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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

OAKLAND BULK & OVERSIZED TERMINAL, LLC,

Plaintiff,

v.

CITY OF OAKLAND, et al.,

Defendants.

Case No. 3:16-cv-07014-VC

BRIEF OF *AMICI CURIAE* WEST OAKLAND ENVIRONMENTAL INDICATORS PROJECT, ASIAN PACIFIC ENVIRONMENTAL NETWORK, COMMUNITIES FOR A BETTER ENVIRONMENT, NO COAL IN OAKLAND, AND CENTER FOR BIOLOGICAL DIVERSITY IN SUPPORT OF DEFENDANTS

Honorable Vince Chhabria
Ctrm.: No. 4, 17th Floor

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Cases

Statutes

Other Authorities

I. FACTUAL BACKGROUND

In 2012 the City of Oakland entered into an agreement with Plaintiff OBOT's affiliate and predecessor-in-interest to transition portions of the former Oakland Army Base into a rail-to-ship bulk commodity export terminal ("the Terminal"). Pl.'s Compl. ¶ 4.

In July 2013, the City executed a Development Agreement ("DA") outlining the parties' rights and obligations related to the Terminal project. Pl.'s Compl. ¶¶ 3, 27, 29. The agreement made no mention of a right to export, handle, or store coal and/or coke.[1] Def.'s Mot. to Dismiss 3. The DA did, however, include a clause reserving the City's right to regulate the terminal should a condition substantially dangerous to the health and safety of Oakland arise. Def.'s Request for Judicial Notice ("RJN") (Doc. 20-1), Ex. A, at 24 (DA § 3.4.2) (permitting the City to pass new regulations upon finding "substantial evidence" of a "substantially dangerous" health or safety condition posed to "users of the Project [or] . . . adjacent neighbors").

In 2015 the City of Oakland learned of OBOT's plan (via Terminal Logistics Solutions) to bring coal to the terminal. Def.'s Mot. for Summ. J., at 4-5. In exchange for partial funding, Terminal Logistics Solutions promised shipping rights of 49 percent of the Terminal's capacity to coal-producing counties in Utah. *Id.* This could amount to between 5 and 10 million tons of annual coal throughput in Oakland. Long Decl. (Doc. 160), Ex. 10, at 99 ("Chafe Report"). This news emerged after a June 2014 Oakland City Council resolution opposing transportation of fossil fuels through Oakland. Pl.'s Compl. ¶ 36.

This revelation surprised the City and the public, which hadn't studied or contemplated the use of its infrastructure for coal. Neither the 2002 Environmental Impact Review for the Army Base redevelopment nor the 2012 Initial Study/Addendum mentioned, considered, or studied the effects of receiving and storing coal at the site. *See* Pl.'s RJN (Doc. 49-9), Ex. E (City of Oakland, Draft Environmental Impact Report, Oakland Army Base Area Redevelopment Plan (April 2002); City of Oakland, Initial Study/Addendum (May 2012)). There is no mention of coal in any other documents

[1] The Complaint refers to petroleum coke (or "petcoke"). The City refers more generally to coke, which includes petcoke. For the purposes of this brief, impacts of coal include those from coke.

formalizing the relationship between the Terminal's developers and the City. Def.'s Mot. for Summ. J., at 3, fn. 5. As a result, Oakland residents—including those who live in West Oakland, the neighborhood adjacent to the Terminal—never received an adequate opportunity to weigh in on bringing coal to their community during the environmental review process.

In September 2015, Oakland City Council held a hearing on the health and safety impacts of allowing coal handling and storage in the city. Pl.'s Compl. ¶ 37. The Council took testimony for over six hours, with hundreds of residents requesting to speak. Def.'s Mot. for Summ. J., at 6; Darwin BondGraham, *Oakland City Council Hearing on Coal*, East Bay Express (Sept. 22, 2015), https://www.eastbayexpress.com/SevenDays/archives/2015/09/21/live-oakland-city-council-hearing-on-coal.[2] The vast majority of the public expressed concern about the project because of public health concerns. *Id.* Oakland later retained experts to gather and review evidence on how the project would impact local health and safety. Pl.'s Compl. ¶¶ 40-41.

