Center for Biological Diversity • Center on Race, Poverty & the Environment • Natural Resources Defense Council • Sierra Club California

June 23, 2008

Mary Nichols, Chairman, and Members of the Board
California Air Resources Board
1001 "I" Street
P.O. Box 2815
Sacramento, CA 95812

RE: Support for Regulatory Measures on Petroleum Refineries and Cement Plants in the AB 32 Scoping Plan

Dear Chairman Nichols and Members of the Board:

On behalf of the undersigned environmental and public health groups, we are writing to urge you to include strong measures in the Scoping Plan to reduce both global warming pollution and criteria and toxic pollutants from two of the largest industrial sources of those pollutants in the state: petroleum refineries and cement plants.

Petroleum refineries and cement plants respectively represent approximately 6.5 and 2 percent of the greenhouse gas emissions in California.[1] Reducing emissions from these two sectors offer significant opportunities to improve air quality and public health in addition to reducing global warming pollution. The substantial potential for co-benefits means that regulatory policies in these two sectors fall in line with AB 32's directive to maximize societal benefits. We estimate that AB 32 measures for refineries and cement plants could potentially reduce greenhouse gas emissions by approximately 16 million metric tons in 2020,[2] and at the same time avoid more than 4,000 tons of nitrogen oxide (NOx) and particulate matter (PM) pollution, prevent over 25 additional premature deaths and hundreds of cases of asthma and respiratory symptoms, and save at least $100 to $175 million in health costs in 2020.[3]

Moreover, the location of these benefits is just as important as the magnitude of the benefits, especially given that many of California's communities of color and low income communities have been and continue to be disproportionately impacted by pollution. Local communities will see significant health benefits from reductions in the co-

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[1] CARB, "Draft California Greenhouse Gas Inventory," November 19, 2007, available at http://www.arb.ca.gov/cc/inventory/data/data.htm.

[2] CARB Presentation, "Reducing Greenhouse Gas Emissions from California Refineries," April 11, 2008; NRDC Comments to CARB on Scoping Plan re: Low Carbon Cement Standard.

[3] This assumes that coal as fuel in cement plants is phased out by 2020 and that measures to reduce global warming pollution at refineries lead to a ten percent reduction in PM and NOx emissions in 2020. For more information on estimates, see NRDC, *Boosting the Benefits: Improving Air Quality and Health by Reducing Global Warming Pollution in California*,

pollutants emitted along with greenhouse gases. See the attached maps of California refineries and cement plants for an idea of which communities are impacted most now and stand to gain major improvements to air quality and health through well designed measures under the AB 32 Scoping Plan.

Refineries

We support a package of direct regulations on the largest global warming pollutant sources within petroleum refineries. Not surprisingly, these sources also emit significant quantities of criteria and toxic pollutants, such as smog precursors and carcinogens, in communities facing some of the greatest environmental burdens in the state. The Scoping Plan should include measures to reduce emissions from the largest sources within refineries, such as energy efficiency measures aimed at upgrading boilers or increasing utilization of cogeneration opportunities to capture waste heat. Additionally, current exemptions for methane leaks and emissions from refineries (as well as other sources) should be removed, and flaring rules currently in place in the Bay Area and the South Coast should be improved and expanded to all air districts to prevent additional pollution.

The measures addressed above are discussed in detail in comments previously submitted by Communities for a Better Environment (CBE). Other concepts from CBE's comments that we support include reducing the demand for the refineries' products through smart growth and similar initiatives, and development of separate emission factors for heavy crude feedstocks to discourage use of the most carbon-intensive types of crude oil.

Cement Plants

Cement plants produce greenhouse gases from the limestone as it is heated to produce cement, and from fuels, predominantly coal, used to heat the limestone. In California, most of the coal and limestone also contain mercury, which is also released during the heating process. In fact, cement plants represent the vast majority (almost 90%) of airborne mercury emissions in the state[4] and are also a significant source of criteria pollutants such as PM and NOx.

We recommend an intensity standard for cement production that reduces CO2 emissions from this sector by at least 25 percent. This standard would allow plant operators to select the optimum combination of strategies for each individual facility, including improving energy efficiency, moving to lower-carbon fuels, and supplementing high-carbon cement by blending with other "cementitious" materials. These policies to reduce greenhouse gas emissions would have the added benefit of cutting mercury emissions and criteria pollutants. To avoid leakage, as required by AB 32, the standard should account for the greenhouse gas emissions of all cement used in California. CARB should also develop regulations to reduce greenhouse gas emissions associated with concrete,

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[4] U.S. EPA , 2004 Toxics Release Inventory, available at http://www.epa.gov/triexplorer.

including policies aimed at reducing the consumption of concrete and reducing the use of cement in concrete.

While we strongly support the flexibility of a low carbon cement standard, safeguards must be added to ensure no backsliding on air toxic and criteria air pollutants and general safety. For instance, burning waste tires has been suggested as a low-carbon fuel option. While this practice may or may not reduce greenhouse gases, we are deeply concerned about the potential for toxic emissions and related health impacts. The use of tires as fuel in cement plants would be one giant step backwards for the state of California as a leader of air quality improvement and public health protections.

Another strategy that should be approached with caution is the blending of cement and/or concrete with waste materials such as fly ash and slag, by-products of coal power plants and steel production respectively, which often contain toxic heavy metals like chromium. There are still outstanding questions about the safety of these materials when used in cement and concrete, and the potential for toxic substances in these blended materials to leach into water bodies. Given California's experience with MTBE, careful multi-media environmental review is warranted.

We are optimistic that strong, health-protective measures on petroleum refineries and cement plants can be crafted for the Scoping Plan. Communities throughout California stand much to gain from the inclusion in the Scoping Plan of direct regulations in these two important sectors to reduce global warming pollution and provide tremendous short- and long-term health "co-benefits" by improving air quality. We look forward to working with staff to develop these measures.

Thank you for your time and consideration.

Sincerely,

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Cc: ARB Board Members,
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