

ENVIRONMENTAL LAW AND JUSTICE CLINIC

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EPA Docket Center (6102T)
Docket ID No. EPA-HQ-OAR-2002-0051
1200 Pennsylvania Ave., NW.
Washington, DC 20460

**Re: Comments on National Emission Standards for Hazardous Air Pollutants
from the Portland Cement Manufacturing Industry Docket**

To the Environmental Protection Agency:

The Environmental Law and Justice Clinic at Golden Gate University School of Law submits these comments on behalf of West Valley Citizens Air Watch and Bayview Hunters Point Community Advocates regarding EPA's proposed National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry, 74 Fed. Reg. 21136-01.

Overall, we support EPA's efforts to more stringently limit hazardous air emissions from the Portland cement industry. EPA should limit mercury emissions to the greatest extent possible to account for the disproportionate health impact of mercury pollution on poor and minority communities. Additionally, EPA should separately evaluate the other hazardous air pollutants emitted by cement kilns, such as lead and chromium, to account for their unique harmful health effects. Finally, EPA should not eliminate opacity standards as an additional way to measure PM emissions when the more accurate proposed measures are implemented for kilns and clinker coolers because of their ability to provide a valuable check on a facility's emissions and to enable citizens to monitor facilities.

- 1. EPA Should Limit Mercury Emissions from Cement Kilns to the Greatest Extent Possible.**
 - A. Mercury Pollution More Significantly Impacts Poor and Minority Populations.

In addition to the justifications cited by EPA in the proposed rule, EPA should

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regulate mercury emissions from the Portland cement industry to the greatest extent possible because of their adverse health impacts on poor and minority communities. EPA is required to consider the most vulnerable populations when promulgating regulations. Specifically, Executive Order 12898 states that to the extent practicable and permitted by law, each federal agency “shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, the disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States.” In 1994, the EPA Administrator issued guidance pursuant to this executive order requiring that environmental justice issues are considered in the agency’s decision-making process. Despite these specific Agency commitments to environmental justice, EPA has historically devoted little attention to evaluate the impact of decisions made under the Clean Air Act on low-income and minority communities. *See* U.S. Gov’t Accountability Office, *EPA Should Devote More Attention to Environmental Justice When Developing Clean Air Rules*, GAO-05-289 at 1 (2005). By reducing mercury emissions to the greatest extent possible, EPA will be adhering to these requirements to protect the most vulnerable populations.

EPA’s mandate to consider environmental justice is particularly important as to mercury because mercury emissions disproportionately impact environmental justice communities. Mercury emitted in the atmosphere from industrial processes, such as Portland cement kilns, is deposited and taken up in bacteria in aquatic environments and converted from elemental mercury into methylmercury. *See* EPA News Release, Landmark U.S. Geological Survey Study (May 1, 2009), *available at* <http://www.epa.gov/newsroom/index.htm>. Methylmercury bioaccumulates as it moves up the food chain and is absorbed in the tissue of fish and marine mammals. *Id.*

The primary pathway for human exposure to mercury generally recognized at this time is the ingestion of fish and other marine species contaminated with methylmercury. *See* EPA Methylmercury Fish Tissue Criterion Fact Sheet, *available at* <http://www.epa.gov/waterscience/criteria/methylmercury/factsheet.html>. All fifty states, EPA, and the Food and Drug Administration have issued advisories on the consumption of fish due to mercury levels. *See* U.S. Department of State Press Release, Committee of the Whole 25th Governing Council United Nations Environment Programme (February 16, 2009), *available at* <http://www.state.gov/g/oes/rls/remar/2009/117504.htm>; *see also* EPA Mercury Fish Consumption Advisories, *available at* <http://www.epa.gov/mercury/advisories.htm> (summarizing EPA-FDA joint federal advisory).

Low-income racial and ethnic communities more frequently rely on local bodies of water for subsistence fishing, and as a result are more likely to be exposed to unsafe levels of mercury. Devon Payne-Sturges & Gilbert C. Gee, *National Environmental Health Measures for Minority and Low-income Populations: Tracking Social Disparities in Environmental Health*, 102 ENVTL. RESEARCH 154, 165-66 (2006). This

is true for the Bayview Hunters Point neighborhood in Southeast East San Francisco. Notably, Southeast San Francisco's residential neighborhoods predominately consist of communities of color and include some of San Francisco's most economically disadvantaged residents. San Francisco Board of Supervisors Resolution No. 465-08 (adopted October 28, 2008). Many of these residents use the San Francisco Bay for recreation and subsistence fishing. *Id.* As studies show,

poor and racial minority groups consume significantly more fish caught in contaminated water bodies than their white, male counterparts because of their reliance on it as an important subsistence supplement to their diet. Yet, pollution limits set by agencies protect humans from toxins accumulated in fish have traditionally been based on the consumption patterns of white, male sport fishers. Not surprisingly, racial minority groups and the poor have suffered exposure to much higher levels of pollutants and toxins.

