

Administrator Regan
June 16, 2023
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**States of California, Connecticut, Delaware, Maine, Maryland, New Jersey, New York,
Oregon, Washington, the Commonwealths of Massachusetts and Pennsylvania, and the
District of Columbia**

June 16, 2023

Via Electronic Transmission

U.S. Environmental Protection Agency
EPA Docket Center, OAR Docket
Docket ID No. EPA-HQ-OAR-2022-0985
Mail Code 28221T
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Washington, DC 20460
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RE: Comments on “Preemption of State Standards and Requirements for New Locomotives or New Engines Used in Locomotives,” 88 Fed. Reg. 26,092-26,096, contained within Notice of Proposed Rulemaking for “Greenhouse Gas Emissions Standards for Heavy-Duty Vehicles—Phase 3,” 88 Fed. Reg. 25,926 (April 27, 2023)

Attention: Docket ID No. EPA-HQ-OAR-2022-0985

Dear Administrator Regan,

The States of California,¹ Connecticut, Delaware, Maine, Maryland, New Jersey, New York, Oregon, Washington, the Commonwealths of Massachusetts and Pennsylvania, and the District of Columbia (collectively, “our States”) respectfully submit these comments in support of the Environmental Protection Agency’s (“EPA”) proposed revisions to “Preemption of State Standards and Requirements for New Locomotives or New Engines Used in Locomotives,” (Proposed Revisions), contained within the Notice of Proposed Rulemaking for “Greenhouse Gas Emissions Standards for Heavy-Duty Vehicles—Phase 3,” 88 Fed. Reg. 25,926 (April 27, 2023) (NPRM).²

Our States commend EPA for revisiting its preemption regulation specific to locomotives and locomotive engines, 40 C.F.R. § 1074.12 (Locomotives Preemption Regulation), in order to better align it with the Clean Air Act (“CAA”). EPA is proposing to delete subsection (b) of 40 CFR 1074.12, which currently provides:

During a period equivalent in length to 133 percent of the useful life, expressed as MW-hrs (or miles where applicable), beginning at the point at which the

¹ The California Attorney General submits these comments pursuant to his independent power and duty to protect the environment and natural resources of the State. *See* Cal. Const., art. V, § 13; Cal. Gov. Code, §§ 12511, 12600-12612; *D’Amico. v. Bd. of Medical Examiners*, 11 Cal.3d 1, 1415 (1974).

² *See* NPRM at 26,092-96 (revising 40 C.F.R. 1074.10, 1074.12, and 1074.101).

locomotive or engine becomes new, those standards or other requirements which are preempted include, but are not limited to, the following: emission standards, mandatory fleet average standards, certification requirements, retrofit and aftermarket equipment requirements, and nonfederal in-use testing requirements. The standards and other requirements specified in the preceding sentence are preempted whether applicable to new or other locomotives or locomotive engines.³

Congress preserved state authority in the CAA to regulate locomotive emissions by requiring the EPA Administrator to authorize California to control emissions from locomotives and locomotive engines that are not new (“non-new”).⁴ Other states may adopt and enforce California’s standards as well.⁵ EPA’s proposed deletion of subsection (b) of 40 CFR 1074.12 will advance Congressional intent by clarifying the States’ authority to regulate emissions from non-new locomotives.

Under EPA’s regulations for the control of emissions from locomotives, a locomotive, including its engine, is no longer new once legal or equitable title has transferred, or after it is placed into service.⁶ By contrast, EPA’s Locomotives Preemption Regulation references a period equivalent to 133 percent of the useful life of a locomotive or engine.⁷ This has the potential to cause significant confusion, as the regulation could be interpreted to preempt California and other States from regulating well after a locomotive is no longer considered new—in other words, during the period when the locomotive is non-new and, thus, subject to potential state regulation.

As EPA acknowledges, diesel-powered locomotives emit multiple harmful pollutants including particulate matter (“PM”) and nitrogen oxides (“NOx”).⁸ The pollutants emitted by locomotives have disproportionate impacts on disadvantaged communities due to their proximity to rail operations.

Despite the serious effects of locomotive air pollution, locomotive owners and operators continue to operate fleets composed primarily of older locomotives subject to EPA’s more lenient Tier 0, 1, and 2 emissions standards, or that remain unclassified.⁹ As of 2020, only 7 percent of the Class I line haul fleet was subject to EPA’s most stringent Tier 4 emission standards, which have been in place since 2008 and are applicable to locomotives manufactured

³ NPRM at 26,096. EPA is also proposing to relocate subsection (a) of 40 CFR § 1074.12 to § 1074.10 and make changes to 40 CFR § 1074.101 to refer to the relocated text. NPRM at 26,096.

⁴ 42 U.S.C. § 7543(e)(2)(A).

⁵ *Id.*, § 7543(e)(2)(B).

⁶ 40 C.F.R. § 1033.901 (def. of “new”).

⁷ *Id.*, § 1074.12(b).

⁸ NPRM, at 26,047-48; *see also* 17 Cal. Code Regs. § 93000; CARB, “Overview Diesel Exhaust & Health” (CARB Overview Diesel Exhaust), available at: <https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health>.