By the time the comment process concluded in 2016, the City had received extensive oral testimony and written comments, reports from Sierra Club and Earthjustice, and three additional expert reports. Def.'s Mot. for Summ. J., at 7; *see also* Long Decl. (Doc. 159), Ex. 1, at 1-2 (Oakland Ordinance No. 13385 CMS) (summarizing public testimony received). While OBOT correctly notes that the City Council received the ESA Report in June 2016, it does not mention nor assess the fact that the City also received these additional expert reports. *See, e.g.* Pl.'s Mot. for Summ. J., at 16.

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[2] *Amici* provide extra-record evidence here to assist the court in engaging with technical matters. Per Justice Breyer, *amicus curiae* briefs "play an important role in educating the judges on potentially relevant technical matters," helping them become "moderately educated lay persons" in order to "improve the quality of [their] decisions." Stephen Breyer, The Interdependence of Science and Law, 82 Judicature 24, 26 (1998). In the tradition of the so-called "Brandeis brief," *amici* may provide the court with studies and information outside the record and available to the public in order to broaden the court's perspective on pertinent issues. *Rivera v. Division of Industrial Welfare*, 265 Cal. App. 2d 576, 589-90 (1968); *see also Asarco, Inc. v. E.P.A.*, 616 F.2d 1153, 1160 (9th Cir. 1980) (accepting information from *amici* scientists consisting of peer-reviewed and publicly available literature). Though the case at hand is not under the Administrative Procedure Act, the Ninth Circuit has held repeatedly under that statute that extra-record evidence provided by *amici* is permitted if it serves to explain the record before the agency and enhance the court's understanding of technical issues the agency considered. *Ass'n of Pac. Fisheries v. E.P.A.*, 615 F.2d 794, 812 (9th Cir. 1980) (allowing extra-record studies to illuminate the agency's original decision); *Bunker Hill Co. v. E.P.A.*, 572 F.2d 1286, 1292 (9th Cir. 1977) ("courts are not straightjacketed to the original record in trying to make sense of complex technical testimony").

City officials commissioned two of the expert reports, whereas the third came from an independent panel of public health administrators and doctors and received endorsement from over 15 health professionals and UCSF Benioff Children's Hospital in Oakland. Long Decl. (Doc. 161-1, 2), Ex. 17 ("Public Health Advisory Panel Report"). Dr. Muntu Davis, the highest-ranking public health official in Alameda County, submitted a letter to the City of Oakland concurring with the Public Health Panel's analysis and findings. Letter from Dr. Muntu Davis, MD, MPH to City of Oakland (June 14, 2016), OAK05943, *available at* http://www2.oaklandnet.com/w/oak059343.[3]

All three expert reports, and the vast majority of public comments, concluded the same thing: unloading, handling, and storing millions of tons of coal annually at a bulk commodity terminal would pose serious threats to Oakland residents that could not be adequately mitigated.

In June 2016 the City published a staff report analyzing the record evidence it received. Myre Decl. (Doc. 141), Ex. 28, at 11-12 (City of Oakland, "Public Hearing to Consider a Report and Recommendation for Options to Address Coal and Coke Issues") ("Oakland Staff Report"). The staff report concluded that residents would be exposed to toxic coal dust, harmful emissions, and the risk of fires and explosions. *Id.* Workers at the terminal and emergency responders would face life-and-death risks from working with combustible coal piles. *Id.* at 13-14. The impact of millions of tons of coal in their neighborhood would compound the already poor health outcomes of residents in West Oakland, an area identified by the Bay Area Air Quality Management District ("BAAQMD") as suffering from severe levels of toxic air pollution. *Id.* at 6, 14. Though Oakland would be the terminus for Utah coal, the harms would not be left on tracks somewhere in the desert. The City of Oakland would be changed for the worse, and at a price the City determined was not worth the public safety harms. *Id.* at 1-2.

Taken together, the comments and reports the City received amounted to substantial evidence supporting the Ordinance prohibiting coal and coke activities. Long Decl. (Doc. 159), Ex. 1, at 6 (Ordinance No. 13385). The Council also approved a resolution applying the Ordinance to the

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[3] Dr. Davis's letter was timely submitted to the City of Oakland during the public comment period and is available on the City's dedicated website for the Project located at http://www2.oaklandnet.com/government/o/CityAdministration/d/project-implementation/OAK038485. *See* Monetta Dec., ¶ 4, Klein Decl., ¶ 4.

Terminal based on these factual findings, thereby invoking the Development Agreement's health and safety condition. Long Decl. (Doc. 159), Ex. 1 (Oakland Resolution No. 86234 CMS).

