with the intent that it will be blended downstream with ten percent ethanol content to maintain compliance with EPA and industry specifications. Conventional BOB (CBOB) is BOB produced or imported for areas outside of RFG areas otherwise known as conventional areas.

resulting in a lower-volatility blended fuel ultimately sold at retail outlets in the petitioning states.[30]

We first note that volatility controls for gasoline differ across various states and regions within states. Summer gasoline for use in the continental U.S. must comply with either the federal RVP standard of 9.0 psi or the more stringent RVP standard of 7.8 psi, unless the summer gasoline is either for use in an RFG covered area, is subject to California's gasoline regulations, or EPA has waived preemption and approved a state request to adopt a more stringent RVP standard into a State Implementation Plan (SIP). Most of the U.S. utilizes "conventional gasoline," for which the federal RVP standard is 9.0 psi, with a 1.0 psi waiver for gasoline blended with 10 percent ethanol. There are also areas that utilize conventional gasoline for which the federal RVP standard is 7.8 psi, and in such regions, the 1.0 psi waiver also applies for gasoline blended with 10 percent ethanol.[31] Several states have "boutique" low-RVP fuel programs or SIP programs[32] that allow the 1-psi waiver for gasoline blended with 10 percent ethanol.[33] Some boutique fuel programs, or SIP-approved fuel programs, however, disallow the 1-psi waiver for gasoline blended with 10 percent ethanol and in those areas, such gasoline must meet the applicable state RVP standard of either 9.0 psi, 7.8 psi, or 7.0 psi.[34] Additionally, approximately 30 percent of the gasoline sold in the U.S. is RFG, which must meet a 7.4 psi RVP standard.[35] The 1-psi waiver does not apply to RFG, and thus E10 that is sold in RFG areas

[30] Because the gasoline distribution system has been configured to utilize 10 percent ethanol and optimized to utilize the octane value of ethanol, we expect ethanol will be blended at least at the same levels it is blended today. Thus, we anticipate that E10 will continue to be the dominant form of gasoline supplied to the region, but will now be blended into a lower-volatility blendstock produced by refineries.
[31] 40 CFR 1090.215(a)(2) and (b)(1).
[32] Of particular note for this action, seven counties in southeast Michigan that border Ohio have an RVP standard of 7.0 psi in the summer, with a 1-psi waiver for E10.
[33] See *https://www.epa.gov/gasoline-standards/state-fuels*.
[34] 40 CFR 1090.215(b)(3). See also *https://www.epa.gov/gasoline-standards/state-fuels*.
[35] 40 CFR 1090.215(a)(3). The Chicago and St. Louis areas are such RFG areas.

must meet the 7.4 psi RVP standard. This action removes the 1-psi waiver only for conventional gasoline that is sold in the petitioning states and does not apply to gasoline sold in RFG or SIP program areas. However, due to the interconnected nature of gasoline distribution, and the changes required for a new fuel type, impacts on gasoline quality and supply are expected to extend beyond the petitioning states, as further described below.

Before discussing the various steps required to produce and distribute the new lower-volatility gasoline,[36] it is useful to describe the gasoline fuel supply system that is interdependent on its different parts to bring a fuel to market. The first step is fuel production, in which refineries refine crude oil using various processing units and then blend the various blendstocks together in finished gasoline tanks. The next step is fuel distribution, in which the gasoline in these tanks is transported through the fuel distribution system to the final market, mostly by pipelines.[37] These pipelines transport a wide variety of fuels and other products (e.g., gasoline, diesel fuel, jet fuel, heating oil, petroleum blendstocks, etc.), including an array of different grades and types of gasoline (e.g., conventional gasoline, RFG, boutique fuels, and regular and premium grades of each). Each grade and type of gasoline must be segregated from other grades and types to preserve the physical properties of each product. When a pipeline reaches a juncture where it branches out to two different pipelines serving different gasoline markets, a set of short-term storage tanks ("breakout tanks") are necessary to offload the fuel from the upstream pipeline to enable scheduling the various fuels through the two downstream pipelines. Pipeline systems often have many branches from upstream to downstream pipelines to enable moving the

[36] We refer to this new lower-volatility gasoline as "low-RVP gasoline" throughout this preamble.
[37] If all gasoline in the country was required to shift to low-RVP gasoline, the impacts would be limited to just refineries. The rest of the fuel distribution system would merely distribute the replacement low-RVP gasoline instead. However, since this action only applies to the eight petitioning states, a new additional type of gasoline is required for the distribution system to also handle.

fuel to the downstream markets, and breakout tanks serve an important function in the fuel distribution system. For example, there are approximately 110 breakout tank locations within the petitioning states alone. Pipeline transportation of gasoline to market also involves downstream product terminals and bulk plants, which accumulate gasoline from pipelines and other bulk distribution systems and distribute the gasoline to retail outlets via tank trucks loaded at terminal racks. Each rack can load a premium grade and regular grade gasoline, but some racks can load additional grades and types of gasoline.

To minimize other impacts and enable production and distribution of low-RVP gasoline, refiners and fuel distributors will need time to make capital investments to optimize the fuel production and distribution system to replace the gasoline solely in the petitioning states with low-RVP gasoline. Without capital investments, which can take two years or more to complete, the limited availability of additional storage tanks for the new low-RVP gasoline grades—particularly at pipeline breakout tank locations, but also at refineries and downstream terminals—may result in low-RVP gasoline being sold within both the petitioning states and the immediately adjacent non-petitioning states. This would increase the volume of low-RVP gasoline needed to be produced and distributed to satisfy demand. Over time, we expect refiners and fuel distributors to invest in and optimize the fuel production and distribution system to more efficiently target low-RVP gasoline solely to the petitioning states.

A. Production

Refiners will need to make modifications to their refinery operations to supply low-RVP gasoline. There are 11 petroleum refineries located within the petitioning states; that number increases to 40 when refineries located in states that border the petitioning states are included. Further, additional refineries outside of the immediate region may also modify their operations to

provide low-RVP gasoline, as some of the gasoline supply for the petitioning states also historically comes from refineries located further west, east, and south, such as refineries in the Gulf Coast.[38] For example, gasoline sold in Iowa is often produced by refineries located in Texas and distributed via pipeline. Therefore, this action could result in changes in refinery operations both within and outside of the petitioning states and extend to refineries in the Gulf Coast. Prior to the implementation of this rule, most refineries producing gasoline for use in the petitioning states produce a CBOB with an RVP of 9.0 psi during the summer season, with the 1-psi waiver allowing the final gasoline-ethanol blend to meet an RVP standard of 10.0 psi when 10 percent ethanol is added to the CBOB downstream. With the removal of the 1-psi waiver and to enable the final gasoline-ethanol blend to comply with the resulting 9.0 psi RVP standard, refineries that choose to continue producing CBOB for use within the petitioning states will need to make changes to their operations to reduce the volatility of the CBOB distributed to these states to ~8.0 psi.[39] For most refineries operating within and near the petitioning states, removal of the 1-psi waiver will likely result in the refinery choosing to only produce low-RVP CBOB. Refineries operating outside the petitioning states will choose to either produce only low-RVP CBOB for distribution to the petitioning and adjacent states, continue to produce only the current ~9.0 psi RVP CBOB for distribution to areas outside the petitioning states, or both. The limited availability of existing blending/storage tanks at a refinery to handle both gasoline types may

[38] According to the Energy Information Administration (EIA), 64 million barrels of gasoline were shipped from Petroleum Administration for Defense District (PADD) 3 (Gulf Coast) into PADD 2 (Midwest), which corresponds to about 8 percent of the volume of gasoline consumed in PADD 2. EIA, "Petroleum & Other Liquids; Movements by Pipeline, Tanker, Barge and Rail between PAD Districts; PADD 3 to PADD 2," *https://www.eia.gov/dnav/pet/pet_move_ptb_dc_R20-R30_mbbl_m.htm*.