⁹ For purposes of this comment, we do not differentiate between pre-2008 and post-2008 (represented by a ‘+’) standards.

since 2015.¹⁰ It is significant that such a minor percentage of the Class I fleet is subject to the Tier 4 standards. Under the Tier 4 standards, NO_x emissions are limited to 1.3 grams per brake horsepower-hour (g/bhp-hr) and PM emissions are limited to 0.03 g/bhp-hr.¹¹ By contrast, under the Tier 2 standards, NO_x is limited to 5.5 and PM is limited to 0.10, and under the Tier 1 standards, NO_x is limited to 7.4 and PM is limited to 0.22.¹² EPA's data shows that 47% of the in-service fleet in the United States is subject to Tier 1 or earlier, less stringent standards.¹³ Therefore, nearly half of the in-service fleet is permitted to emit NO_x at a level almost six times higher and PM at a level over seven times higher than standards now applicable to new locomotives allow. The profile of the Class I switching fleet is even worse, comprising approximately 97 percent Tier 0 or unclassified locomotives.¹⁴

There are greater risks to public health and welfare if the States cannot effectively regulate non-new locomotives to address this serious air pollution. Reducing locomotive emissions can play an important role in protecting public health and in our States attaining and/or maintaining National Ambient Air Quality Standards ("NAAQS"). Therefore, our States urge EPA to finalize and adopt the Proposed Revisions to better align EPA's Locomotive Preemption Regulation with the statutory text of the CAA, thereby removing a potential obstacle to the States exercising their congressionally preserved authority to regulate emissions from non-new locomotives and locomotive engines.

I. Factual Background

A. Diesel Locomotives Emit Toxic Air Pollutants that Endanger Public Health and Welfare

Diesel-powered locomotives emit a complex mixture of air pollutants, including diesel particulate matter ("DPM") and NO_x, which can lead to the formation of ozone and the secondary formation of PM including PM_{2.5}.¹⁵ DPM is typically composed of carbon particles ("soot," also called black carbon) and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene.¹⁶ The DPM present in diesel exhaust consists mostly of fine particles (less than 2.5 mm), of which a significant fraction is ultrafine particles (less than 0.1 mm).¹⁷ These particles have a large surface

¹⁰ Eastern Research Group, Inc., 2020 National Emissions Inventory Locomotive Methodology Prepared for U.S. Environmental Protection Agency (May 19, 2022), p. 4, available at: https://gaftp.epa.gov/air/nei/2020/doc/supporting_data/nonpoint/Rail/2020_NEI_Rail_062722.pdf (hereinafter NEI Methodology); 40 C.F.R. § 1033.101. Railroads are classified as I, II, or III based on operating revenue. NPRM at 26,093 fn. 1017.

¹¹ 40 C.F.R. § 1033.101 (Table 1).

¹² *Id.*

¹³ NEI Methodology, p. 4.

¹⁴ *Id.*, p. 10.

¹⁵ 17 Cal. Code Regs. § 93000; CARB Overview Diesel Exhaust; *see also* NPRM, at 26,047-48.

¹⁶ CARB Overview Diesel Exhaust.

¹⁷ *Id.*

area that makes them an excellent medium for absorbing organics, and their small size makes them highly respirable. Many of the organic compounds present in the gases and on the particles, such as polycyclic organic matter, are individually known to have mutagenic and carcinogenic properties.¹⁸

As of 2018, mobile sources were the largest contributor to national average cancer and noncancer risk from directly emitted pollutants. They are also significant contributors to precursor emissions which react to form air toxics, including 26 percent of primary anthropogenic emissions of formaldehyde, which is the largest contributor to cancer risk, and 60 percent of ambient concentrations of benzene.¹⁹

There is a causal relationship between exposure to PM_{2.5} and premature mortality and cardiovascular effects, and a likely causal relationship with respiratory effects, nervous system effects, and cancer.²⁰ There is also evidence suggestive of a causal relationship with reproductive and developmental effects and metabolic effects, and short-term exposure and nervous system effects.²¹

Exposure to ambient ozone levels can lead to respiratory effects, including lung function decrements, pulmonary inflammation, exacerbation of asthma and new onset asthma, respiratory-related hospital admissions, metabolic effects, central nervous system effects, and mortality.²² Ground level ozone also causes damage to terrestrial and aquatic ecosystems.²³

Evidence also indicates exposure to NO_x leads to asthma exacerbation, cardiovascular effects, diabetes, cancer, and mortality.²⁴

Federal, state, and international agencies have determined that exposure to diesel exhaust is likely to be carcinogenic to humans by inhalation from environmental exposures.²⁵ Several studies report increased lung cancer risk associated with occupational exposure to diesel exhaust from older engines.²⁶ California classifies diesel engine emissions as a Toxic Air Contaminant that has no threshold exposure level below which no significant adverse health effects are anticipated from exposure to the identified substance.²⁷

¹⁸ NPRM at 26,048.

¹⁹ *Id.*

²⁰ *Id.* at 26,049.

²¹ *Id.*

²² *Id.* at 26,051.

²³ “Emission Standards for Locomotives and Locomotive Engines,” 63 Fed. Reg. 18,978, 18,978 (April 16, 1998).

²⁴ NPRM at 26,052.

²⁵ *Id.* at 26,053.

²⁶ *Id.* at 26,054.

²⁷ CARB, “Identified Toxic Air Contaminants,” <https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants>.