II. SUMMARY OF ARGUMENTS

This Court should grant Defendant-Intervenors' motion for summary judgment and deny OBOT's motion for summary judgment.

The City of Oakland properly found, based on substantial evidence, that storing and handling coal and coke at bulk facilities and terminals would produce dire and unavoidable public health and safety risks. Long Decl. (Doc. 159), Ex. 1, at 5-8 (Ordinance No. 13385). OBOT's assertion—that the City lacked an adequate basis for this finding, and that the impacts of coal activities are merely speculative—is plainly wrong. Pl.'s Compl. 15, ¶¶ 48-49. OBOT's claim ignores the weight of evidence, the consensus of health experts, and the realities of those living in Oakland's disadvantaged communities already beset by severe pollution. The City exercised its legal right to protect its residents by invoking DA § 3.4.2. Long Decl. (Doc. 159), Ex. 1 (Resolution No. 86234).

There are numerous unavoidable harms and serious risks along each stage of OBOT's plan. Even with the best mitigation, coal and coal dust would release particulate matter ("PM"), ozone, nitrogen oxide, and other toxic pollutants into Oakland's air—with most of this falling in the environmentally-stressed community of West Oakland, the neighborhood adjacent to the Terminal. Long Decl. (Doc. 159), Ex. 1, at 6 (Ordinance No. 13385).

The City also recognized the substantial health and safety risks posed to workers at the Terminal. Those handling the coal would be exposed to harmful amounts of toxic pollutants. *Id.* at 2, 7. Bulk coal storage piles—covered or not—are also highly combustible, and could endanger workers' and first responders' lives in the event of a fire or explosion. *Id.* at 5-8. There are simply no solutions or regulations that completely avoid significant health and safety impacts. *Id.*

The City of Oakland analyzed the substantial evidence it received and recognized that coal activities at the Terminal would impose serious, long-lasting, and potentially deadly harms on Oakland's most vulnerable communities and beyond. *Id.* at 2. The City validly exercised its legal right under the Development Agreement to protect the residents and natural environment. For these reasons

this Court should grant Defendant-Intervenors' motion for summary judgment and deny OBOT's motion for summary judgment.

III. ARGUMENTS

A. The City of Oakland's Ordinance and Resolution properly rest on substantial evidence showing dangerous health and safety risks from handling and storing coal at bulk facilities and terminals.

It is well-established that a city can regulate to protect the public health and safety of its residents. Cal. Const. Article XI, Section 7 (empowering a city to enact measures that protect and promote the health, safety, and/or welfare of its Constituents); *see also Marblehead Land Co. v. City of Los Angeles*, 47 F.2d 528, 531 (9th Cir. 1931) ("Municipalities in California have long had the power to impose conditions on the conduct of industrial operations within their bounds where necessary to protect public health and safety"). The City of Oakland did just that when passing its Ordinance to prohibit coal handling and storage at bulk facilities and terminals, and applying this legislation to OBOT through the Resolution.

The proper level of review for an administrative decision is the substantial evidence standard. *U.S. v. Carlo Bianchi & Co.*, 373 U.S. 709, 715 (1963) (substantial evidence describes how an administrative record is to be judged by a reviewing court); *see e.g., Topanga Assn. for a Scenic Community v. County of Los Angeles*, 11 Cal.3d 506, 514 (1974) (the court must determine if substantial evidence supports the agency's findings and decision); *Pacifica Corp. v. City of Camarillo*, 149 Cal.App.3d 168, 179 (1983) (concluding, in a case challenging the denial of building permit, that "judicial review is limited to a determination of whether the Council's decision is supported by substantial evidence.").

"'Substantial evidence' is a term of art [that] goes to the reasonableness of what the agency did on the basis of the evidence before it." *U.S. v. Carlo Bianchi & Co.*, 373 U.S. at 715. Under this standard the court reviews the **entire record** the government body had before it when making a decision. *Cal. Youth Authority v. State Personnel Bd.*, 104 Cal.App.4th 575, 586 (2002) (explaining that review does not take place in isolation, but considers all evidence presented); *City of Walnut*

