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June 12, 2023

Re: Implementing Environmental Justice Goals for Frontline Communities Near Transportation Sources

To: White House Environmental Justice Advisory Council

The Biden Administration has made firm commitments to reverse the environmental injustices that have contributed to the disproportionate health burden borne by frontline communities most exposed to the pollution emitted from the combustion of fossil fuels. In addition to greenhouse gases, the products of carbon combustion emitted from mobile sources, electric generating units and industrial plants reduce life expectancy, disrupt normal fetal development, cause childhood diseases that interrupt school attendance, interfere with educational advancement, employment opportunities and lifetime income, and contribute to acute long-term conditions that impose additional health care costs and impair quality of life. Moreover, petrochemical production for motor fuels and plastics has also been concentrated in low-income and minority communities, further intensifying environmental injustice in places like Louisiana’s “Cancer Alley,” even as economy-wide progress is made towards transportation decarbonization and reduction of criteria air pollution.¹

Frontline communities living near major highways, ports, airports, rail yards and intermodal freight terminals are most at risk because –

1. Over 80 million Americans live in residences, attend schools, play at recreation facilities and work immediately adjacent to mobile emission sources including truck routes, port and airport operations, railyards, and warehouses.
2. Unlike pollutants emitted from power plants and most industrial sources, pollutants from mobile sources are emitted at ground level with little dispersion in the atmosphere before being inhaled by people living, working, traveling, or attending school nearby; and

¹ Deep South Center for Environmental Justice, [“The More Things Change, the More They Remain the Same: Living and Dying in Cancer Alley”](#), May 8, 2023.

3. Internal combustion engines emit a much more complex mixture of harmful pollutants that include both criteria pollutants (NO_x, particulate matter, volatile organic compounds, and carbon monoxide) and toxic substances (benzene, polycyclic organic hydrocarbons, aldehydes, 1,3 butadiene, chromium, vanadium, and other metals) to which frontline communities are continuously exposed.

Together these factors combine to cause frontline communities to be exposed to more elevated concentrations of pollutants known to harm human health than neighborhoods not near transportation facilities, and to suffer a significantly more severe burden on community health. This is in addition to the disparate adverse impacts many such communities suffer because transportation facility operations and designs impair safety and equitable access to opportunities, as well as imposing higher burdens of noise and water pollution.

To remedy the past impact of these discriminatory policies, and protect communities going forward, we ask the Administration to implement initiatives in four areas of transportation policies:

- establish and implement standards to protect at-risk communities from exposure to environmental hazards;
- adopt strategies to mitigate the adverse impacts of facility siting decisions;
- expand programs that enhance mobility for low-income communities; and
- accelerate the replacement of polluting Internal Combustion Engine (ICE) vehicles with zero emission vehicles (ZEVs).

Administration action is needed now to ensure that a half a trillion dollars in federal formula transportation spending flowing to the states over the next several years under the Infrastructure Investment and Jobs Act (IIJA) is compliant with key federal statutes and rules. While states have substantial discretion to allocate formula funds to many types of projects, administrative actions we outline here, which rely on existing legal authority, could help ensure this spending does not exacerbate environmental injustice, worsen climate change, and undermine public health.

- The Administration should set requirements for introduction of zero emission vehicles to accelerate vehicle electrification.
- US DOT and EPA should take steps to ensure that planned transportation investments will not cause attainment areas to fall into non-attainment.
- EPA should set a much more stringent daily PM 2.5 standard designed to keep community exposures below harmful levels, unlike the current standard which prevents only 2% of the 50 to 70 days a year when 24-hour PM 2.5 concentrations exceed the level that EPA has found to cause significant harm to health.
- EPA should revise rules governing air pollution monitor siting to ensure that near-road exposures of front-line communities are accounted for in designating non-attainment areas, rather than disregarded as under current rules, which require regional monitors to be located at least two miles from major highways.
- The Administration should require modernization of methods used to meet federal transportation planning requirements and to implement the National Environmental Policy Act (NEPA). This should include comparing models against observed data, use of big data to evaluate multimodal accessibility of housing to jobs and neighborhood services, and integration of remote sensing and

other tools to honestly appraise transportation plan and project impacts, especially as they affect front-line environmental justice communities. This should include rule changes to ensure that induced traffic impacts of road expansions are properly accounted for in transportation plan and project appraisals. Empirically-well supported methods are available that could enable good analysis to be done quickly as needed to meet requirements of the Fiscal Responsibility Act of 2023.