B. Diesel Locomotive Emissions Disproportionately Impact Environmental Justice Communities²⁸

Emissions of harmful air pollutants from diesel locomotives disproportionately impact residents of communities that suffer environmental injustices, adding to the significant negative health conditions those communities already bear. Rail lines are fixed-in-place and, thus, locomotive emissions impact communities located along those rail lines. The most significantly impacted communities are those located near railyards and related infrastructure like seaports and intermodal facilities. Railyards—consisting of multiple tracks used for storing, sorting, loading, and transferring locomotive freight—not only attract significant amounts of rail traffic but also related industrial infrastructure drawing large numbers of heavy duty trucks. In addition, such intermodal rail facilities employ significant number of diesel-fueled engines to power cranes and other yard equipment. Further, locomotive engines emit pollution at these facilities by idling for long periods at railyards and deploying older, lower-tier engines with less-stringent emission controls for switch operations to transport rail cars in-yard.²⁹ While locomotives operate across the country, their harmful impacts are most concentrated in the areas surrounding railyards where many locomotives—and other transportation-related machinery—simultaneously operate.

Residents living near railyards and rail infrastructure are disproportionately lower-income communities and communities of color. These communities unfairly bear the brunt of harmful rail-related emissions, while also experiencing other cumulative industrial pollution burdens. Further, railyards are often sited near sensitive receptors, such as schools, hospitals, elder care facilities, and residential neighborhoods.³⁰ In California, nearly 70 percent of large-scale Class I railyards are located in underserved communities categorized as “disadvantaged” under

²⁸ Environmental justice is defined by EPA as the “fair treatment and meaningful involvement of all people regardless of race, color, national origin or income with respect to development, implementation, and enforcement of environmental laws, regulations and policies.” EPA, EPA-300-B-1-6004, EJ 2020 Action Agenda: The U.S. EPA’s Environmental Justice Strategic Plan For 2016-2020, p. 1 (Oct. 2016). For the purpose of this comment, the term “environmental justice community” refers to a community of color or community experiencing high rates of poverty that due to past and or current unfair and inequitable treatment is overburdened by environmental pollution, and the accompanying harms and risks from exposure to that pollution, because of past or current unfair treatment.

²⁹ See NEI Methodology; see also CARB Initial Statement of Reasons (CARB ISOR) for Proposed In-Use Locomotive Regulations, p. 59 (Sept. 20, 2022), available at:

<https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/locomotive22/isor.pdf>.

³⁰ CARB ISOR, Appendix H, p. 6, available at:

<https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/locomotive22/apph.pdf>.

California law.³¹ Smaller Class III, Military, and Industrial railyards are similarly sited, with over 55 percent located in underserved, disadvantaged communities.³²

Of the 18 largest railyards in California, all but one is located in a census tract that suffers from pollution burdens greater than the state average.³³ In fact, amongst the census tracts in which these facilities are located, the average cumulative pollution burden exceeds that of 90 percent of the rest of California communities.³⁴ In part due to locomotive emissions—in addition to the cumulative burdens from other industrial sources—these census tracts also suffer from levels of DPM greater than 80 percent of California’s communities.³⁵ That pollution causes similarly disproportionate health impacts, including rates of asthma higher than 70 percent of the rest of California.³⁶

Reflecting historical redlining,³⁷ the communities that disproportionately suffer health impacts from locomotive and other transportation-related emissions are overwhelmingly comprised of residents with lower-incomes and people of color. In California, Hispanic/Latino communities overall experience pollution exposures from rail activity over 30 percent higher than average.³⁸ A prior study found that 17 of the 18 biggest railyards in California had a

³¹ CARB ISOR, p. 33. “Disadvantaged” communities are defined in California as communities suffering from pollution burdens and vulnerability factors in the top 25th percentile, such as exposure to PM_{2.5}, high ozone, drinking water contaminants, traffic impacts, high diesel particulate matter (DPM), groundwater threats, poverty, asthma, and cardiovascular disease. See California Senate Bill No. 535, California Global Warming Solutions Act of 2006: Greenhouse Gas Reduction Fund (approved Sept. 30, 2012), available at:

https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201120120SB535; California Office of Environmental Health Hazard Assessment, “SB 535 Disadvantaged Communities,” <https://oehha.ca.gov/calenviroscreen/sb535>.

³² CARB ISOR, p. 33

³³ Data from CalEnviroScreen 4.0, California Office of Environmental Health Hazard Assessment, <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40>. Metrics for pollution burden, diesel particulate matter exposure, asthma rates, and poverty are the census tract’s percentile ranking as compared to all census tracts in California, demonstrating that these census tracts are among those with the greatest pollution exposure, detrimental health impacts, and lowest incomes statewide. The raw data for these percentile rankings are available on the CalEnviroScreen 4.0 website.

³⁴ *Id.*

³⁵ *Id.*

³⁶ *Id.*

³⁷ Beginning in the 1930s, federal housing policy directed investment away from “risky” communities of color. In California, several residential communities in or adjacent to major railyards and related infrastructure were coded red, signifying the least desirable areas where investment was to be avoided. See Robert K. Nelson, LaDale Winling, Richard Marciano, Nathan Connolly, et al., “Mapping Inequality,” American Panorama, ed., see Commerce, CA: <https://dsl.richmond.edu/panorama/redlining/#loc=12/34.037/-118.156&city=los-angeles-ca>, Stockton, CA: <https://dsl.richmond.edu/panorama/redlining/#loc=14/37.941/-121.281&city=stockton-ca>, West Oakland, CA: <https://dsl.richmond.edu/panorama/redlining/#loc=13/37.796/-122.287&city=oakland-ca>.