Creek v. County of Contra Costa, 101 Cal.App.3d 1012, 1017 (1980) (where the City sought review of a county permit, the court asked "whether there is substantial evidence to support the county's findings and whether the findings support the decision."). Public testimony and/or expert reports are sufficient to create an evidentiary record. *Desmond v. County of Contra Costa*, 21 Cal.App.4th 330, 334-37 (1993) (based on ample testimony, finding that substantial evidence supported the county's findings that a development would threaten public health, safety, and welfare); *Duncan v. Dept. of Personnel Admin.*, 77 Cal.App.4th 1166, 1174 (2000) (testimony of a single witness may be sufficient). The court then asks whether the record evidence—when taken as a whole—is such that "a reasonable mind might accept it as adequate to support the conclusion reached." *Cal. Youth Authority v. State Personnel Bd.*, 104 Cal.App.4th at 584; *see also Kutzke v. City of San Diego*, 11 Cal.App.5th 1034, 1040 (2017) (holding a court may reverse a city's decision "on if, based on the evidence before it, an reasonable person could not have reached" the city's conclusion). The court may consider conflicting testimony, but ultimately "indulges all presumptions and resolves all conflicts in favor of" the administrative body's decision. *Cal. Youth Authority*, 104 Cal.App.4th at 584. In reviewing administrative decisions, the courts generally are forbidden from conducting a full-fledged and independent evidentiary hearing. *Bunker Hill Co. v. E.P.A.*, 572 F.2d at 1292.

The City of Oakland had a vast factual record before it consisting of public comments and expert reports. Def.'s Mot. for Summ. J., at 7. The record included commissioned and independent reports, testimony from residents, union workers, a former EPA official, city services staff, health professionals, PhDs, and more. *Id.* Based on this, the City made a reasonable decision—adequately supported by the evidence as a whole—that coal transfer and storage at bulk facilities and terminals would be substantially dangerous to Oakland residents' health and/or safety. Long Decl. (Doc. 159), Ex. 1, at 5 (Ordinance No. 13385). This is more than sufficient to find that Oakland's Ordinance and Resolution rest on substantial evidence and must stand.

Further, the Development Agreement requires the City of Oakland to rest its decision to apply the Ordinance to the Resolution (and therefore, the Terminal) on substantial evidence of a condition substantially dangerous to the project's workers and/or neighbors. Def.'s RJN (Doc. 20-1), Ex. A, at

24 (DA § 3.4.2) (The City "shall have the right to apply City Regulations . . . after the Adoption Date, if such application . . . [is] based on **substantial evidence** . . . that a failure to do so would place existing or future occupants or users of the Project, adjacent neighbors, or any portion thereof . . . in a condition substantially dangerous to their health and safety."). While "substantial evidence" is not defined in the DA, this provision is consistent with well-established standards of review under which a public agency's *factual* findings are reviewed only for substantial evidence. *See, e.g. Pacifica Corp. v. City of Camarillo*, 149 Cal.App.3d at 179. The City of Oakland's determinations that storing, handling and rail transport of coal or coke would have "substantial public health and safety impacts to Oakland Constituents" are all factual findings. *See, e.g.* Long Decl. (Doc. 159), Ex. 1, at 5 (Ordinance No. 13385) ("The transport and storing or handling of coal or coke in the City of Oakland . . . would have many public health and/or safety impacts, including without limitation the creation of conditions that would be substantially dangerous to . . . Oakland's Constituents"); *id.* (Resolution No. 86234). The California case law interpreting substantial evidence should therefore guide review.

B. Handling and storing coal as a bulk commodity would result in substantial health and safety risks.

Plaintiffs try to dismiss the evidence of dangerous health impacts as unsupported speculation and mere conclusions. Pl.'s Compl. 15, ¶¶ 48-49. To do so is to willfully ignore countless studies documenting the substantial public health and safety harms from coal storage and handling. Fortunately the City of Oakland did not turn a blind eye to these studies, and instead considered the mountain of evidence detailing these risks. *See* Def.'s Mot. for Summ. J., at 7.

1. Coal storage and handling would release particulate matter and other toxic pollutants into Oakland neighborhoods

Pollution is an inevitable byproduct of handling and storing coal and coke, and can be produced in several ways. Coal dust is released from coal trains, coal storage piles, and the loading and unloading of bulk coal—all activities contemplated by Plaintiffs. Myre Decl. (Doc. 141), Ex. 47, at 3-6 (OBOT Air Quality & Human Health Safety Assessment [Sept. 2015]). This coal dust contains high concentrations of mercury, lead, arsenic, particulate matter, and cadmium. Long Decl. (Doc. 161-

1), Ex. 17, at v (Public Health Advisory Panel Report); *see also* Long Decl. (Doc. 159), Ex. 1, at 5 (Ordinance No. 13385) (citing expert reports in the record). There are no known safe levels of exposure to these pollutants. Long Decl. (Doc. 161-1), Ex. 17, at v (Public Health Advisory Panel Report).