Tseming Yang, *Melding Civil Rights and Environmentalism: Finding Environmental Justice's Place in Environmental Regulation*, 26 HARV. ENVTL. L. REV. 1, 15 (2002); see also Catherine O'Neill, *Variable Justice: Environmental Standards, Contaminated Fish, and "Acceptable" Risk to Native People*, 19 STAN. ENVTL. L.J. 3, 11-14 (2000). Populations who are exposed to higher levels of mercury through their livelihood and culture – such as subsistence fishers – are particularly susceptible to mercury's devastating health effects. See United Nations Environment Programme, Mercury Awareness Raising Package (February 2009), available at http://www.chem.unep.ch/mercury/awareness_raising_package/default.htm.

B. EPA Should Reject Industry Arguments to Not Set Protective Mercury Standards.

EPA should reject the industry's argument that it cannot cost effectively achieve the mercury reductions. The Maryland Department of the Environment recently entered an agreement with Lehigh Cement Co.'s plant in Carroll County whereby the facility agreed to reduce its mercury emissions by 80 percent by March 2012. See <http://www.mde.state.md.us/PressReleases/1215.html>. Notably, according to its plant manager, Lehigh Company believes that it can cost-effectively achieve these mercury reductions. See Timothy B. Wheeler, *Cement Plant to Cut Mercury Emissions*, BALTIMORE SUN (Aug. 11, 2009), available at <http://www.baltimoresun.com/news/maryland/carroll/bal-md.lehigh11aug11,0,858039.story>.

Similarly, EPA should reject industry comments suggesting cement production will shift overseas due to weaker standards. See, e.g., John Flesher, *Cement Industry: Mercury and Toxins Must Stay!*, THE HUFFINGTON POST (April 22, 2009), available at http://www.huffingtonpost.com/2009/04/23/cement-industry-mercury-a_n_190478.html. Notably, the international community has also found mercury

emissions to be harmful to human health. The United Nations Environment Programme is developing an international treaty to slash Mercury emissions around the world. *See* 40 Env'tl. Rep. 429 (February 27, 2009); 40 Env'tl. Rep. 1175 (May 22, 2009). The United States, along with 140 other countries, has committed to prepare a "global legally binding instrument on mercury" by the year 2013. *See* United Nations Environment Programme, Draft Decision On Chemicals Management Including Mercury (February 2009).

In support of comprehensive international regulation of mercury, the United Nations observes that "mercury is a chemical of global concern due to its long-range atmospheric transport, its persistence in the environment once anthropogenically introduced, its ability to bioaccumulate in ecosystems and its significant negative effects on human health and the environment." *Id.* The United Nations thus calls for strong "international action consisting of the elaboration of a legally binding instrument on mercury . . . to reduce risks to human health and the environment." *Id.*

2. EPA Should Evaluate Other Hazardous Air Pollutants as Matters of Potential Regulation.

As EPA has acknowledged, Portland cement facilities emit other hazardous air pollutants, including arsenic, cadmium, beryllium and lead. *See* 74 Fed. Reg. at 21138. In this proposed rule, EPA does not evaluate or regulate these harmful pollutants, which could also include other pollutants not listed such as dioxin. Rather, EPA is "proposing to set emission standards for these metal hazardous air pollutants from Portland cement manufacturing facilities that are area sources (using particulate matter as a surrogate)." *Id.* Each of these harmful pollutants causes adverse health effects, which are not accounted for in this rulemaking.

For example, there is no safe exposure level for lead: even small, discrete doses of lead from Portland cement emissions can have long-term health and environmental impacts. The adverse health effects from lead include "neurological, hematological and immune effects for children and hematological, cardiovascular and renal effects for adults." 73 Fed. Reg. at 66987. These health hazards caused are undisputed by the EPA, which has repeatedly concluded that "lead is a very toxic element, causing a variety of effects at low dose levels." *See* Lead Compounds Hazard Summary, U.S. EPA (April 1992, modified January 2000), *available at* <http://www.epa.gov/ttn/atw/hlthef/lead.html>.

The Administrator recently recognized that health effects are now known to occur at much lower levels than experts thought thirty years ago when the initial NAAQS level for lead was promulgated. In particular, the Administrator found that "the current evidence indicates the need for a standard level that is significantly lower than the current level to provide increased public health protection, especially for at-risk groups, including most notably children." 73 Fed. Reg. at 66985. Indeed, as EPA

recently recognized, no “safe” threshold for blood lead levels has been identified. 73 Fed. Reg. 66968. Consistent with these findings, in 1991, the Secretary of Health and Human Services characterized lead poisoning as the “number one environmental threat to the health of children in the United States.” *Id.* at. 66968. This threat will not be eliminated even with the new NAAQS standard. *See id.* at 67006.