³⁸ Hricko et al., Global Trade, Local Impacts: Lessons from California on Health Impacts and Environmental Justice Concerns for Residents Living near Freight Rail Yards. *International Journal of Environmental Research and Public Health*, 11(2), pp. 1914-1941, (February 10, 2014).

statistically higher percentage of non-White residents within areas at risk of cancer than the remainder of the county in which they are located.³⁹

The California Air Resources Board (“CARB”) has previously identified four California railyards as having a particularly high health risk from cancer related to diesel emissions, all of which are located in communities that are disproportionately populated by non-White residents experiencing higher rates of poverty than average. The BNSF San Bernardino railyard—which is adjacent to residences and within a mile of 41 sensitive receptors—including seven health care facilities, 15 schools, and 19 childcare centers—is located in a census tract populated by 94 percent people of color that experiences poverty rates higher than 97 percent of the State.⁴⁰ Union Pacific’s Intermodal Container Transfer Facility (ICTF) in Wilmington, CA—less than 500 feet from a middle school and residences—is sited in and around multiple census tracts whose populations are approximately 90 percent non-White and experience poverty rates greater than 65 percent of the State.⁴¹ And in the Los Angeles community of Commerce—where four railyards are clustered resulting in a DPM burden in the 96th percentile—the facilities surround census tracts consisting of 98% people of color that experience poverty rates higher than 70 of California residents.⁴²

In New York, environmental justice communities are disproportionately impacted by locomotive pollution given their shared proximity to major cities throughout the state. Freight rail service intersects the state, including across a majority of its 62 counties and cities.⁴³ Along New York’s 3,279 miles of freight railroad, Buffalo, Syracuse, Albany, Binghamton, and the New York City metro area (NYCMA) are all home to major facilities.⁴⁴ These cities are also home to large communities of color and low-income families.⁴⁵ Such communities in each city experience elevated risks of cancer and respiratory hazards, as well as PM_{2.5} levels above the

³⁹ *Id.*, p. 1924. From 2005 to 2008, CARB published a Health Risk Assessment (HRA) for each of the 18 major rail yards in California, using guidance from the California Office of Health Hazard Evaluation and Assessment (OEHHA). These HRAs analyzed diesel particulate emissions from locomotives, cranes and yard equipment within the railyard boundaries, as well as onsite and offsite emissions from heavy duty diesel-powered trucks that take containers to and from the rail yards. See CARB, “Railyard Health Risk Assessments and Mitigation Measures,” <https://ww2.arb.ca.gov/resources/documents/railyard-health-risk-assessments-and-mitigation-measures>.

⁴⁰ CalEnviroScreen 4.0, Census Tract 6071004900.

⁴¹ *Id.*, Census Tracts 6037980014, 6037980002, 6037572301, 6037572600, and 6037543306.

⁴² *Id.*, Census Tracts 6037532400, 6037532302, 6037532303, and 6037532304.

⁴³ See New York State Department of Transportation (NYSDOT), “Railroads in New York - 2023,” <https://www.dot.ny.gov/divisions/operating/opdm/passenger-rail/railroadsmap>.

⁴⁴ See U.S. Department of Transportation, “New York Transportation by the Numbers,” p. 1, January 2020, https://www.bts.gov/sites/bts.dot.gov/files/states2020/New_York.pdf.

⁴⁵ See New York State Department of Environmental Conservation (NYSDEC), “Potential Environmental Justice Areas” (PEJAs), <https://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1273>.

annual average.⁴⁶ Emergency department visits and hospitalizations tied to asthma are also consistently estimated at elevated rates in counties where these railyards operate.⁴⁷

The asthma rate for low-income individuals across New York City is well above the national average.⁴⁸ In collaboration with EPA, New York City Economic Development Corporation and New York City Department of Small Business Services undertook two locomotive repowering projects between 2011 and 2018 to combat the disproportionate quantity of air pollution faced by environmental justice communities in the NYCMA in part due to their proximity to freight and commuter rail yards operated by CSX Transportation (CSXT) and New York & Atlantic Railway (NY&A).⁴⁹ The rail companies estimated that repowering would reduce annual NO_x emissions from these locomotives by between 33 and 99 percent and PM_{2.5} by between 81 and 99 percent⁵⁰—exemplifying the potential that emission reduction projects have to benefit environmental justice communities.

Pennsylvania also has a significant number of railyards in urban areas, many of which are adjacent to or surrounded by environmental justice communities. More populous areas with elevated levels of ozone and PM concentrations, such as the Pittsburgh area (Beaver, Allegheny, Westmoreland, Washington Counties), have significant rail operations and emissions.

Accordingly, reducing emissions from locomotives is a critical step towards dismantling historical patterns of environmental injustice burdening communities near railyards and related industrial infrastructure.

C. Reducing Diesel Locomotive Emissions Is Important For our States To Attain and Maintain Federal Air Quality Standards

The CAA requires EPA to set, and regularly review and revise, federal health-based ambient air quality standards for “criteria pollutants,” including PM_{2.5}, NO_x, and ground-level ozone.⁵¹ Depending on whether the air quality in an area meets the NAAQS for a particular pollutant, EPA designates the area as being in “attainment” or “nonattainment.” EPA further classifies areas that are in nonattainment according to the severity of their air pollution problem,

⁴⁶ See *id.*; EPA, EJScreen, accessed via: <https://ejscreen.epa.gov/mapper/>. In Buffalo, for example, an area adjacent to the Black Rock railyard (Census Block 15000US360290071014) is 93 percent non-white, 54 percent below poverty level, and at 80th percentile for PM_{2.5}, 83rd percentile on the air toxics respiratory hazard index, 96th percentile for ozone, and 98th percentile for diesel particulate matter.

⁴⁷ See New York State Department of Health (NYSDOH), “Asthma ED Visits and Hospitalizations,” https://apps.health.ny.gov/statistics/environmental/public_health_tracking/tracker/index.html#/asthmaCounty.