[39] We refer to this new lower-volatility CBOB as "low-RVP CBOB" throughout this preamble.

prevent the refinery from producing both blendstocks without further capital investment.[40] One commenter submitted a survey with data from refiners in and around petitioning states, which provided information regarding what refiners may have to do to meet the 9.0 psi RVP standard and is further discussed below.[41] Nevertheless, at this time, we cannot predict which of the refineries that currently produce fuel for use in the petitioning states will choose to produce low-RVP CBOB for use in the petitioning states and potentially the surrounding states. Unlike a nationwide change to the RVP of CBOB, the regional nature of this action means that not all refineries must adjust their refining processes to reduce the RVP of their CBOB. While it is highly likely that refineries that supply gasoline only to the petitioning states will adjust their refinery processes to reduce the RVP of their CBOB, these refineries could choose to avoid the necessary investments and provide 9.0 psi RVP CBOB to non-petitioning states instead if they are able to reach those markets.

Throughout the year, refineries must adjust the volatility of their gasoline—typically lowering the volatility of the gasoline in the summer and increasing the volatility in the winter by adjusting the quantity of light hydrocarbons in their gasoline. Refineries typically control gasoline volatility by adjusting the amount of butane in gasoline, but sometimes they need to also modify the amount of pentane or natural gas liquids (NGLs). Refineries providing fuel to the petitioning states will have to modify their summer gasoline production operations and potentially add capital equipment to accommodate the 9.0 psi RVP standard. A refinery's ability

[40] Certain areas within the petitioning states and other states already have more stringent RVP standards during the summer. Gasoline that refineries produce for these areas would be unaffected by this final rule. Refineries that produce 6.8 psi RVP CBOB for 7.8 psi RVP areas, or 6.4 psi RVP RBOB for RFG areas, could expand production of these gasoline types for use in the petitioning states rather than create a new gasoline type at 8.0 psi RVP. This may reduce distribution cost complexity, but in exchange increase refinery production cost and lower gasoline production volume.

[41] Comment submitted by the American Fuel and Petrochemical Manufacturers (AFPM), Docket Item No. EPA-HQ-OAR-2022-0513-0077.

to adapt to the 9.0 psi RVP standard and the time that it takes to do so depends on the refinery's structure, operations, and the mix of crude oil types that it processes.[42]

In addition to contributing to gasoline's volatility, butane also contributes to gasoline's octane and volume. Thus, when removing butane, refineries must also make other changes to replace the lost octane to keep the gasoline consistent and in compliance with EPA regulations and industry specifications. Refineries could produce more alkylate or reformate, which are two high octane gasoline blendstocks, to make up the lost octane. We estimate that the amount of butane that would have to be removed to produce a gasoline 1-psi lower in RVP amounts to about two volume percent of the volume of gasoline. However, comments from the refining industry described how at least some refineries would need to not only remove butane, but some less-volatile hydrocarbons as well (e.g., light straight run naphtha (LSR) or NGLs). Since LSR and NGLs are less volatile than butane, refineries would need to remove significantly more of those hydrocarbons to realize the same 1-psi reduction in RVP, perhaps up to 10 volume percent. Such a change would have a smaller reduction in octane, however. Removing butane and these other light hydrocarbons from the summer gasoline sold in the petitioning states would reduce the supply of gasoline in those states.

Regardless of how a refinery is modified to reduce the RVP of its gasoline, it will result in additional output of the removed butane or other light hydrocarbons. If excess onsite butane storage capacity is available, the refinery has the option of saving excess butane on-site for use in winter gasoline production, which would minimize the cost impact of producing low-RVP CBOB. However, if excess butane storage is not available, the refinery would then need to store it offsite (e.g., in caverns), sell it, or export it. This may require additional butane railcars and

[42] Further discussion of the changes we expect from refineries associated with removal of the 1-psi waiver is available in the TSD.

refinery upgrades for handling railcars to transport the butane. Refineries may also utilize some portion of the butane as a feedstock to their alkylation unit. In the near term, the large influx of excess butane may exceed the existing storage capacity, transport capacity, amount desired in the markets, or alkylation unit capacity. Without an outlet for the excess butane, this could then limit the refinery's ability to produce low-RVP CBOB, further reducing the supply of low-RVP gasoline. If a refinery is removing LSR or NGLs from its gasoline, these gasoline blendstocks could be sold to another refinery that could blend them into its gasoline, but the purchasing refinery would then need to remove butane to compensate for the RVP impact of the LSR or NGLs. This gasoline blendstock switching would help to offset the volume reductions associated with producing low-RVP CBOB.

Given the high demand for gasoline in the summer months, refineries often begin producing summer gasoline for storage well ahead of the upcoming high ozone season. This process can begin as early as December of the year prior to the applicable high ozone season, and thus storage of a differing volatility of fuel could impact the refinery's ability to utilize the fuel the next summer without further modification.

B. Distribution

As discussed above, removal of the 1-psi waiver will require refineries that distribute gasoline to the petitioning states to produce low-RVP CBOB. There are three primary groups within the distribution chain that will be impacted: refineries, pipelines (with their breakout terminals), and downstream product terminals.

1. Refinery Distribution

Most refineries have an onsite terminal with numerous product storage tanks wherein they accumulate and store the range of products that they produce prior to placing the products

into the distribution system. Once a refinery accumulates a sufficient volume of a gasoline type and confirms that it meets the applicable gasoline specifications, the refinery then schedules the shipment of that batch of gasoline to downstream markets. Shipment can occur via an onsite product terminal analogous to that discussed in section V.B.3. where trucks load product and deliver to retail outlets. However, most gasoline produced by refineries is loaded onto product pipelines for delivery to downstream product terminals. In some cases, refineries also distribute product by rail or barge. For those refineries that distribute most or all of their gasoline to the petitioning states, removal of the 1-psi waiver will have little impact on their distribution operations. They can switch over their existing product tanks to hold only low-RVP CBOB. Instead of transitioning from winter CBOB RVP levels (up to 15 psi) to a 9.0 psi RVP CBOB in the summer, they would instead transition to low-RVP CBOB. However, refineries that produce gasoline for both petitioning and non-petitioning states will likely need additional tanks, pipes, manifolds, and control systems to store the additional grades of gasoline. The time needed to plan, design, permit, and construct additional tankage is typically on the order of two or more years. Until this can be accomplished, a refinery that lacks the additional tankage will likely need to shift all its production to low-RVP CBOB. However, this can be avoided if unused systems already exist or other products are discontinued.[43] The market may go through a "sorting out" process, wherein some refineries shift their historic markets, with some changing to producing only low-RVP CBOB and others continuing to produce only 9.0 psi RVP CBOB. This could result in some low-RVP CBOB flowing in from outside the petitioning states (e.g., from Gulf Coast refineries). Due to tankage and logistical limitations, some refineries serving both markets may initially shift all their production to low-RVP CBOB. This would result in low-RVP CBOB

[43] Alternatively, some refineries may shift all premium grade fuel to low-RVP CBOB, while producing both 9.0 psi and low-RVP CBOBs for regular grade fuel.

being distributed to the surrounding states, which would ease gasoline supply availability concerns, but at the same time add to the overall reduction of gasoline supply due to butane and other light hydrocarbon removal. Terminals servicing low-RVP CBOB outside the petitioning states that have butane blending facilities could purchase some of the excess butane being removed by refineries and inject it into their CBOB to bring the fuel up to 9.0 psi RVP since the gasoline in their area would not require the low-RVP fuel.

For those refineries that have excess tankage or invest in new tankage to allow the production of both 9.0 psi and low-RVP CBOB, they would also need to adjust their operations and schedules for loading gasoline blendstock onto pipelines, barges, or rail to split their production into separate product streams. These logistical changes would initially take some period of time in order to occur smoothly and safely, but should streamline over time.