Further, as with mercury emissions, the significant public health effects from lead emissions are likely worse in poor and minority communities. *See, e.g., Hartford Park Tenants Ass’n v. Rhode Island Dept. of Env’tl. Management*, 2005 WL 2436227 at *7 (R.I. Super. Ct. Oct. 3, 2005) (“[m]inority children in Providence suffer disproportionately from high levels of lead poisoning when compared to white children of Providence”); Robert D. Bullard, *Leveling the Playing Field Through Environmental Justice*, 23 VT. L. REV. 453, 467-68 (1999) (children with lead poisoning are often in the lowest income bracket). This is yet another reason for EPA to find endangerment from lead emissions. *See* 74 Fed. Reg. 18890 (“[i]f vulnerable subpopulations are especially at risk, the Administrator is entitled to take that point into account in deciding the question of endangerment”).

In addition to the harms mercury and lead cause, chromium has been linked to cancer and respiratory effects such as decreased pulmonary function and pneumonia. *See* EPA, Chromium Compounds, Hazard Summary, *available at* <http://www.epa.gov/ttnatw01/hlthef/chromium.html>. For these reasons, chromium emissions from the Portland cement industry are a significant concern of local communities located near plants.

Even with EPA’s proposed control requirements for particulate matter, the Portland cement industry will still emit up to 0.085 lb particulate matter per ton of clinker. 74 Fed. Reg. at 21155. Without an analysis of the amount of these hazardous air pollutants that will still be emitted, it is unclear how much these new emission reduction requirements will reduce the serious health risks from arsenic, chromium, lead, beryllium and other emissions. Importantly, the health effects from the synergistic and cumulative impacts of the various air pollutants emitted from cement kilns are not taken into account in this regulatory proposal. Therefore, we request that EPA separately analyze these pollutants to determine the appropriate reduction level to protect public health and account for synergistic and cumulative impacts.

3. EPA Should Not Eliminate Opacity Standards.

In the proposed rule, EPA states that it is “proposing to remove all opacity standards for kilns and clinker coolers because these sources will be required to monitor compliance with the PM emissions limits by more accurate means.” 40 Fed. Reg. 21140. We support EPA’s requirement for more accurate measures of the pollution.

Nevertheless, although we strongly support the use of more accurate

measurement techniques for particulate matter, we do not believe the elimination of all opacity requirements is justified. There are benefits to having an opacity standard in conjunction with a particulate matter standard. Opacity measurements can be made by anyone who is trained to measure opacity, which can include members of the public and not just inspectors. *See* EPA, Particulate Matter and Opacity, *available at* <http://www.epa.gov/reg5oair/naaqs/opacity.html>. Therefore, opacity requirements can provide a local community with an important and valuable opportunity to monitor facilities in its community.

In addition, “opacity measurements provide a cheaper means of getting much more frequent information on the effectiveness of a source’s emission control.” *Id.* Not only are opacity measurements inexpensive, but “opacity measurements can reasonably occur much more frequently” than stack tests. *Id.* Furthermore, for emissions that do not come out of a stack, opacity may be the only way to measure the emissions. *See id.* Finally, continuous emission monitors are not always accurate and may be offline. *See generally* EPA, Evaluation of Particulate Matter Continuous Emission Monitoring Systems, *available at* <http://www.epa.gov/ttn/emc/cem/r4703-02-07.pdf>. Opacity requirements would provide an additional check that a facility is reducing particulate matter emissions.

Likely due to all these benefits of opacity limits, EPA has acknowledged that “[t]ypically, a stack will have two applicable limits, one that specifies a maximum allowable mass of emissions that exit the stack (e.g. 25 pounds of particulate matter per hour or 0.2 pounds of particulate matter per ton of widgets produced), and one that specifies a maximum acceptable opacity (e.g. 30% opacity).” *See* EPA, Particulate Matter and Opacity, *available at* <http://www.epa.gov/reg5oair/naaqs/opacity.html>. In other words, other industries typically have both mass-based and opacity based particulate matter limits. *See, e.g.*, 71 Fed. Reg. 9866 (requiring both mass-based and opacity based particulate matter limits for electric utilities). The Portland cement industry should not be an exception, and EPA has not explained in the proposed rulemaking why there should be an exception.

Thank you for the opportunity to submit these comments.

Sincerely,

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/s/ Lucas Williams