⁴⁸ See NYSDOH, Asthma Dashboard - State Level, “Current asthma prevalence among adults, 2020,” https://webbi1.health.ny.gov/SASStoredProcess/guest?_program=/EBI/PHIG/apps/asthma_dashboard/ad_dashboard&p=tbl&ind_id=ad28. The asthma rate for individuals in New York City earning less than \$25,000 annually is between 13.6 and 14 percent, while the U.S. rate is 9.2 percent and the U.S. rate for earning less than \$25,000 annually is between 11.2 and 13.8 percent.

⁴⁹ See EPA, “New York City Locomotive Repowers: Collaborative Efforts to Improve Air Quality,” <https://www.epa.gov/ports-initiative/new-york-city-locomotive-repowers-collaborative-efforts-improve-air-quality>.

⁵⁰ *Id.*

⁵¹ 42 U.S.C. §§ 7408-7409.

and areas with more severe pollution levels are generally given more time to meet the standard while being subject to more stringent control requirements.

As of May 31, 2021, California had nineteen 8-hour ozone nonattainment areas and the only three extreme nonattainment areas in the nation: South Coast Air Basin, San Joaquin Valley, and Coachella Valley.⁵² South Coast Air Basin and San Joaquin Valley Air Basin also fail to meet ambient air quality standards for PM_{2.5}.⁵³ The South Coast Air Basin has the highest ozone levels in the nation.⁵⁴ For the South Coast Air Basin to meet the federal ozone standards, overall NO_x emissions need to be reduced to 60 tons per day in 2037, an approximately 80 percent reduction from 2018 levels.⁵⁵ NO_x emission reductions are also key to reducing PM_{2.5} pollution, as NO_x contributes to the formation of secondary PM_{2.5}.⁵⁶ Reducing locomotive emissions will be an important element in attaining the NAAQS ozone and/or PM standards.⁵⁷ EPA has recognized that emissions from locomotives generate significant emissions of PM_{2.5} and NO_x that contribute to nonattainment of the NAAQS for PM_{2.5} and ozone.⁵⁸

Further, as demonstrated by the location of disadvantaged communities within NAAQS nonattainment areas, reducing locomotive emissions is critical to solving the pollution problem that plagues these communities. In California, more than half of the population (21 million out of nearly 40 million) live in areas that exceed the most stringent 70 ppb ozone standard.⁵⁹ A disproportionate number of California's population also live in areas designated extreme

⁵² CARB, 2016 State Strategy for the State Implementation Plan for Federal Ozone and PM_{2.5} Standards (March 7, 2017), available at: <https://ww2.arb.ca.gov/resources/documents/2016-state-strategy-state-implementation-plan-federal-ozone-and-pm25-standards>.

⁵³ EPA, "Status of California Designated Areas," https://www3.epa.gov/airquality/urbanair/sipstatus/reports/ca_areabypoll.html (hereinafter Status of CA Designated Areas).

⁵⁴ *Ibid.*

⁵⁵ South Coast Air Quality Management District, 2022 Clean Air Management Plan, Chapter 5, p. 5-17, available at: <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/08-ch5.pdf?sfvrsn=8#:~:text=%E2%80%A2Without%20additional%20control%20measures%2C%20the%20South%20Coast%20Air,is%2071%20percent%20lower%20than%20the%202037%20baseline>.

⁵⁶ EPA, "Ground-level Ozone Basics," <https://www.epa.gov/ground-level-ozone-pollution/ground-level-ozone-basics>; EPA, Evaluating the Contribution of PM_{2.5} Precursor Gases and Re-entrained Road Emissions to Mobile Source PM_{2.5} Particulate Matter Emissions, p. 22, available at: <https://www3.epa.gov/ttnchie1/conference/ei13/mobile/hodan.pdf>. See also CARB, Staff Report Proposed SIP Revision for the 15 µg/m³ Annual PM_{2.5} Standard for the San Joaquin Valley, p. 1 (August 13, 2021), available at: <https://ww2.arb.ca.gov/sites/default/files/2021-08/SJV%2015%20ug%20SIP%20Revision%20Staff%20Report%20FINAL.pdf>.

⁵⁷ See, e.g., CARB, 2022 State Strategy for the State Implementation Plan, p. 6 (September 22, 2022), available at: https://ww2.arb.ca.gov/sites/default/files/2022-08/2022_State_SIP_Strategy.pdf (hereinafter 2022 State SIP Strategy).

⁵⁸ "Control of Emissions of Air Pollution from Locomotive Engines and Marine Compression-Ignition Engines Less Than 30 Liters per Cylinder; Republication," 73 Fed. Reg. 37,096, 37,099 (June 30, 2008) (hereinafter 2008 Locomotives Rule).

⁵⁹ Status of CA Designated Areas; U.S. Census Bureau, Population Division, Annual Estimates of the Resident Population for Counties in California: April 1, 2020 to July 1, 2022 (CO-EST2022-POP-06) (March 2023), available at: <https://www2.census.gov/programs-surveys/popest/tables/2020-2022/counties/totals/co-est2022-pop-06.xlsx>.

nonattainment.⁶⁰ These Californians often live in low-income and disadvantaged communities that experience greater exposure to diesel exhaust and other toxic air pollutants compared to surrounding areas.