2. Pipelines and Pipeline Breakout Terminals

Most fuel in the U.S. flows from refineries to consumer markets via pipeline systems. As described in the TSD, there are several pipeline systems serving the petitioning states, the vast majority of which serve both petitioning and non-petitioning states. Consequently, the addition of the low-RVP CBOB in the petitioning states will require significant changes in the operations of the pipeline systems. What is currently one large conventional fuel market distributing primarily 9.0 psi RVP CBOB will also need to distribute the new low-RVP CBOB. There will thus be a period where the pipeline systems go through a planning and optimization process to assess what gasoline type must be supplied to the pipeline to comply with the new fuel requirement. If a pipeline primarily serving the petitioning states is only equipped with breakout tanks compatible with a single gasoline type, the pipeline company will likely mandate that refiners solely provide that gasoline type. Decisions from refineries on whether they will supply

low-RVP CBOB, and at what volumes, will be necessary to inform the planning and optimization process by pipeline systems. All of this can have impacts on gasoline supply not only to the petitioning states, but also to the surrounding states in the short term. Having the wrong fuel types in the wrong volume can result in an inability for the pipeline to move fuel in and out of tankage as needed, which, in turn, can result in significant supply disruption not only for the gasoline type in question, but also for all the fuels shipped on the pipeline. For the longer term, due to the market splitting into different types, some areas in the petitioning states may lose access to available markets of supply, which may then lead to more frequent shortfalls in supply during times of disruption (e.g., refinery fire, pipeline outage, hurricane, etc.).

Some pipeline companies operate a fungible distribution system. This allows them to collect a standard type of gasoline from refineries into their system, "transport" the barrels virtually, and draw out identical barrels at their destination. The barrels delivered are not actually the purchased barrels from the refinery, but rather the same product from a different refinery meeting the same product specifications. An additional type of gasoline would disrupt their ability to function as efficiently using the fungible system. This increases the complexity associated with ensuring products can be distributed to locations in the timeframe needed to ensure supply to the market.

The most significant impact on pipeline operations caused by the removal of the 1-psi waiver, however, will be on pipeline breakout tankage operations. Breakout tankage is required at junctions where pipelines connect with other pipelines that have differing schedules and flow rates. Thus, the pipelines typically need tankage to store every grade and type of product distributed on the pipeline, with the size and configuration of the tankage matched to the product and pipeline batch sizes. If new regular and premium grades of low-RVP CBOB need to be

shipped on the pipeline, then it may require the addition of new tankage at these breakout tank facilities. The planning, permitting, and construction of such additional tankage would require two or more years and is likely to be an issue at many breakout tankage facilities both inside and outside the petitioning states. Until this additional breakout tankage can be brought into service, an impacted pipeline serving the petitioning states may be restricted to solely distributing either 9.0 psi or low-RVP CBOB, limiting gasoline supply to either the petitioning states or the surrounding states, and in turn restricting what the refineries shipping on the pipeline are able to produce if the pipeline restrictions do not allow for the distribution of a particular type of gasoline. Some pipelines may opt to carry one fuel type and some the other, limiting the product offerings at the various downstream product terminals. As with the refineries, it may be that due to tankage and logistical limitations, pipelines currently serving both petitioning and non-petitioning states will have to initially shift all the gasoline they carry to low-RVP CBOB, which is fungible in both markets. This will result in low-RVP CBOB being supplied in the surrounding states and additional reduction in supply of gasoline due to the necessary removal of butane and other light hydrocarbons. Pipelines would have the option to blend in butane during gasoline transport to the states with the 1-psi waiver that are located at the end of the pipeline systems (e.g., North Dakota and Michigan). This would provide a market for some of the excess butane from refineries producing low-RVP CBOB and could reduce consumer costs in the border states by blending up to 9.0 psi RVP CBOB. It could also allow more low-RVP CBOB to be produced if there are constraints in the markets for butane. However, like refineries, many pipeline and terminal facilities do not currently have the existing infrastructure to utilize butane blending. Additional tankage and equipment may be needed to maximize the potential of this opportunity.

3. Product Terminals

The potential impact of the removal of the 1-psi waiver on product terminals varies depending on whether the terminals provide gasoline only to the petitioning states, or to non-petitioning states as well. Those terminals that only provide gasoline to the petitioning states will be little impacted, as they will simply take delivery of replacement grades of low-RVP CBOB beginning in the spring leading into the summer season. They will not have to contend with adding additional fuel grades and types and the tankage and logistics associated with them. This will most likely not be the case for terminals that serve areas both within and outside the petitioning states. If such terminals do not have sufficient onsite tankage capacity to handle the additional regular and premium grades of low-RVP CBOB, then they will need to either add the tankage or choose to serve one market or the other. The decision to serve a particular market or fuel type may also be dictated by a fuel marketer on the retail side. Both options could have gasoline supply, cost, and price impacts both within the petitioning states and in the surrounding areas the terminals serve. Approximately 75 such terminals are located close to the borders (i.e., 30 miles) between petitioning states and non-petitioning states.[44] These terminals are more likely to provide gasoline to both petitioning and non-petitioning states and will need to change their gasoline distribution patterns if they lack extra tankage to handle the additional low-RVP CBOB grades. Since terminals can serve gasoline markets up to 200 miles away, the number of terminals impacted could be significantly greater. If limitations in the fuel distribution system cause low-RVP CBOB to be sold in a significant portion of the surrounding states to improve fungibility of gasoline near the petitioning states, the potential impact on terminals will be reduced.

[44] EIA, U.S. Energy Atlas - Oil and Natural Gas Maps, *https://www.eia.gov/maps*.

Regardless of whether a terminal serves only the petitioning states, or also non-petitioning states, all terminals will be impacted to some degree by a somewhat more challenging transition in the spring from winter to summer fuel due to the removal of the 1-psi waiver, particularly in the first year. While this transition occurs every year as the terminals blend down the volatility of the CBOB they have in storage from the higher RVP of winter CBOB to the lower RVP of summer CBOB, the change of having to blend down an additional 1.0 psi to accommodate low-RVP CBOB instead of 9.0 psi RVP CBOB will require some additional time and incur additional cost. In order to achieve the volatility of low-RVP CBOB, pipelines and terminals will likely need to blend down their winter CBOB with a summer CBOB that has an RVP as low as 6.0 psi during this transition period. Additionally, terminals will likely take steps to ensure their tanks are drained as low as possible prior to receiving a low-RVP CBOB to ensure the finished gasoline will comply with the 9.0 psi RVP standard, which could result in additional delays before the low-RVP CBOB begins moving to markets. This will likely occur more frequently at terminals located within and near the border of the petitioning states.

4. Tank Trucks

Moving gasoline to market also involves tank trucks that deliver the gasoline to retail outlets. For terminals located within the petitioning states, their operations should be little impacted by the removal of the 1-psi waiver; they will simply pick up a different type of gasoline from the product terminal than they did before and can transport it to market, even outside the petitioning states if the terminal normally covers the area. However, depending on the changes in product offering at the terminals, there may still be considerable stress on their operations. If some refineries, pipelines, or terminals limit their product offering to either 9.0 psi or low-RVP CBOB, especially in the near term, then the tank trucks would need to shift their operations

accordingly. In some cases where there is a loss of fuel fungibility, this is expected to increase the distances traveled, which may in turn require the purchase of additional tank trucks and hiring of additional drivers. As with the rest of the fuel distribution system, this can all be accomplished, but will take some time for the market to respond and optimize around the new norms.

C. Retail Operations

The removal of the 1-psi waiver and resulting transition from 10.0 psi RVP gasoline to 9.0 psi RVP gasoline received from the terminal should be minor for retail outlets—they will simply take delivery of the lower-volatility gasoline from the terminal. The most noticeable effects will be seen at retail outlets near the borders of states maintaining the 1-psi waiver, as the cost of 9.0 psi RVP gasoline within the petitioning states is likely to be higher than that of 10.0 psi RVP gasoline across the border in non-petitioning states. Retailers within the petitioning states may have to charge higher prices to recoup this cost, which could result in consumers preferentially choosing to refill at stations across the border when possible.[45] Retail operations located near state lines on the border of petitioning and non-petitioning states may have issues scheduling gasoline shipments to their retail outlets if tank trucks are shipping their gasoline from terminals located further away and if there is an initial shortage of tank truck operators, particularly at the beginning of the transition to the new 9.0 psi RVP gasoline. As with the rest of the distribution system, this can all be accomplished, but will take some time for the market to respond and optimize around the new norms.