Perhaps the most abundant pollutant produced by coal handling is particulate matter ("PM"). $PM_{2.5}$ describes the type of particulate pollution measuring less than 2.5 micrometers in diameter—or about 30 times thinner than a strand of human hair. Akshaya Jha, Carnegie Mellon University, *Even when it's sitting in storage, coal threatens human health*, The Conversation (Sept. 13, 2017), https://theconversation.com/even-when-its-sitting-in-storage-coal-threatens-human-health-80865. PM_{10} particles are slightly larger, at about the size of dust or pollen. *Id.* Coal dust releases PM pollution, and coal itself emits volatile gases that combine chemically in the atmosphere to create $PM_{2.5}$ pollution independent of the "dust" particles. *Id.*

Both types of PM are linked to increased deaths and illnesses due to cardiovascular and respiratory conditions. Yixing Du, et al., *Air Particulate Matter and Cardiovascular Disease: Epidemiological, Biomedical, and Clinical Evidence*, 8 J. of Thoracic Disease 1 (Jan. 2016), *available at* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4740122/. $PM_{2.5}$, however, is especially pernicious. While PM_{10} particles lodge in the upper airways and cause conditions such as bronchitis, $PM_{2.5}$ embeds in small airways and capillaries, eventually reaching the body's organs—including the brain. *Id.* A growing body of evidence links $PM_{2.5}$ exposure to accelerated cognitive aging, dementia, Alzheimer's, and other diseases. M. Cacciottolo, et al., *Particulate air pollutants, APOE alleles and their contributions to cognitive impairment*, J. of Translational Psychiatry 7 (Jan. 2017), *available at* https://www.ncbi.nlm.nih.gov/pubmed/28140404; *see also* Hong Chen, et al., *Living Near Major Roads and the Incidents of Dementia, Parkinson's Disease, and Multiple Sclerosis*, 389 The Lancet 718 (Feb. 2017), http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(16)32399-6.pdf (analyzing the link between fine particulate matter and brain disease); Yixing Du, et al., *supra*, at 1.

National Ambient Air Quality Standards for $PM_{2.5}$ do not protect from all adverse health effects related to exposure. A 12-year study published in the New England Journal of Medicine

examined health records from nearly 61 million people and combined that with pollution data. Qian Di, M.S., Antonella Zanobetti, Ph.D., et al., *Air Pollution and Mortality in the Medicare Population*, N Engl J Med (June 2017), *available at* http://www.nejm.org/doi/full/10.1056/NEJMoa1702747. The researchers found that for every increase of 10 micrograms of $PM_{2.5}$, death rates rose over seven percent—the equivalent of 12,000 people. *Id.* The risk of death is highest among racial minorities and people with low income. *Id.* Notably, researchers found that harms occur even at exposure concentrations **below** current air quality standards. *Id.*

Plaintiffs downplay the substantial danger coal dust and pollution poses by claiming that there is no evidence coal or petcoke release more PM than any other commodity. Pl.'s Compl. ¶ 51. This is simply untrue. The properties of coal lend themselves to PM pollution in such a way that other bulk goods do not. First, wind blowing over coal piles produces heavy amounts of $PM_{2.5}$ fugitive dust emissions. Akshaya Jha, et al., Carnegie Mellon University, *Handle with Care: The Local Air Pollution Costs of Coal Storage* 15, National Bureau of Economic Research (May 2017), https://www.eenews.net/assets/2017/07/05/document_pm_01.pdf. Second, coal piles themselves emit volatile gases, which then help form $PM_{2.5}$. *Id.* Last, when coal is unloaded and handled, the dust from its movement generates additional fine particulates. *Id.* Increased concentrations of airborne $PM_{2.5}$ from coal piles have been detected as far away as 25 miles from the source. *Id.* at 15.[4]

These multiple emission pathways for $PM_{2.5}$—combined with the Terminal's close proximity to Oakland residents—mean that local health and safety risks are high. The Terminal is only 1.5 miles from the residential neighborhood of West Oakland, and the City of Oakland is only 54 square miles total. Pl's RJN (Doc. 49-11), Ex. E, at 17; Oakland Chamber of Commerce, "Key Facts: Oakland", http://www.oaklandchamber.com/pages/OaklandFacts (last visited Nov. 29, 2017). Given that coal particulates can travel 25 miles from the source, the Terminal's coal pollution would impact hundreds of thousands—if not all—of Oakland residents. One study calculated that a single ton of stored coal