The New York Metropolitan area ozone nonattainment area (which also includes parts of New Jersey and Connecticut) failed to reach attainment by the deadline for serious nonattainment of the 2008 ozone NAAQS and, in 2022, was re-classified to severe nonattainment status for that NAAQS.⁶¹ As such, more than 60 percent of the state population (over 12 million out of about 20 million)—including several environmental justice communities—live in areas exceeding ozone standards.⁶²

Prior to EPA’s last revision of its locomotive regulations, a study commissioned by New York State Energy Research and Development Authority (NYSERDA) determined that off-road diesel emissions significantly impact ambient air quality across New York and contribute to nonattainment in New York City.⁶³

D. Railroads Continue to Operate Old, Highly Polluting Locomotives

Class I railroads operate the majority of locomotives in our States and are responsible for the majority of locomotive emissions. The two Class I railroads operating in California—Union Pacific (UP) and BNSF Railway (BNSF)—operate approximately 12,000 freight interstate line haul locomotives annually within the State, representing about 85 percent of the statewide locomotive activity and emissions.⁶⁴ UP and BNSF also operate switcher locomotives, or those traveling around rail yards, representing about five percent of the statewide locomotive activity and emissions.⁶⁵ A much smaller number of Class II and III railroads, industrial operators, and passenger railroads also operate in the State.⁶⁶ By 2030, locomotive emissions are projected to contribute 14 percent of the California’s PM_{2.5} freight emissions and 16 percent of the State’s NOx freight emissions.⁶⁷

⁶⁰ *Id.*

⁶¹ See “Determinations of Attainment by the Attainment Date, Extensions of the Attainment Date, and Reclassification of Areas Classified as Serious for the 2008 Ozone National Ambient Air Quality Standards,” 87 Fed. Reg. 60,926 (Oct. 7, 2022).

⁶² See U.S. Census Bureau, “QuickFacts New York; United States,” Population, April 1, 2020, available at: <https://www.census.gov/quickfacts>. This estimate was calculated by adding the populations for all nine counties (Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Suffolk, and Westchester) classified as in nonattainment.

⁶³ See Southern Research Institute, NYSERDA Clean Diesel Technology: Non-Road Field Demonstration Program, Development of the 2002 Locomotive Survey for New York State, p. 1-1 (February 9, 2007), available at: <https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Publications/Research/Environmental/locomotive-survey-clean-diesel-technology.pdf> (hereinafter NYSERDA Report).

⁶⁴ CARB ISOR, Appendix G, p. 14, available at: <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/locomotive22/appg.pdf>.

⁶⁵ *Id.*

⁶⁶ *Id.*, pp. 24, 28, 32.

⁶⁷ 2022 State SIP Strategy, p. 110.

Four Class I railroads operate within New York: CSX Transportation (CSX), Canadian National Railway (CN), Canadian Pacific Railway (CP), and Norfolk Southern Railway (NS).⁶⁸ Up to 35 additional regional or shortline roads operate, along with 10 tourist railroads, and five commuter/intercity railroads, some of which also receive freight vehicles.⁶⁹ New York & Atlantic Railway (NYA), for example, which has a fleet of 14 locomotives, operates freight trains on the lines owned by the Long Island Rail Road (LIRR), the busiest passenger system in the United States.⁷⁰ The most recent comprehensive survey of locomotives conducted by NYSERDA indicated that at least 245 Class I, II, and III locomotives were in operation in 2002, as well as 160 commuter locomotives and 32 switchers.⁷¹ According to the most recent EPA National Emissions Inventory data, in New York locomotives contributed 17.3 percent of statewide freight emissions of NO_x and 15.3 percent of PM_{2.5}.⁷²

Similarly, in Pennsylvania, locomotive operations contribute a total of 12,182.80 tons per year of NO_x and 316.30 tons of PM_{2.5}, amounting to 19.4 percent of total statewide freight emissions of NO_x and 17.4 percent of PM_{2.5} emissions.⁷³ In Oregon, locomotives contribute 13.6 percent of statewide freight emissions of NO_x and 11.8 percent of PM_{2.5}.⁷⁴

EPA has adopted five emission standards tiers for new locomotives, Tiers 0 through 4, with Tier 0 being the least stringent and Tier 4 being the most stringent.⁷⁵ Per EPA regulations, a locomotive is classified in an emissions Tier based on its original manufacture date.⁷⁶ A locomotive must comply with the emissions Tier applicable to its original manufacture date if it is remanufactured, as defined in EPA's regulations, unless or until it is freshly manufactured, when it would be subject to the more stringent Tier 4 standards.⁷⁷ In spite of the wide commercial availability of cleaner locomotives—which, if put to full use, could cut average emissions by up to 80 percent—EPA's data demonstrates that operators continue to operate locomotives that emit up to nearly 8 times more NO_x per gallon of fuel and 20 times more PM than the cleanest levels required by EPA's most stringent Tier 4 emission standards (applicable to locomotives and locomotive engines first put into service in 2015 or later).⁷⁸

⁶⁸ See NYSDOT, Freight Rail Service in New York State, <https://www.dot.ny.gov/divisions/operating/opdm/passenger-rail/freight-rail-service-in-new-york-state>.

⁶⁹ *Id.*

⁷⁰ See Anacostia, New York & Atlantic Railway, p. 1 (Jan. 2023), available at: <https://www.anacostia.com/wp-content/uploads/2023/01/NYA-Profile23.pdf>.

⁷¹ See NYSERDA Report, pp. 2-24 through 2-27.

⁷² EPA, 2020 National Emissions Inventory Data, accessed via: <https://www.epa.gov/air-emissions-inventories/2020-national-emissions-inventory-nei-data> (hereinafter NEI Data). Total freight emissions were calculated by adding emission totals for locomotives, commercial marine vessels, and on-road heavy duty vehicles.