[45] This phenomenon is observed today in SIP and RFG areas.

VI. Implementation and Effective Date

A. Statutory Provisions

Under CAA section 211(h)(5)(C), the regulations removing the 1-psi waiver shall take effect on the later of: (1) The first day of the first high ozone season for the area that begins after the date of receipt of the notification; or (2) 1 year after the date of receipt of the notification. The high ozone season is defined in EPA's regulations as "June 1 through September 15 for retailers and [wholesale purchaser consumers (WPCs)], and May 1 through September 15 for all other persons," which includes gasoline distribution terminals.[46]

In applying this provision for the petition dated April 28, 2022, the later date is April 28, 2023. Therefore, the earliest date on which the removal of the 1-psi waiver for Illinois, Iowa, Nebraska, Minnesota, South Dakota, and Wisconsin could have been effective was April 28, 2023. This date would have been in advance of the high ozone season beginning May 1, 2023. For the petition from Ohio, dated June 10, 2022, the later date is June 10, 2023. This would have placed the effective date within the 2023 high ozone season (i.e., 10 days after the beginning of the high ozone season for retailers and WPCs, and 41 days after the beginning of the high ozone season for all other parties). Finally, for the petition from Missouri, dated December 21, 2022, the later date is December 21, 2023.[47] This would have placed the effective date after the 2023 high ozone season.

Further, under CAA section 211(h)(5)(C), the effective date can be extended if EPA, on its own motion or on petition from any person, after consultation with the Secretary of Energy, determines there would be an insufficient supply of gasoline in a state that has requested the

[46] 40 CFR 1090.80. We note that given the current definition of "high ozone season," the later date will always be one year after receipt of the request from a governor.
[47] We recognize that the Missouri petition requested that the removal take effect for the 2023 high ozone season. However, such an effective date was not permissible under CAA section 211(h)(5)(C).

removal of the 1-psi waiver for E10.[48] Section 211(h)(5)(C) further provides that the effective date can be extended for not more than one year, and that EPA may renew the extension for two additional periods, each of which shall not exceed one year.

As described above, EPA is allowed to extend the effective date of the removal of the 1-psi waiver upon a finding of "insufficient supply of gasoline in the [petitioning] state" that would result from "the promulgation of the regulations [to remove the 1-psi waiver]."[49] "Insufficient supply of gasoline" is not defined in the statute, and thus EPA is interpreting and applying the phrase in a manner that is consistent with the structure of the statute, historical application of similar or related provisions, and congressional intent. We interpret "insufficient supply of gasoline" to require a demonstration that gasoline supply disruptions would result from removal of the 1-psi waiver, such that the necessary quantities of gasoline may not be available in the states at the time they are required. It is particularly appropriate in this case to consider the possibility of supply disruptions because this action calls for a different type of gasoline to be physically produced and transported to and within the petitioning states. CAA section 211(h)(5) also indicates that our analysis of "insufficient supply" should be "in the State" petitioning for the removal of the 1-psi waiver. That is, if there was insufficient supply only in a single state, we could extend the effective date for that state only. This contrasts with CAA section 211(c)(4)(C)(iii)(I), which calls for consideration of supply constraints in "the smallest geographic area." Therefore, our analysis properly considers any state-specific factors, and examines the supply in the state.

In considering the likelihood of supply disruptions, we look to the entire production and distribution chain, from the refineries where gasoline is produced, through distribution systems

[48] CAA section 211(h)(5)(C)(ii).
[49] CAA section 211(h)(5)(C).

such as pipelines and trucking, and ultimately to the retail outlets. This reading is also similar to EPA's interpretation of other provisions in CAA section 211 that call for consideration of constraints on fuel supply when EPA is acting on petitions within the fuels program. For instance, CAA section 211(k)(6)(A)(ii) allows EPA, after consultation with the Department of Energy, to extend the effective date for a state that has petitioned to opt into the RFG program for a period that is up to one year from the date of receipt of the petition upon a finding of insufficient domestic capacity to produce RFG. A related provision in CAA section 211(k)(6)(B)(iii) allows EPA to extend the effective date for areas within the ozone transport region established under CAA section 184 that opt into RFG, upon a finding of insufficient capacity to supply RFG. Like the phrase "insufficient supply of gasoline" in CAA section 211(h)(5)(C), the statute does not define either "insufficient domestic capacity" or "insufficient capacity to supply RFG." But in acting on petitions to opt into the RFG program, EPA has explained that setting the effective date allows EPA to consider any sudden and unexpected increases in the demand for RFG on the local supply and distribution system that is caused by an opt-in.[50]

EPA's reading of "adequate supply" in CAA section 211(c)(4)(C)(ii) comports with our interpretation of CAA section 211(h)(5)(C) given that Congress intended for EPA to act in certain unique emergency circumstances to relieve supply disruptions within the "motor fuel distribution system."[51] And while "motor fuel distribution system" is not defined in the statute, EPA's historical practice in granting waivers under CAA section 211(c)(4)(C)(ii) has been to

[50] 62 FR 30261, 30263 (June 3, 1997) ("Section 211(k)(6)(A) of the Act gives the Administrator discretion to 'establish an effective date * * * as he deems appropriate* * *.' EPA interprets this provision to mean that it has broad discretion to consider any factors reasonably relevant to the timing of the effective date. This would include factors that affect industry and the potential opt-in area. The factors that affect industry could include productive capacity and capability, other markets for RFG, oxygenate supply, cost, lead time, supply logistics for the area, potential price spikes, and potential disruption to business.")
[51] CAA section 211(c)(4)(C)(iii)(V).

consider all stages of the gasoline production and distribution system within states that are experiencing emergency circumstances.

In contrast, the phrase "insufficient supply of gasoline" differs from other sub-provisions of CAA section 211 allowing for waivers of applicable requirements as well as implementation delays that use language such as "inadequate domestic supply."[52] The D.C. Circuit has provided guidance on the meaning of "inadequate domestic supply" in CAA section 211(o)(7)(A)(ii), finding that EPA may properly consider "supply side factors – such as production and import capacity," but not downstream effects.[53] The court, in viewing the statutory scheme of the RFS program, further specified that the supply of renewable fuel to refiners, blenders, and importers properly considers the factors necessary to get renewable fuel to refiners, blenders, and importers, but not to market actors "downstream from refiners, importers, and blenders." We find that the analysis under CAA section 211(h)(5) extends to include market actors downstream from refiners, importers, and blenders, as the gasoline distribution system is a key component to the availability of gasoline in the state.[54] The analysis properly considers production factors, as well as the distribution of fuel from the refinery, through the distribution chain (including pipelines and terminals) to the ultimate endpoint of the gasoline distribution chain—the retail outlet. Further, CAA section 211(h)(5) explicitly contemplates the "supply of gasoline in the State."

Finally, we note that consideration of the effective date for this action properly considers supply to the ultimate consumer given the statutory language "in the State." Therefore, our

[52] CAA sections 211(m)(3)(C) and (o)(7)(A)(ii).
[53] *Americans for Clean Energy v. EPA*, 864 F.3d 691, 710 (2017).
[54] CAA section 211(h)(5)(C) explicitly contemplates the "supply of gasoline in the State."

analysis of "insufficient supply of gasoline" properly considers all stages of the gasoline production and distribution system, from the refinery to the retail outlet.

B. Finding of Insufficient Supply for 2024 and Renewal of Extension of Effective Date

CAA section 211(h)(5)(C)(ii)(I) requires a determination of insufficient supply of gasoline in order to extend the effective date of the removal of the 1-psi waiver. We determined that a 2023 implementation date would result in insufficient supply of gasoline and proposed an effective date of April 28, 2024, for removal of the 1-psi waiver in all petitioning states.[55] We also sought comment on renewing the extension of the effective date for removal of the 1-psi waiver for an additional year (i.e., until the summer of 2025).[56] We received comments for and against the proposed effective date. Commenters against the proposed dates argued that we could still implement the rule for the 2023 summer season, despite the mere two weeks between the end of the comment period and the beginning of the 2023 summer season for terminals and refiners. Commenters in support of the proposed delay argued that a 2023 effective date would be either "impractical" or "impossible."