- The White House Council on Environmental Quality (CEQ) should establish guidance to govern how agencies consider impacts of their actions on GHG emissions by analyzing how their programs and projects will, or will not, contribute to meeting the CO2 reduction targets set by the US in the Nationally Determined Contribution (NDC) submitted under the UN Climate Convention. The Administration's climate policy and plans are poised to fall far short of those targets.
- The Administration should apply the Precautionary Principal before relying on industrial carbon removal in the form of Carbon Capture and Storage (CCS), Carbon Capture Storage and Utilization (CCUS), hydrogen fuels, and Direct Air Capture (DAC) to meet its greenhouse gas goals.² We share the concerns raised by 13 environmental justice organization representatives who recently cautioned that industrial carbon removal threatens to undermine wins achieved at the local and state levels to transition away from fossil fuels and harmful co-pollutants like particulate matter to a just and equitable energy economy. The overarching purpose of carbon removal should be the complete and rapid transition away from harmful fossil fuels and other sources of industrial pollution, with an absolute priority on reducing chronic disparities of pollution exposure and industrial harm experienced by environmental justice communities.

EPA Policies and Practices.

As discussed below, environmental policies played a major role in discriminating against frontline communities. Many adverse impacts could be substantially reduced as the vehicle fleet is converted to zero emissions technologies. But EPA's proposals for vehicle emission standards are not intended to achieve that result. EPA assumes that its regulatory standards will achieve only "a constant Battery Electric Vehicle (BEV) penetration of 48.45% for model year 2030 and beyond, whereas light trucks have a constant BEV new sales penetration of 50.28% for model year 2030 and beyond. For medium-duty class 2b and 3, the regulatory case was modeled assuming 55% of new sales are BEVs or FCEVs for model year 2035 and beyond."³ This level of ZEV replacement of ICE vehicles will not achieve the full measure of protection that at-risk communities need to minimize their exposure and health risks.

To minimize health risks before tailpipe emissions are eliminated, we ask EPA to adopt air quality standards designed to protect against exposure to the complex mixture of pollutants emitted from transportation facilities. Since 1970 EPA set air quality standards based on the evidence of harm caused by exposure to a single pollutant. Health effects research early on demonstrated that communities adjacent to highways and ports suffered significantly greater mortality and morbidity, impaired fetal development and a greater incidence of childhood asthma compared to similar social-economic communities not located near transportation sources. But the research showing the increased adverse health burden suffered by near-highway communities was excluded from EPA's criteria documents that evaluated the evidence of health effects for the purpose of setting air quality standards. EPA disregarded near-highway health studies because air quality near highways was contaminated by a complex array of pollutants that "confounded" the evidence of harm linked to the pollutant for which a standard

² [Statement by Environmental Justice Organizations on the National Symposium on Climate Justice & Carbon Management](#), June 7, 2023.

³ [Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles, Draft Regulatory Impact Analysis](#) (EPA, April 2023), p. 8-7,

was being set. Air quality standards for PM and NO_x were set based on evidence of the harm caused only by that pollutant and did not account for the synergistic and additive adverse health effects caused by that pollutant when it contributed to the total mixture of pollution emitted from highways. No air quality standards were set to protect at-risk communities from the health effects caused by exposure to the actual complex mixture of multiple pollutants emitted from highways, ports, and railyards.

We also ask that EPA return to the more protective interpretation of the Clean Air Act that it applied to setting air quality standards during the first quarter century of the Act. Initially, EPA understood that its obligation was to set standards that protected against pollutant concentrations that caused known harms to public health. But in 1997 when EPA first established a separate air quality standard for fine particles (PM_{2.5}), EPA abandoned its prior CAA interpretation. EPA determined that a separate standard for PM_{2.5} was needed because the health effects research showed that fine particles are more strongly linked to the mortality effects of cardiovascular and respiratory disease than larger particles. EPA also concluded the most compelling evidence of increased disease and mortality is associated with short-term 24-hour exposures starting at concentrations around 16 µg/M³. But instead of setting the 24-hour standard at 16 µg/M³ to protect against these harmful exposures, EPA set the 24-hour standard at 65 µg/M³ and did not require the seven most polluted days of each year comply with that standard. Based on air quality data in the record, the effect of these standards was to prevent only 2% of 50 to 70 days per year when 24-hour concentrations exceeded the level EPA found cause significant harm to health.

EPA's abandonment of its interpretation that had governed previous NAAQS decisions put near-source communities especially at risk. The health effects science showed that each high pollution day contributes most to increased mortality and hospitalization. Elevated peak levels of pollutants occur closest to the source, and populations near a source are exposed to both higher and more frequent peak concentrations than communities further removed from a source.