⁷³ NEI Data. Total freight emissions were calculated by adding emission totals for locomotives, commercial marine vessels, and on-road heavy duty vehicles.

⁷⁴ NEI Data. Total freight emissions were calculated by adding emission totals for locomotives, commercial marine vessels, and on-road heavy duty vehicles.

⁷⁵ 40 C.F.R. § 1033.101.

⁷⁶ *Id.*

⁷⁷ *Id.*, § 1033.640(d).

⁷⁸ CARB ISOR, p. 27; NEI Methodology, p. 5, Table 5.

Indeed, NOx emission reductions from locomotives have not kept pace with NOx reductions in other freight transport sectors. For example, in 2008, EPA found that the per horsepower-hour emission levels for locomotive and marine diesel engines remained at much higher levels than emissions from highway and other nonroad diesel engines, which are comparable to the emissions for highway trucks in the early 1990s.⁷⁹ In California, trucks have become much cleaner over the last decade and are moving towards Zero Emissions (“ZE”) technology. NOx emissions from light-duty vehicles, heavy-duty trucks, and off-road equipment in the South Coast Air Basin have declined by 75 percent since 2000, while emissions from locomotives and other federally regulated sources have declined by half that amount over the same period.⁸⁰ Locomotives are quickly becoming one of the top mobile-source polluters in California on a per transport-container basis.⁸¹ Trucks will be the cleaner mode of moving freight in California as of this year, 2023.⁸²

EPA’s data shows that in 2020, total nationwide emissions from all locomotives were 461,726 tons of NOx and 11,736.90 tons of PM.⁸³ Locomotives also emitted 36,492,845 tons of carbon dioxide, a primary greenhouse gas contributing to climate change.⁸⁴ Again, this demonstrates that locomotives are becoming an increasingly large proportion of mobile source emissions while other sources’ emissions are declining. Further, these figures were likely approximately 15 percent below average due to the effects of the COVID-19 pandemic.⁸⁵

II. Legal Background

A. Congress Preserved State Authority to Control Emissions from Non-New Locomotives

The CAA requires EPA to promulgate standards to achieve the greatest degree of emission reduction achievable through the application of technology applicable to emissions from *new* locomotives and *new* engines used in locomotives.⁸⁶ As described above, EPA has set emission standards. The CAA also provides that no State or any political subdivision thereof shall adopt or attempt to enforce any standard or other requirement relating to the control of emissions from “[*n*]ew locomotives or *new* engines used in locomotives.”⁸⁷ But the statute expressly preserves state authority to regulate *non-new* locomotives and engines. The CAA mandates that EPA authorize California to enforce standards to control emissions from “any nonroad vehicles or engines other than those referred to” in the preceding subparagraphs—e.g., other than *new*

⁷⁹ 2008 Locomotives Rule, at 37,100.

⁸⁰ CARB, 2020 Mobile Source Strategy, p. 74 (Oct. 28, 2021) available at: https://ww2.arb.ca.gov/sites/default/files/2021-12/2020_Mobile_Source_Strategy.pdf.

⁸¹ CARB, Draft Truck vs. Train Emissions Analysis (Sept. 23, 2020), <https://ww2.arb.ca.gov/resources/fact-sheets/draft-truck-vs-train-emissions-analysis>.

⁸² *Id.*

⁸³ NEI Methodology, p. 17, Table 16.

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ 42 U.S.C. § 7547(a)(5).

⁸⁷ *Id.*, § 7543(e)(1), (e)(1)(B) (italics added).

locomotives and their engines.⁸⁸ Other States are permitted to adopt and enforce California’s standards.⁸⁹

Thus, Congress’s intent with respect to the regulation of locomotive emissions is apparent on the face of the statute: California and the other States are preempted only from regulating emissions from *new* locomotives and their engines, which is under the exclusive purview of the EPA, but may regulate emissions from non-new locomotives and their engines.⁹⁰

III. Discussion

A. The Proposed Revisions Are Warranted to More Clearly Align the Locomotive Preemption Regulation with the CAA

As defined in EPA’s regulations for the control of emissions from locomotives (not reopened here), a locomotive, including its engine, is no longer “new” once legal or equitable title has transferred, or after it is placed into service.⁹¹ EPA’s Locomotive Preemption Regulation could be read as “extending preemption well beyond the CAA language,” i.e., far beyond the point at which locomotives and engines are no longer “new.”⁹²

The first subsection of EPA’s Locomotive Preemption Regulation reflects the language in Section 209(e): “States and localities are preempted from adopting or enforcing standards or other requirements relating to the control of emissions from new locomotives and new engines used in locomotives.”⁹³

The second subsection, however, could lead to confusion and deter the States from exercising the authority preserved under the CAA. This part appears to extend preemption to “a period equivalent in length to 133 percent of the useful life, expressed as MW-hrs (or miles where applicable), beginning at the point at which the locomotive or engine becomes new....”⁹⁴ As discussed in the NPRM, the Locomotive Preemption Regulation also provides specific examples of standards and other requirements that would presumptively be preempted during the specified period, including “retrofit and aftermarket equipment requirements,” “whether applicable to *new or other* locomotives or locomotive engines.”⁹⁵

As described above, Congress itself defined the scope of preemption for locomotives and locomotive engines and did not delegate EPA authority to change it.⁹⁶ “[A]gencies have no

⁸⁸ 42 U.S.C. § 7543(e)(2)(A).

⁸⁹ *Id.*, § 7543(e)(2)(B).