Further, in response to and after the proposal, we received petitions from numerous stakeholders requesting a delay of the proposed effective date until either 2025 or 2026. These stakeholders posited that the extension of the effective date would be supported by the Administrator's finding of insufficient supply of gasoline pursuant to CAA section 211(h)(5)(C)(ii)(I).[57] After consideration of comments and extension petitions, EPA is acting on

[55] At proposal, we further explained that the effective date for Ohio, would have been within the 2023 high ozone season (i.e., 10 days after the beginning of the high ozone season for retailers and WPCs, and 41 days after the beginning of the high ozone season for all other parties), while the effective date for Missouri would have been December 21, 2023, or after the 2023 high ozone season. 88 FR 13762 (March 6, 2023).
[56] 88 FR 13767 (March 6, 2023).
[57] Petition from Magellan (September 16, 2022); Petition from API (September 23, 2022); Petition from Flint Hills Resources (September 29, 2022); Petition from Phillips 66 (September 29, 2022); Petition from AFPM and other

its own motion to renew the extension of the proposed effective date for an additional year from April 28, 2024, to April 28, 2025. In sum, the circumstances that justified a finding of insufficient supply of gasoline and extension of the effective date for 2023 have not attenuated. Additionally, we have consulted with the Department of Energy, consistent with the CAA section 211(h)(5)(C)(ii)(I). We are not acting on petitions that requested a 2026 effective date, and these petitions remain pending. In this section we discuss our finding that there would be an insufficient supply of gasoline in 2024.

At proposal, we provided the rationale for our determination of insufficient supply for 2023; we assessed the following three supply constraints: (1) Low gasoline inventories; (2) The limited time available for coordination between various parties to make the necessary physical changes to the gasoline production and distribution infrastructure; and (3) The physical loss of supply necessary to produce low-RVP CBOB. We determined that these constraints would likely have led to supply disruptions in the petitioning states in 2023.[58]

We have now assessed gasoline supply impacts associated with an effective date in 2024 and updated our analyses of these supply constraints.[59] As discussed further in detail below and in the TSD, our updated analyses found: (1) Continued low gasoline inventories in PADD 2; (2) The limited time available after the promulgation of this action for coordination between various

parties (October 14, 2022); Petition from HF Sinclair (October 17, 2022); Petition from Magellan (August 19, 2023); Petition from Kevin Stitt, Governor of Oklahoma (August 25, 2023); Petition from API (September 29, 2023); Petition from AFPM (September 29, 2023); Petition from Sarah Huckabee Sanders, Governor of Arkansas (October 9, 2023); Petition from Superior Refining (October 13, 2023); Petition from Phillips 66 (October 18, 2023); Petition from CountryMark (October 25, 2023); Petition from Yesway (November 1, 2023); Petition from HF Sinclair (November 15, 2023).

[58] Our detailed finding of insufficient supply for 2023 can be found at 88 FR 13767 (March 6, 2023).

[59] EPA also received several petitions for further delay beyond 2024. See Petition from Magellan (August 25, 2023); Petition from Kevin Stitt, Governor of Oklahoma (August 25, 2023); Petition from API (September 29, 2023); Petition from AFPM (September 29, 2023); Petition from Sarah Huckabee Sanders, Governor of Arkansas (October 9, 2023); Petition from Superior Refining (October 13, 2023); Petition from Phillips 66 (October 18, 2023); Petition from CountryMark (October 25, 2023); Petition from Yesway (November 1, 2023); Petition from HF Sinclair (November 15, 2023).

parties to make the necessary physical changes to the gasoline production and distribution infrastructure; and (3) Greater reduction in supply as a result of the removal of the 1-psi waiver than estimated at the time of the proposal. We also considered the following: (1) The lack of sufficient time to make the capital investments and physical changes to refineries and the fuel distribution system; and (2) Less flexibility within the fuel distribution system than had been anticipated to adequately mitigate the supply reduction until such time as the capital and physical changes can be made. We are therefore renewing the extension of the delay of the effective date for an additional year to April 28, 2025.

Since proposal, we have conducted an updated analysis to quantify the reduction in gasoline supply that would result from the removal of the 1-psi waiver. At proposal, we estimated the reduction in supply as 20 thousand barrels per day (kbpd) based on the removal of light hydrocarbons—mostly butane—to reduce the volatility of CBOB.[60] In response to our proposal, AFPM commissioned a study of supply reductions that quantified the reduction in gasoline supply at 88–120 kbpd.[61] We also conducted a series of meetings with refiners regarding the supply impacts associated with the removal of the 1-psi waiver in the petitioning states.[62] As further described in the TSD, based on our discussions with refiners and our review of the comments, we now estimate that gasoline production by refineries supplying gasoline to the petitioning states would likely decrease by 30–80 kbpd as a result of the transition to low-RVP CBOB. Our estimate increased from the proposal primarily because a significant number of refineries that choose to produce low-RVP CBOB will need to reduce other less-volatile

[60] "Technical Support Document for the Proposed Removal of the 1-psi Waiver," available in the docket for this action.
[61] Baker and O'Brien, "Midwest States Gasoline RVP – 1 psi Waiver Study, Report for American Fuel and Petrochemical Manufacturers," February 24, 2023. Submitted as part of comments from AFPM, Docket Item No. EPA-HQ-OAR-2022-0513-0077.
[62] Memorandum to the Docket: Meeting Log for Requests from States to Remove the Gasoline Volatility Waiver.

hydrocarbons (e.g., NGLs), which will have a larger impact on gasoline supply. On average, refineries producing low-RVP CBOB are estimated to produce 3–4 percent less gasoline compared to producing 9.0 psi RVP CBOB, particularly when removal of the 1-psi waiver is first implemented. We acknowledge that the possibility of drawing down gasoline inventories, increasing gasoline supply from other regions (e.g., Gulf Coast), and reblending some higher-volatility gasoline blendstocks at terminals in non-petitioning states could mitigate the supply reduction to some extent. However, we believe that these mitigating actions would fall far short of offsetting the projected supply reductions for the 2024 summer season.

Further, at proposal we noted that while the gasoline inventories in PADD 2 (the affected region) was low, we believed that it would likely return closer to historic levels due to the previously shut-down Midwest refineries returning to operation. However, even though these refineries have since come back online—increasing gasoline production in the region—the gasoline inventories in PADD 2[63] have continued to be at levels of concern.[64] Furthermore, we have been made aware of the fact that refiners have had a heavy maintenance season at their refineries in the fall of 2023 and are planning a heavy maintenance season for the first quarter of 2024. This means that gasoline production capacity will be taken offline for several months at a key time during the winter season when gasoline inventories are typically replenished prior to the next summer season.[65] Additionally, gasoline demand is still expected to increase. EIA estimates

[63] Low gasoline inventories in PADD 2 were an additional bases for the emergency fuel waivers issued under CAA section 211(c)(4)(C)(ii)(I) during the summer of 2023. See Letter from EPA Administrator to Governors, "May 1, 2023, E15 Reid Vapor Pressure Fuel Waiver," April 28, 2023 ("The Midwest region—the region that has the most ability to increase supply with blending an increased percentage of ethanol—has gasoline stocks below the five-year seasonal average for this time of year.").

[64] Based on our discussions with EIA, gasoline supply begins to be a concern when gasoline inventories drop below the 5-year minimum for any particular PADD.

[65] Bloomberg News, "Nearly 2.5 Million Barrels a Day of US Refining Capacity to Shut for Fall Maintenance," October 2, 2023, *https://www.bnnbloomberg.ca/nearly-2-5-million-barrels-a-day-of-us-refining-capacity-to-shut-for-fall-maintenance-1.1979186*.

that national gasoline demand will increase by 60 kbpd in 2024 compared to 2023, further straining gasoline inventories and supply.[66] Thus, we anticipate that gasoline inventories in PADD 2 will not recover sufficiently by the 2024 summer season to alleviate the estimated loss of gasoline supply that would occur when low-RVP CBOB is produced. Further, due to a separate and unrelated regulatory action, the prohibition on sale of conventional gasoline in the Denver metropolitan area began on November 7, 2023. This means that gasoline sold in that area must comply with a 7.4 psi RVP requirement beginning with the 2024 summer season.[67] This is expected to cause an additional 5–10 kbpd reduction in gasoline supply in the same 2024 summer season. Although Denver is not in a petitioning state, some gasoline is currently supplied to this region from refineries that also produce gasoline for the petitioning states, resulting in additional strain on gasoline supply in the region.