EPA chose to rely primarily on an annual standard for PM_{2.5} which assured protection for those exposed to regional average concentrations not near a major source such as a highway, but not for nearby residents exposed to daily high peaks near a major source. Annual concentrations measured at a monitor are the average for all days measured at that site over a year. A much larger number of days are "clean" days because of wind, rain, and other conditions, and many of those days include wind directions that blow pollution from a source, such as a highway, away from the monitor. Less frequent high pollution events that may occur 30, 40 or 50 days out of a year, are averaged out at the monitor by many more clean days. In addition, the high concentrations occurring near a source are not detected a mile or more downwind after a source plume disperses in the atmosphere.

EPA's decision not to protect near-source communities from exposure to high peak concentrations of pollution was compounded by monitoring policies that failed to measure peak concentrations that might violate the non-protective 24-hour standard. Prior to the 2012 revision of the PM NAAQS, EPA's air quality monitoring policies required states to locate air quality monitoring stations for two of the most harmful pollutants emitted from highways, i.e., particulate matter and nitrogen oxides, away from the source rather than where residents were exposed to highway emissions. Monitors were to be located at "neighborhood" or "regional" scale sites to measure regional or neighborhood air quality. Monitors could not be located in communities adjacent to major sources such as highways, railyards or industrial facilities. If states nonetheless sited monitors in adjacent communities, EPA's monitoring policy prohibited air quality measured at those locations from being compared with national air quality standards (NAAQS) to determine whether the area should be designated "nonattainment" under the Clean Air Act. A formal designation as "nonattainment" is required to trigger the obligation for a State to develop and adopt a "control strategy" designed to attain the NAAQS.

Thus, for decades EPA's failure to measure air quality in frontline communities denied communities adjacent to major traffic corridors and ports the protections promised by promulgating air quality standards established to protect public health. EPA's failure to set a daily standard that would keep exposures below harmful levels, and instead rely on the annual standard, continued to allow 98% of elevated daily exposures, providing no protection for the health of near-source at-risk communities. By not protecting near-highway communities from exposure to most high pollution days, EPA created a regulatory scheme that denied those communities recourse to obtain the protections for public health promised by the CAA.

Representative of eight environmental, environmental justice, and transportation reform organizations submitted comments to EPA asking the Agency to reverse monitoring policies that have allowed communities near transportation facilities to suffer significant adverse health outcomes.⁴ Representative of nine organizations submitted comments to the White House Council on Environmental Quality (CEQ) regarding guidance for implementation of the National Environmental Quality Act (NEPA) to fill some of the regulatory gaps created by EPA's failure to set adequate health standards, and the Agency's monitoring and implementation guidance.⁵ We ask that you encourage the Administration to adopt the policies requested to assure greater protection for at-risk communities.

DOT Actions

While past highway siting decisions are hard to reverse, the Administration can mitigate the disruptive community and adverse health impacts of forcing Black, Indigenous, and People of Color (BIPOC) and low-income communities to live near polluting facilities by accelerating the electrification of the vehicle fleet, supporting multimodal transportation, and ensuring that communities achieve the full protection promised by the CAA. Many of these monitoring policy issues are addressed in recent comments to EPA on implementation of the revised NAAQS for PM2.5.⁶

The adverse economic and social impacts on frontline communities of highway siting decisions are harder to mitigate. We urge you to explore with US DOT policies designed to mitigate the economic and community disruption that has been caused by past highway siting decisions. The Reconnecting Communities Program is a good but very modest start, but even this is being used in some states as window dressing for much larger road expansion projects that are harmful to frontline communities. We urge strategies that compensate residents of nearby communities for the diminished value of properties not condemned, and that provide free health monitoring and treatment for the diseases that EPA has found to be causally linked to highway air pollutants.

We would appreciate an opportunity to meet with you to further explore actions the Administration might take to fulfill its commitments in Justice40 to protect frontline communities.

⁴ *Comments on Implementation of Revised PM NAAQS*, submitted March 28, 2023, by Coalition for Smarter Growth, Elders Climate Action, Equiticity, Institute for Transportation and Development Policy, Neighbors for Clean Air, RMI, Transportation for America.

⁵ *Comments on CEQ's NEPA Guidance on Consideration of Greenhouse Gas Emissions and Climate Change*, submitted April 10, 2023, by Coalition for Smarter Growth, Elders Climate Action, Equiticity, Institute for Transportation and Development Policy, National Association of City Transportation Officials, RMI, Sierra Club, Transportation for America, the Southern Environmental Law Center. <https://www.itdp.org/2023/04/12/working-group-nepa-ceq-transport-emissions/>

⁶ *Comments on Implementation of Revised PM NAAQS*, op. cite.

Sincerely,

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