⁹⁰ See also *Engine Mfrs. Ass’n v. U.S. E.P.A.*, 88 F.3d 1075, 1091 (D.C. Cir. 1996) (discussing Congress’s intent to protect California’s ability to continue to develop nonroad emission standards).

⁹¹ 40 C.F.R. § 1033.901 (def. of “new”).

⁹² NPRM at 26,092.

⁹³ 40 C.F.R. § 1074.12(a).

⁹⁴ *Id.*, § 1074.12(b); NPRM at 26,092.

⁹⁵ *Id.*, § 1074.12(b) (italics added); NPRM at 26,092.

⁹⁶ 42 U.S.C. § 7543(e).

special authority to pronounce on pre-emption absent delegation by Congress....”⁹⁷ Section 209(e)(2) specifically preserves California’s authority to adopt and enforce standards applicable to non-new locomotives and engines.⁹⁸ Congress required EPA to authorize such California regulations, unless evidence supports one of three factual findings that can be a basis for denial.⁹⁹

Congress’s direction to EPA contained in Section 209(e) to “issue regulations to implement this subsection” does not provide EPA with authority to expand the scope of categorical preemption.¹⁰⁰ The text provides no indication that “Congress intended [EPA] regulations ... to displace state law[s]” other than those Congress itself expressly chose to displace through the CAA.¹⁰¹ When Congress authorizes EPA to categorically preempt state law under the CAA, it does so in clear language that bears no resemblance to Section 209(e).¹⁰² The direction to “implement” the categorical preemption decisions Congress already made bears no resemblance to such provisions.¹⁰³

EPA’s proposal is an appropriate clarification of its Locomotive Preemption Regulation that will prevent a misinterpretation that EPA intended to expand the scope of congressionally-defined preemption. As EPA correctly observes, the text of Section 209(e)(2)(A) calls for EPA to make factual findings on a record that includes public comment. The CAA does not direct, or even authorize, EPA to predetermine that certain regulations of non-new locomotives and their engines are categorically preempted.¹⁰⁴ Rather, EPA may evaluate whether a given California law impermissibly regulates *new* locomotives or *new* engines on a “case-by-case basis.”¹⁰⁵ The Proposed Revisions bring EPA’s Locomotive Preemption Regulation into alignment with the statute.

B. Retaining the Current Regulatory Text Would Be Detrimental to the Public

EPA asks for comments on “to what extent there would be public benefit if [it] were to retain the current regulatory text.”¹⁰⁶ There is no public benefit to retaining the existing text; rather, it would be detrimental to the public.

⁹⁷ *Wyeth v. Levine*, 555 U.S. 555, 577 (2009); see also *Louisiana Pub. Serv. Comm’n v. FCC*, 476 U.S. 355, 374 (1986) (“[A]n agency literally has no power to act, let alone pre-empt the validly enacted legislation of a sovereign State, unless and until Congress confers power upon it.”).

⁹⁸ 42 U.S.C. § 7543(e)(2).

⁹⁹ *Id.*, § 7543(e)(2)(A).

¹⁰⁰ *Id.*, § 7543(e) (final sentence).

¹⁰¹ See *Louisiana Pub. Serv. Comm’n*, 476 U.S. at 374.

¹⁰² E.g., 42 U.S.C. § 7545(c)(4)(A).

¹⁰³ See also *Nat. Res. Def. Council v. E.P.A.*, 777 F.3d 456, 473 (D.C. Cir. 2014) (vacating EPA implementation regulations based on exceeding and conflicting with the CAA); *S.E.C. v. Sloan*, 436 U.S. 103, 118 (1978) (courts reject agency interpretations that are inconsistent with the statute or frustrate congressional policy underlying the statute); *Ry. Lab. Executives’ Ass’n v. Nat’l Mediation Bd.*, 29 F.3d 655, 670 (D.C. Cir. 1994) (agency’s power is no greater than that delegated to it by Congress).

¹⁰⁴ NPRM at 26,095; see also 42 U.S.C. § 7543(e)(2)(A).

¹⁰⁵ NPRM at 26,095.

¹⁰⁶ *Id.*

As explained above, there is a great need for the States to be able to exercise their congressionally-preserved authority to regulate emissions from non-new locomotives. Locomotive emissions present an increasing proportion of the harmful air pollutants endangering public health and the environment, and plaguing environmental justice communities. State action is needed to respond to this critical situation and also to attain and maintain NAAQS. The current regulatory text has the potential to create confusion and to unintentionally and inappropriately serve as a deterrent to the States exercising their authority.

IV. Conclusion

For all of the reasons stated above, our States respectfully request that EPA finalize and adopt the proposed revisions to its Locomotive Preemption Regulation.

Sincerely,

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Index of Supporting Materials to Comments of the States in Support of EPA’s Proposed Revisions to “Preemption of State Standards and Requirements for New Locomotives or New Engines Used in Locomotives,” 88 Fed. Reg. 26,092-26,096 (April 27, 2023)

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2	CARB, “Identified Toxic Air Contaminants,” https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants
3	EPA, EPA-300-B-1-6004, EJ 2020 Action Agenda: The U.S. EPA’s Environmental Justice Strategic Plan For 2016-2020 (Oct. 2016)
4	CARB Initial Statement of Reasons for Proposed In-Use Locomotive Regulations (Sept. 20, 2022), available at: https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/locomotive22/isor.pdf
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6	California Senate Bill No. 535, California Global Warming Solutions Act of 2006: Greenhouse Gas Reduction Fund (approved Sept. 30, 2012)
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