[4] The authors of the study note that the decline of PM levels beyond 25 miles indicates that the PM pollution measured is from coal storage and deliveries, rather than transportation. Akshaya Jha, et al., *Costs of Coal Storage*, *supra*, at 15.

generates $183 in local health costs (the local air pollution cost is $202.51 per ton). Akshaya Jha, *Handle with Care*, *supra*, at 6. When applied to OBOT's project and based on the low-end estimate of 5 million tons of annual coal throughput, coal particulate pollution alone could cost Oakland residents up to $1.3 billion in health costs *each year*.

OBOT argues that estimates submitted to the City Council of the Terminal's PM_{10} and $PM_{2.5}$ emissions are not supported by substantial evidence. Pl.'s Compl. ¶ 55. However, the Terminal's plan is to store, handle, and offload 5-10 million tons of coal annually. Myre Decl. (Doc. 141), Ex. 28, at 9 (Oakland Staff Report); Myre Decl. (Doc. 141), Ex. 45, at 99 (ESA Report). As the City noted from a World Health Organization study, there is no safe level of PM exposure. Myre Decl. (Doc. 141), Ex. 28, at 16 (Oakland Staff Report). Even in the absence of precise emission estimates, a reasonable conclusion is that annual throughput of 5-10 million tons of coal will release unsafe levels of PM pollution, putting Oakland's health and safety at risk. Notably, there are no BAAQMD regulations explicitly targeting PM emissions from coal storage and handling, making it difficult to impose and enforce mitigation measures. *See* Def.'s Mot. for Summ. J., at 22, fn. 33.

Even if coal storage piles are covered to mitigate emissions, covering coal introduces a new set of substantial risks. Coal and coal dust are highly combustible. Long Decl. (Doc. 159), Ex. 1, at 5 (Ordinance No. 13385); *see also* U.S. Dep't of Energy, *The Fire Below: Spontaneous Combustion in Coal* 1 (May 1993), http://www.coaltrainfacts.org/docs/EH-93-4-The-Fire-Below_-Spontaneous-Combustion-in-Coal.pdf. Piles of bulk coal sitting in storage generate heat, thereby increasing the possibility of fires and explosions. U.S. Dep't of Energy, *The Fire Below*, *supra*, at 8. A team of experts studying OBOT's proposed design noted that storing coal in confined spaces suspends coal dust in the air, which could then explode. Long Decl. (Doc. 161-1), Ex. 17, at vi (Public Health Advisory Panel Report).[5] The speed and duration of moving air in a coal dust explosion is capable of dispersing additional coal dust, which could cause and/or feed a secondary fire and/or explosion. Myre

[5] The Public Health Advisory Panel also expressed concern that the Terminal's Basis of Design documents do not propose a completely closed system, meaning health risks from fugitive coal dust would remain. Long Decl. (Doc. 161-1), Ex. 17, at vi (Public Health Advisory Panel Report).

Decl. (Doc. 141), Ex. 28, at 17 (Oakland Staff Report). Emergency personnel responding to one coal fire could generate a secondary dust cloud that could lead to another fire and/or explosion, thereby putting first responders' lives at risk. *Id.*

To manage fire risks, covered storage piles would require adequate ventilation and repeated applications of water. Long Decl. (Doc. 161-1), Ex. 17, at 49 (Public Health Advisory Panel Report). The level of oversight required to ensure safety and environmental protection would be "very difficult to enforce and is unlikely a reliable strategy for protecting" health and safety. *Id.* at vi. Even then, "careful facility design will not prevent coal fires or combustion." Myre Decl. (Doc. 141), Ex. 28, at 17 (Oakland Staff Report).

The City of Oakland had all of this evidence before it when considering the Ordinance and Resolution. *Id.* at 8-20 (summarizing public health and safety evidence received during public comment periods). With the high likelihood of substantial health and safety harms, and facing potentially unenforceable and unreliable mitigations, the City Council made the informed decision not to put Oakland residents at risk from massive coal activities at its port.