As also described in section V. and the TSD, capital investments will be necessary for some refiners and fuel distributors to accommodate a transition to low-RVP CBOB in the petitioning states. This includes investments for the storage of additional gasoline types and grades, storage of excess butane and LSR, and associated measures for piping, pumping, and spill containment. We also anticipate that refineries would need to debottleneck debutanizers and octane-producing units to enable the production of low-RVP CBOB.[68] These capital investments typically require time to come online. For example, projects to debottleneck existing refinery

[66] EIA, Annual Energy Outlook (AEO) 2023, Table 11, *https://www.eia.gov/outlooks/aeo*. AEO 2023 also estimates that gasoline demand will decrease by 140 kbpd in 2025 relative to 2024.
[67] 87 FR 60926, 60932-33 (October 7, 2022).
[68] Capital grassroots projects typically require 3–4 years to engineer, design, purchase, permit and install. Smaller projects that can "debottleneck" individual refinery units (e.g., replacing a furnace, heat exchanger, or reactor) typically require 2–2.5 years to complete, while much smaller projects (e.g., replacing a valve or pump or adding or increasing the size of piping) may be designed and completed in a year or less. These types of capital investments can help a refinery produce additional low-RVP CBOB. Shell, "Thriving in the new reality: Refinery revamp projects FAQ; Shell Catalysts and Technologies," *https://www.shell.com/business-customers/catalysts-technologies/resources-library/refinery-revamp-faq.html*.

units typically require 2–2.5 years to engineer, design, purchase, permit and install. Under an assumption that refiners and fuel distributors could have begun the planning process for debottlenecking a refinery unit or installing a gasoline storage tank after the first state filed its petition in April 2022, or after EPA proposed to remove the 1-psi waiver in the petitioning states in early 2023, there would be insufficient time prior to the summer of 2024 to complete the desired capital additions. However, based on discussions with refiners, pipeline operators, and terminal operators, as well as public comments, many of the needed capital investments were not initiated in 2022 due in part to: (1) The uncertainty created by several states rescinding their petitions during 2022; (2) The emergency fuel waivers under CAA section 211(c)(4)(C)(ii)(I) extending the 1-psi RVP waiver to E15 during the 2023 summer season;[69] and (3) Potential congressional action that would extend the 1-psi waiver to E15 nationwide.[70] Without initiation in 2022, many of the necessary capital investments are unlikely to be completed by the summer of 2024.

In addition, supplying the new low-RVP CBOB will require coordinated investments, planning, and actions between refineries, pipelines and other fuel distribution companies, terminals, and retail outlets. Typically, this coordination occurs before winter to provide the fuel production and distribution system a chance to make the proper preparations; we are now past the point in the calendar when such coordination typically occurs. We are also entering into the timeframe when most refineries have already started producing summer gasoline. As such, refineries will not have sufficient and appropriate notice to begin modifying their fuel supply for the summer of 2024.

[69] From April 28, 2023, to August 28, 2023, EPA issued a waiver under CAA section 211(c)(4)(C)(ii)(I) that facilitated E15 sales during the summer of 2023.
[70] See, e.g., comments from Magellan (Docket Item No. EPA-HQ-OAR-2022-0513-0042), API (Docket Item No. EPA-HQ-OAR-2022-0513-0056), and HF Sinclair (Docket Item No. EPA-HQ-OAR-2022-0513-0076).

Finally, we assumed at proposal that flexibility within the fuel production and distribution system could allow refiners and fuel distributors to mitigate the projected 2024 summer season supply reduction until such time as capital and physical changes could be completed. However, based on subsequent comment and analysis, we now believe that the existing flexibility would not be sufficient, particularly in light of the larger anticipated supply reduction and lingering low gasoline inventories in PADD 2.

For the above-mentioned reasons, supported by additional detail and analysis in the TSD, we are making a determination that there will be an insufficient supply of gasoline in the petitioning states in the 2024 summer season and, therefore, are renewing the extension of the effective date of the removal of the 1-psi waiver by an additional year to April 28, 2025.[71]

VII. Cost and Price Impacts

There are associated costs with the changes to the refining and gasoline distribution systems described in sections V. and VI. Part of the costs will be incurred by the refining sector, while another portion will be incurred by the gasoline distribution system. Gasoline refining costs will increase due to several factors, the largest portion of which is the lost opportunity cost for refiners having to sell the removed light hydrocarbon material at lower market prices instead of blending this material into high value summer gasoline. To the extent that refiners and distributers install capital equipment, there are also additional capital and associated operating costs that will need to be recouped over time. These costs will be passed along to consumers in the petitioning and surrounding states in the form of higher gasoline prices.

With respect to consumer fuel prices, while fuel prices generally reflect fuel costs in the competitive gasoline market, this may not be the case when removal of the 1-psi waiver is first

[71] Discussion of the supply circumstances in the summer of 2025 is available in TSD section 7.

implemented, as gasoline supply will be reduced and not yet recovered. Due to the reduced supply, there will likely be a reduction in PADD 2 gasoline inventories, which could further increase gasoline prices. Due to the challenges that some refiners may have in producing low-RVP CBOB and the associated impacts on gasoline inventories, fuel prices will likely exceed fuel costs because the marginal cost producer will set the fuel price. This will likely affect gasoline prices in both petitioning and non-petitioning states and result in higher gasoline prices at the pump for consumers. The potential cost and price impacts due to the removal of the 1-psi waiver are discussed in more detail in the TSD.

As discussed above, under the relevant CAA provisions, upon receiving a petition from a state governor that is accompanied by a successful demonstration of emissions increases as a result of the 1-psi waiver, EPA is required to remove the 1-psi waiver in the areas requested by the governor. In deciding whether to grant the petition, the statute does not provide EPA with the authority to consider fuel cost or price impacts and we assume that any fuel cost or price impacts to consumers were taken into consideration by the governors of the petitioning states in submitting their petitions. Therefore, regardless of the magnitude of the impact of this action on fuel costs or prices, EPA has not considered them in this action.

VIII. Associated Regulatory Provisions

In the NPRM, we proposed changes to the fuel quality regulations at 40 CFR part 1090 to implement the removal of the 1-psi waiver in the petitioning states. Specifically, we proposed to include new designation and associated product transfer document (PTD) language requirements and a regulatory mechanism for states to request the reinstatement of the 1-psi waiver under CAA section 211(h)(5). We are finalizing these changes as proposed, and we respond to comments received on the proposed regulatory changes in the RTC document.

A. New Designation and Associated PTD Language

We are finalizing as proposed a new designation and associated PTD language for summer CBOB in states where the 1-psi waiver for E10 has been removed under CAA section 211(h)(5).[72] Designations and PTD language requirements help ensure that batches of fuel are distributed and used in a manner consistent with EPA's fuel quality requirements. Without proper designation, summer gasolines with different volatilities intended for use in different areas may get commingled in a fungible system, causing the introduction and use of non-compliant gasoline in areas that require lower-volatility fuels in the summer. Similarly, PTD language serves to ensure that parties in the fuel distribution chain are aware of the designation of the fuel and accompanying Federal requirements for the distribution and use of the fuel. Because we are finalizing requirements for a new type of summer CBOB in this action, we need to create a new designation and accompanying PTD language to ensure that the new CBOB is distributed and used consistent with the RVP requirements.

In this action, we are requiring gasoline manufacturers to designate summer CBOB for use in states where we have removed the 1-psi waiver as "Low-RVP Summer CBOB." We are also finalizing as proposed related changes to the PTD language requirements so that gasoline manufacturers that produce Low-RVP Summer CBOB can accurately and consistently describe the fuel designation. All other designation and PTD provisions will still apply (e.g., those designations related to the blending of ethanol). We believe this approach is the most straight-forward method for updating the designation and PTD requirements for Low-RVP Summer CBOB.

