



ENVIRONMENTAL DEFENSE

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**Testimony on EPA’s Proposed Rulemaking for
“Control of Emissions of Air Pollution from Locomotives and Marine
Compression-Ignition Engines Less than 30 Liters per Cylinder”
Published on April 3, 2007 (72 Fed. Reg. 15,937)
EPA Public Docket No. EPA-HQ-OAR-2003-0190**

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Seattle, WA**

Good morning. My name is Janea Scott, and I am testifying today on behalf of Environmental Defense. Environmental Defense is a non-profit, non-governmental and non-partisan environmental organization with about 21,000 members in Washington and more than 500,000 members nationwide. Since 1967, our organization has linked science, economics, and law in solving today’s most pressing environmental issues.

Environmental Defense strongly supports cleaning up emissions from ships and trains and we strongly encourage EPA to finalize this proposal before the end of the year. Over the last few years, EPA’s Office of Transportation and Air Quality has made tremendous strides in cleaning up diesel air pollution. This locomotive and marine engines rule has the potential to keep us on the steady march towards eliminating that black puff of smoke associated with diesel engines. In fact, by 2030, EPA estimates this proposed rule will provide approximately \$12 billion in health benefits, preventing each year, for example, about: 1,500 early deaths, 1,100 hospitalizations, and 170,000 lost work days. Further, EPA’s estimates utterly fail to account for the deaths and other health benefits prevented due to reductions in smog pollution, so this estimate is conservative at best.

Before I dive into the minutia of this rule, I want to take a minute to step back and paint the bigger picture of why we’re all here today. Diesel engines provide power to almost every type of vehicle used in commerce, including the ships and locomotives that are the subject of today’s hearing. The diesel exhaust produced by these engines is among the most dangerous and pervasive sources of air pollution. In fact, according to EPA’s own estimates, the locomotive and marine engines covered by the proposed rule currently account for about 17% of mobile source diesel PM2.5 emissions in Seattle. Left to grow

unchecked this percentage would increase to a staggering 43% in 2020 and 60% in 2030. This rule can help address the important air quality challenges the nation and Seattle face:

- Diesel air pollution adds to cancer risk all around the country. In Washington, for example, approximately 87% of the cancer risk due to air pollutants comes from mobile sources like cars, trucks, ships and trains. Overall, diesel emissions are the hazardous air pollutant with the highest contribution to cancer risk.
- Diesel exhaust has been classified as a probable or likely human carcinogen, by the EPA and the World Health Organization, among others. Furthermore, the California EPA has classified it as a known human carcinogen.
- Diesel air pollution is a major source of harmful fine particles. Nationwide monitoring data indicates that 88 million people in more than 200 counties are exposed to levels of fine particles that exceed the national health-based air quality standard for PM_{2.5}. And a body of epidemiological studies associates these fine particles with thousands of premature deaths and hospitalizations.
- Diesel air pollution contributes to harmful smog levels. Nationwide monitoring similarly indicates that 157 million people living in 461 counties are exposed to levels of ground-level ozone or “smog” that exceed the 8-hour national health-based standard. High ozone levels cause acute respiratory problems, aggravated asthma, decreased lung function, inflammation of lung tissue, an increase in hospital admissions and emergency room visits for respiratory causes, and crop damage. Children with asthma are most at risk.
- When EPA established the national health-based air quality standards for fine particles and ozone smog in 1997, EPA estimated that **each year** the high levels of harmful fine particle concentrations and smog that are common in metropolitan areas nationwide are responsible for an estimated 15,000 premature deaths, 350,000 cases of aggravated asthma and 1 million cases of significantly decreased lung function in children. Since 1997 the science supporting more protective NAAQS for both fine particles and ozone has gotten stronger, making reductions from sources like the ships and locomotives under discussion today even more important.
- Diesel air pollution contains more than 40 different toxic chemicals, many of which are known or suspected to cause cancer, like benzene, 1,3 butadiene, and polycyclic aromatic hydrocarbons (PAHs).
- Diesel air pollution impairs visibility. The same fine particles that have adverse health effects cause the haze that pollutes scenic vistas in national parks and wilderness areas, and creates “brown clouds” in our urban centers.

- Diesel air pollution threatens revered ecosystems. The constituents of diesel exhaust contribute to the acid rain that continues to harm sensitive ecosystems across Washington. In fact, a recent report by the Puget Sound Maritime Air Forum demonstrated that maritime activity produces about 40% of all SO₂ in the region.

The list I have just read through helps us see the forest through the trees of details in the rule. And it demonstrates that EPA's action to clean up the diesel pollution from ships and trains will help to provide enormous public health and environmental benefits. Environmental Defense respectfully urges EPA to protect human health from dangerous diesel exhaust by improving its proposal in the following four key ways:

First, EPA should tighten up the NO_x standards throughout the rule. Currently there is no Tier 3 NO_x standard for locomotives. Environmental Defense strongly recommends that locomotive Tier 3 include a requirement for a 50% reduction in NO_x. The preamble to this rule indicates that reductions can be gained by applying EGR and the Clean Air Act requires that EPA set standards that are technology-forcing. Environmental Defense also strongly urges EPA to require that both the stringent (80-95%) reductions in PM and in NO_x for the largest ships (>3700 kw) begin as soon as possible and no later than 2014. These same stringent standards for NO_x and PM should be applied to the smaller ships and all trains as soon as possible, but no later than 2015. States across the country are under firm deadlines for achieving cleaner, healthier air and EPA's own numbers show that each year of delay is paid for in early deaths, children's asthma attacks, and lost work days that could have been prevented.

Second, Environmental Defense strongly supports the provision that requires all locomotive engines to install modern pollution control technology when they are rebuilt and, we strongly encourage EPA to include marine engines in this provision. Including marine engines is cost-effective, technologically feasible, and will help get pollution out of the air right now. Environmental Defense would like to see this requirement for locomotives and ships begin as soon as the rule goes final.

Third, EPA must finalize this rule no later than December 2007. In 2004, EPA initially contemplated issuing proposed rules in 2005 and final rules in 2006 with a target compliance date of 2011. EPA is now nearly 2 years delayed and the target compliance date has been prolonged by 4-6 years. Further delay is unacceptable.

Fourth, Environmental Defense would strenuously and vigorously object to any weakening of the proposed rule. Locomotive engines release voluminous amounts of nitrogen oxide pollution. These NO_x emissions contribute to lethal particulate pollution. These NO_x emissions transform in the atmosphere to dangerous summertime smog. These NO_x emissions threaten the health of our forests and lakes. In Seattle alone, locomotives emit nearly 3500 tons of NO_x air pollution each year. This is comparable to the pollution from about 3.7 million new cars. Numerous diesel engine manufacturers -- those who make heavy duty trucks, buses, construction equipment,

agricultural equipment, mining equipment, and I could go on -- have stepped up to the plate to address the harmful NOx pollution from their engines. Now it's time for locomotive engine manufacturers to do their part. Therefore, we respectfully ask that EPA finalize timely, rigorous NOx emission standards for high-polluting locomotive engines.

In conclusion, Environmental Defense appreciates EPA's proposal to limit emissions from diesel trains and ships. To put the nation on the path toward cleaner, healthier air, it is essential that ships and locomotives are subject to rigorous emission and fuel standards. And to realize the full suite of public health and environmental protections possible, it is imperative that all categories of engines take part in reducing diesel air pollution. And to fulfill the promise of the proposal, EPA must take prompt action to finalize comprehensive, protective standards before year's end to ensure that it does indeed become a reality for the millions of Americans waiting for a breath of fresh air.

Thank you for your time.