

## Health and Safety Concerns Regarding Coal Transport in Oakland

Distribution initiated February 5, 2016

Dear Mayor Libby Schaaf and Members of the Oakland City Council,

We are physicians, nurses, healthcare providers and public health professionals serving the people of Oakland and other local communities. We are writing to oppose coal export from the upcoming Oakland Bulk and Oversized Terminal (OBOT).

We are especially concerned that coal shipment through Oakland may adversely affect health by increasing exposure to particulate matter and toxic substances, and by potentially contributing to climate change and its health hazards. We are also concerned about associated increases in healthcare costs and burdens on local health infrastructure. Millions of tons of coal may pass through Oakland annually, and ensuing health threats and costs could be significant.

The release of coal dust increases the dangers of air pollution by increasing exposure to particulate matter. Coal dust consists of very tiny particles, including very fine particles less than 2.5 microns (PM2.5). As documented by the U.S. EPA and California EPA, exposure to such particles is implicated in lung damage, asthma, heart disease, cancer, adverse birth outcomes, and premature death along with increases in hospitalization, emergency department visits and lost days of work and school. Research indicates that there is no safe level of exposure to PM2.5 and so there is no coal shipment scenario that will not impact the public's health.

Coal dust, including PM2.5, also carries with it heavy metals including mercury, arsenic, cadmium, chromium, lead and nickel, which have been associated with increased risk of cancer, birth defects, genetic defects, endocrine disruption, and neurological damage. These toxic substances can also enter the San Francisco Bay and local fresh waters and ultimately our food supply. In addition, with roughly 30% of Bay Area air pollution currently coming from Asia, our communities may be exposed to these dangers twice – on the way out through coal dust and then back again by way of post-combustion air pollution.

Research indicates that coal dust is released not only at the outset of transport but also at its destination, placing Oakland children, elderly, and chronically ill most at risk for these adverse health effects. West Oakland residents in particular will face increases in already unacceptably high levels of health disparities, asthma and chronic disease. The terminal's workforce and people residing and recreating nearby also will be at risk. To the extent coal particulate and toxic matter blow farther, Oakland and surrounding communities may also face exposure risks.

The unproven mitigation strategies before the City Council cannot assure the people's protection from PM2.5, toxic substances, and (albeit rare) explosions or derailments. The latter hazards, in a densely populated setting or near drinking water sources, could produce significant mass-casualty and public health emergencies.

The volume of coal potentially shipping from Oakland would be great enough to contribute to climate change and all of its well-understood health sequelae. A decision to export coal from Oakland will produce not only a local, but also a global deleterious impact on health.

As health professionals who care deeply about the health of our patients, our communities, and our planet, we urge you to protect public health and oppose a coal-export plan in Oakland.

Respectfully, [signed here](#).

## References

Ewing et al. (2010) Pb Isotopes as an Indicator of the Asian Contribution to Particulate Air Pollution in Urban California Environ. Sci. Technol. 44 (23), pp 8911–8916. accessed from the internet January 2016 <http://pubs.acs.org/doi/abs/10.1021/es101450t#afn2>

United States Environmental Protection Agency (2009) Integrated Science Assessment for Particulate Matter. EPA/600/R-08/139F Accessed from the internet January 2016 [file:///Users/heatherkuiper/Downloads/PM\\_ISA\\_WITHOUT\\_ANNEXES.PDF](file:///Users/heatherkuiper/Downloads/PM_ISA_WITHOUT_ANNEXES.PDF)

United States Environmental Protection Agency, Particulate Matter accessed from the internet January 2016 <http://www3.epa.gov/pm/health.html>

Additionally, this letter draws from and reinforces the expert guidance submitted to the City Council in September by Dr. Bart Ostro, former Chief of the Air Pollution Epidemiology Section of the California Environmental Protection Agency and by Dr. Paul English, state environmental epidemiologist and branch scientific advisor for the Environmental Health Investigations Branch at the California Department of Public Health (attached). Their citations are listed as follows:

Green et al. (2009) Environmental Health Perspectives 117: 1939-44.

Hammer et al. (2014) Environmental Health Perspectives 122:115–119.

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Malig and Ostro (2009) Occupational and Environmental Medicine 66:832-839.

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Ostro et al. (2006) Environmental Health Perspectives 114: 29–33.

Ostro et al. (2009) Environmental Health Perspectives 117:475-480.

Ostro et al. (2014) Occupational and Environmental Medicine 72:123-9.

Progress in pediatric asthma surveillance II: geospatial patterns of asthma in Alameda County, California. Roberts EM, English PB, Wong M, Wolff C, Valdez S, Van den Eeden SK, Ray GT. Prev Chronic Dis. 2006 Jul;3(3):A92. Epub 2006 Jun 15

California Environmental Protection Agency. CalEnviroScreen 2.0 <http://oehha.ca.gov/ej/ces2.html> Accessed 9/14/15

“What Coal Train Dust means for human health” Oregon Public Broadcasting, 2015. <http://www.opb.org/news/article/coal-dust-a-closer-look/> Accessed 9/14/15