[72] The designation and PTD language requirements for gasoline are located at 40 CFR 1090.1010 and 1090.1110, respectively.

B. Regulatory Reinstatement Mechanism

We are finalizing as proposed a regulatory mechanism for states to request the reinstatement of the 1-psi waiver under CAA section 211(h)(5). This regulatory mechanism will be available for the petitioning states, as well as any other state for which EPA removes the 1-psi waiver under CAA section 211(h)(5) in the future. The regulations provide all states with criteria under which such a request could be made and granted. We modeled the regulatory mechanism for reinstatement of the 1-psi waiver on the regulations in 40 CFR 1090.295 that allow for the removal of 7.8 psi RVP standard.[73] Under the reinstatement mechanism, we are requiring that the state only has to request the reinstatement of the 1-psi waiver in order for EPA to reinstate it; however, if the state has relied on the 1-psi waiver removal in a SIP, either pending or approved, EPA, in consultation with the state, must determine if such a SIP must be revised. If a revision is necessary, the state must revise the SIP and EPA must approve the revision prior to the effective date of the reinstatement of the 1-psi waiver. Such requests must include a requested effective date, and any such effective date must be at least 90 days after EPA's written notification to the state that their request has been approved.

IX. Removal of the 1-psi Waiver for E15

This action also amends 40 CFR part 1090 to reflect the 2021 court decision in *American Fuel and Petrochemical Manufacturers (AFPM) v. EPA*, 3 F.4th 373 (D.C. Cir. 2021), vacating the 1-psi volatility waiver for E15 in 40 CFR 1090.215(b)(2). The Administrative Procedure Act, 5 U.S.C. 553(b)(3)(B), provides that, when an agency for good cause finds that notice and public procedures are impracticable, unnecessary, or contrary to the public interest, the agency may

[73] We are not reopening the regulations associated with removal of a federal 7.8 psi low-RVP program in a given area (40 CFR 1090.295) or the regulations that allow states to opt-out of the federal RFG program (40 CFR 1090.290).

issue a rule without providing notice and an opportunity for public comment. EPA has determined that there is good cause for amending these provisions without prior proposal and opportunity for public comment because the correction of 40 CFR part 1090 is a ministerial act to effectuate the court order and public notice and comment is unnecessary and would serve no useful purpose. Modification of the regulations to eliminate the 1-psi waiver for E15 at 40 CFR 1090.215(b)(2) has no legal effect beyond fulfilling the court's vacatur in *AFPM v. EPA* and is ministerial in nature. The court issued its mandate on September 17, 2021, at which point the vacatur became effective.

A. Background

In June 2019, EPA finalized a rule modifying volatility regulations for gasoline-ethanol blends containing more than 10 and up to 15 percent ethanol to provide a 1-psi RVP volatility "waiver." The rule was challenged in the D.C. Circuit by AFPM and other groups in June 2019. The court issued its decision on July 2, 2021, vacating the volatility rule, and subsequently issued the mandate for its decision on September 17, 2021.

This action updates our regulations to reflect the court's vacatur of the volatility rule. Subsequent to the promulgation of the volatility rule and the corresponding regulations at 40 CFR 80.27, in December 2020, EPA finalized its fuels regulatory streamlining effort and transposed the regulations, with minor changes, to 40 CFR 1090.215.[74] We are now making the necessary amendments to the regulations at 40 CFR 1090.215 to be consistent with the court's vacatur.

We are also clarifying the status of the "substantially similar" determination for gasoline made in the same action. Because the 2019 interpretative rule[75] was promulgated solely for the

[74] 85 FR 78412 (December 4, 2020).
[75] 84 FR 26980 (June 10, 2019).

purpose of providing the 1-psi waiver to E15, and because the court vacated the entire volatility rule, the 2019 interpretative rule is rescinded.[76] Thus, the only "substantially similar" determinations for gasoline are: (1) The 1991 interpretative rule,[77] and (2) The 2008 interpretative rule.[78]

Finally, in the same rulemaking action, EPA promulgated regulations related to the RFS credit or "RIN" market.[79] These regulations were not challenged, were severable from the action to extend the 1-psi waiver to E15, and remain in place. EPA is noting this for informational purposes only; we are not reopening these RFS regulations here.

B. Affected Provisions

This final rule amends the fuel quality regulations at 40 CFR part 1090, subparts C and R, to remove the 1-psi waiver for E15 contained in 40 CFR 1090.215(b)(2) and 1090.1720(e) by replacing the phrases "15 volume percent" and "15 percent" with "10 volume percent" and "10 percent," respectively. As explained above, removal of the 1-psi waiver for E15 corrects the CFR to conform to the court's order in *AFPM v. EPA*, has no legal effect beyond fulfilling the court's vacatur, and is ministerial in nature. The court issued the mandate for its decision on September 17, 2021, at which point the vacatur became effective.

X. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at *https://www.epa.gov/laws-regulations/laws-and-executive-orders*.

[76] See 84 FR 26980, 26983 (June 10, 2019) ("In sum, all actions we are taking today constitute a single, cohesive effort, and as such we do not intend for any of these individual actions to be severable").
[77] 56 FR 5352 (February 11, 1991).
[78] 73 FR 22277 (April 25, 2008).
[79] 84 FR 26980 (June 10, 2019).

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 14094: Modernizing Regulatory Review

This action is a "significant regulatory action," as defined under section 3(f)(1) of Executive Order 12866, as amended by Executive Order 14094. Accordingly, EPA submitted this action to the Office of Management and Budget (OMB) for Executive Order 12866 review. Documentation of any changes made in response to the Executive Order 12866 review is available in the docket. EPA prepared an analysis of the potential costs and benefits associated with this action. This analysis is presented in the TSD, available in the docket for this action.

B. Paperwork Reduction Act (PRA)

This action does not impose any new information collection burden under the PRA. OMB has previously approved the information collection activities contained in the existing regulations and has assigned OMB control number 2060-0731. This action removes the 1-psi waiver in eight states. It does not alter practices used by the existing recordkeeping and reporting requirements, nor does it change the number or type of respondents and the manner in which they satisfy the fuel designation and PTD requirements.

C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. The small entities subject to the requirements of this action are small refiners (which are defined at 13 CFR 121.201) that produce or distribute gasoline in Illinois, Iowa, Minnesota, Missouri, Nebraska, Ohio, South Dakota, or Wisconsin. This action removes the 1-psi waiver for E10 in these states. EPA is not aware of any small refiner that operates in these states. However, EPA is aware of at least one small refiner that distributes a portion of the gasoline it produces to some of the petitioning states, and thus will be

affected this action. Therefore, to evaluate the impacts of this action on small entities, we have conducted a screening analysis to assess whether we should make a finding that this action will not have a significant economic impact on a substantial number of small entities.[80] Currently available information shows that the impact on small entities from implementation of this rule will not be significant. As discussed in section VII. and the TSD, we expect that refiners, including small refiners, will be able to recover the cost associated with the removal of the 1-psi waiver through higher gasoline prices in the petitioning and surrounding states. Even if we were to assume that the cost of producing low-RVP CBOB was not recovered by refiners, a cost-to-sales ratio test shows that the costs to small refiners of the removal of the 1-psi waiver are far less than 1 percent of the value of their sales. Furthermore, the removal of the 1-psi waiver in these states does not substantively alter the regulatory requirements on parties that make and distribute gasoline. We have therefore concluded that this action will not have any significant adverse economic impact on directly regulated small entities.

D. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate of $100 million or more as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. This action implements mandates specifically and explicitly set forth in CAA section 211(h)(5) and we believe that this action represents the least costly, most cost-effective approach to achieve the statutory requirements.

[80] See TSD section 8.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

This action does not have tribal implications as specified in Executive Order 13175. This action will be implemented at the state level and would affect gasoline refiners, blenders, marketers, distributors, and importers. Tribal governments would be affected only to the extent they produce, purchase, and use gasoline. Thus, Executive Order 13175 does not apply to this action.

G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern environmental health or safety risks that EPA has reason to believe may disproportionately affect children, per the definition of "covered regulatory action" in section 2-202 of the Executive Order. Therefore, this action is not subject to Executive Order 13045 because it implements specific standards established by Congress in statutes.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not a "significant energy action" because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. This action removes the 1-psi waiver for eight states. As discussed in section V., it will require changes to the production and distribution of gasoline, which is expected to have some short- and long-term impacts on

gasoline supply and cost in the affected areas, but we believe the market will be able to accommodate the change without any significant disruption.

I. National Technology Transfer and Advancement Act (NTTAA) and 1 CFR Part 51

This action does not involve technical standards.

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

EPA believes that the human health and environmental conditions that exist prior to this action do not result in disproportionate and adverse effects on communities with environmental justice concerns. Numerous studies have found that environmental hazards such as air pollution are more prevalent in areas where people of color and low-income populations represent a higher fraction of the population compared to the general population. In addition, there is ample evidence that people who reside in close proximity to major roadways are disproportionately represented by people of color and people with low income.

EPA believes that this action is not likely to result in new disproportionate and adverse effects on communities with environmental justice concerns. This is because any emissions impacts of this action are small. As described in section IV.B., MOVES modeling performed by the states in support of their petitions demonstrated a reduction in VOCs, CO, and NOx, as well as potential increases in emissions of pollutants such as PM. This action is being implemented at the request of the governors of the petitioning states and EPA lacks discretion to deny such requests as described in section III.

EPA additionally identified and addressed EJ concerns by providing the relevant emissions information in this rulemaking action and providing an opportunity for public comment on this rule. We received no comments related to EJ concerns.

The information supporting this Executive Order review is contained in this preamble and the "Evaluation of MOVES Modeling and Results," available in the docket for this action.

K. Congressional Review Act (CRA)

This action is subject to the CRA, and the EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action meets the criteria set forth in 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 1090

Environmental protection, Administrative practice and procedure, Air pollution control, Fuel additives, Gasoline, Petroleum, Renewable fuel.

Michael S. Regan,

Administrator.

For the reasons set forth in the preamble, EPA amends 40 CFR part 1090 as follows:

PART 1090—REGULATION OF FUELS, FUEL ADDITIVES, AND REGULATED BLENDSTOCKS

1. The authority citation for part 1090 continues to read as follows:

Authority: 42 U.S.C. 7414, 7521, 7522-7525, 7541, 7542, 7543, 7545, 7547, 7550, and 7601.

Subpart C—Gasoline Standards

2. Amend § 1090.215 by:

a. In paragraph (b)(2), removing the text "15 volume percent." and adding in its place "10 volume percent."; and

b. Revising paragraph (b)(3).

The revision reads as follows:

§ 1090.215 Gasoline RVP Standards.

* * * * *

(b) * * *

(3)(i) RFG and SIP-controlled gasoline that does not allow for the ethanol 1.0 psi waiver does not qualify for the special regulatory treatment specified in paragraph (b)(1) of this section.

(ii) Gasoline subject to the 9.0 psi maximum RVP per-gallon standard in paragraph (a)(1) of this section in the following areas is excluded from the special regulatory treatment specified in paragraph (b)(1) of this section:

Table 1 to Paragraph (b)(3)(ii)—Areas Excluded From the Ethanol 1.0 psi Waiver

State	Counties	Effective Date
Illinois	All	April 28, 2025
Iowa	All	April 28, 2025
Minnesota	All	April 28, 2025
Missouri	All	April 28, 2025
Nebraska	All	April 28, 2025

Ohio	All	April 28, 2025
South Dakota	All	April 28, 2025
Wisconsin	All	April 28, 2025

* * * * *

3. Add § 1090.297 to read as follows:

§ 1090.297 Procedures for reinstating the 1.0 psi RVP allowance for E10.

(a) EPA may approve a request from a state asking to reinstate the ethanol 1.0 psi waiver specified in § 1090.215(b)(1) for any area (or portion of an area) specified in § 1090.215(b)(3)(ii) if it meets the requirements of paragraph (b) of this section. If EPA approves such a request, an effective date will be set as specified in paragraph (c) of this section. EPA will notify the state in writing of EPA's action on the request and the effective date of the reinstatement upon approval of the request.

(b) The request must be signed by the governor of the state, or the governor's authorized representative, and must include all the following:

(1) A geographic description of each area (or portion of such area) that is covered by the request.

(2) A description of all the means in which emissions reduction from the removal of the ethanol 1.0 psi waiver are relied upon in any approved SIP or in any submitted SIP that has not yet been approved by EPA, if applicable.

(3) For any area covered by the request where emissions reductions from the removal of the ethanol 1.0 psi waiver are relied upon as specified in paragraph (b)(2) of this section, the request must include the following information:

(i) Identify whether the state is withdrawing any submitted SIP that has not yet been approved.

(ii)(A) Identify whether the state intends to submit a SIP revision to any approved SIP or any submitted SIP that has not yet been approved, which relies on emissions reductions from the removal of the ethanol 1.0 psi waiver, and describe any control measures that the state plans to submit to EPA for approval to replace the emissions reductions from the removal of the ethanol 1.0 psi waiver.

(B) A description of the state's plans and schedule for adopting and submitting any revision to any approved SIP or any submitted SIP that has not yet been approved.

(iii) If the state is not withdrawing any submitted SIP that has not yet been approved and does not intend to submit a revision to any approved SIP or any submitted SIP that has not yet been approved, describe why no revision is necessary.

(4) A requested effective date of the reinstatement of the ethanol 1.0 psi waiver.

(5) The governor of a state, or the governor's authorized representative, must submit additional information needed to administer the reinstatement of the ethanol 1.0 psi waiver upon request by EPA.

(c)(1) Except as specified in paragraph (c)(2) of this section, EPA will set an effective date of the reinstatement of the ethanol 1.0 psi waiver as requested by the governor, or the governor's authorized representative, but no less than 90 days from EPA's written notification to the state approving the reinstatement request.

(2) Where emissions reductions from the removal of the ethanol 1.0 psi waiver are included in an approved SIP or any submitted SIP that has not yet been approved, EPA will set an effective date of the reinstatement of the ethanol 1.0 psi waiver as requested by the governor, or the governor's authorized representative, but no less than 90 days from the effective date of EPA approval of the SIP revision that removes the emissions reductions from the ethanol 1.0 psi

waiver, and, if necessary, provides emissions reductions to make up for those from the ethanol 1.0 psi waiver reinstatement.

(d) EPA will publish a document in the *Federal Register* announcing the approval of any ethanol 1.0 psi waiver reinstatement request and its effective date.

(e) Upon the effective date for the reinstatement of the ethanol 1.0 psi waiver in a subject area (or portion of a subject area) included in an approved request, the ethanol 1.0 psi waiver will apply in such subject area.

Subpart K—Batch Certification and Designation

4. Amend § 1090.1010 by redesignating paragraph (a)(2)(iii) as (a)(2)(iv) and adding paragraph (a)(2)(iii) to read as follows:

§ 1090.1010 Designation requirements for gasoline and regulated blendstocks.

(a) * * *

(2) * * *

(iii) If the CBOB is excluded from the special regulatory treatment for ethanol under § 1090.215(b)(3)(ii), Low-RVP Summer CBOB.

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Subpart L—Product Transfer Documents

5. Amend § 1090.1110 by redesignating paragraph (b)(2)(i)(C) as (b)(2)(i)(D) and adding paragraph (b)(2)(i)(C) to read as follows:

§ 1090.1110 PTD requirements for gasoline, gasoline additives, and gasoline regulated blendstocks.

* * * * *

(b) * * *

(2) * * *

(i) * * *

(C) “Low-RVP CBOB. This product does not meet the requirements for summer reformulated gasoline.”

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Subpart R—Compliance and Enforcement Provisions

§1090.1720 [Amended]

6. Amend §1090.1720 by in paragraphs (e) introductory text and (e)(2) removing the text “15 percent” and adding in its place “10 percent”.