2. Coal delivery trains would deposit toxic coal particulates in Oakland, release hazardous diesel fumes, and pose fire risks

OBOT's plan entails coal delivery by rail cars on trains over one mile long. Long Decl. (Doc. 161-2), Ex. 17, at 94 (Public Health Advisory Panel Report). Coal trains produce numerous, well-documented, and substantial health and safety impacts. These include toxic coal particulate blow-off, harmful diesel emissions, fires, and explosions. *Id.*

Coal delivery by rail significantly increases concentrations of $PM_{2.5}$ due to coal dust blow-off during movement and unloading, and train diesel exhaust. *Id.* at v. Introducing a new $PM_{2.5}$ source would increase the risk of lung cancer, hospitalization and emergency room visits due to asthma, heart disease, and adverse birth outcomes in Oakland communities. *Id.*

Coal trains weigh anywhere from 50-200 percent more than other freight trains. *Id.* at 24. They therefore require vastly more diesel fuel and are worse polluting than other commodity-carrying trains. *Id.* Diesel exhaust is a known carcinogen. Communities for a Better Environment, *Diesel Truck Study*

Report 1 (Sept. 2010), http://www.cbecal.org/wp-content/uploads/2012/07/Diesel-truck-study.pdf. It contains over 40 toxic air contaminants, including PM, ozone, benzene, sulfur dioxide, formaldehyde, black carbon, and nitrogen oxide. Long Decl. (Doc. 161-1), Ex. 17, at 20 (Public Health Advisory Panel Report).

Approximately 85-95 percent of particles in diesel exhaust measure less than one micron in size, making them easily inhaled into lungs. *Id.* Short-term health impacts from diesel exhaust exposure include eye, nose, and throat irritation; nausea; memory loss; insomnia; and headaches. *Id.* at 21. Long-term adverse health effects include heart disease, asthma, bronchitis, reduced lung function, increased risk of stroke, and cancer. *Id.* Diesel exhaust's PM pollution is responsible for over 70 percent of the potential cancer risks from all toxic air contaminants in California. California Air Resources Board ("CARB"), *Diesel Particulate Matter Health Risk Assessment for the West Oakland Community* 9 (Dec. 2008) ("2008 CARB Study"), https://www.arb.ca.gov/ch/communities/ra/westoakland/documents/westoaklandreport.pdf.

Adverse health impacts from diesel exhaust disproportionately affect lower income and minority populations where commodity distribution centers are located. Communities for a Better Environment, *Diesel Truck Study Report*, *supra*, at 1. While OBOT asserts that PM emissions in Oakland from rail transport would be "less than any such emissions at the [coal's] departure point" in Utah, this does not mean that the emissions would be without health impacts. Pl.'s Compl. ¶ 84. To the contrary—any coal dust blowing into Oakland will harm those who live, work, recreate, or attend school near rail lines and where trains park before offloading. Scientific studies show that rail transport of coal releases airborne $PM_{2.5}$ into the air at up to twice the rate of normal train emissions. Long Decl. (Doc. 161-1), Ex. 17, at 18 (Public Health Advisory Panel Report); *see also* Jaffe, D., *et al*., *Diesel Particulate Matter and Coal Dust from Trains in the Columbia River Gorge*, Atmospheric Pollution Research 946-52 (2015), https://www.sciencedirect.com/science/article/pii/S1309104215000057.

Meanwhile, OBOT claims mitigation methods would "control" coal dust emissions from rail cars. Pl's Compl. ¶ 83. This is not accurate. The mitigation most commonly used to reduce coal dust

blow-off from rail cars is surfactant spray. Long Decl. (Doc. 161-1), Ex. 17, at 17 (Public Health Advisory Panel Report). Under the most optimistic scenario surfactants would only reduce coal dust emissions by 85 percent. *Id*. Even at this reduced rate, emissions still pose substantial health and safety risks. In recent studies of over 300 trains in Washington State, average $PM_{2.5}$ concentrations near coal trains were twice—and sometimes up to twenty times—that of trains carrying other freight. *Id.* at 18. These PM levels occurred despite the use of surfactants. *Id.* This may be because the 85 percent reduction target is optimistic. Rail shippers and BNSF Railway argued before the Surface Transportation Board that no amount of surfactant could reliably reach an 85 percent containment goal. *Id.* at 25.

Surfactants are known to degrade over time, and they may not significantly reduce coal dust emissions locally or during unloading. *Id.* at vi. Coal particulates may travel up to 25 miles. Akshaya Jha, et al., Carnegie Mellon University, *supra*, at 15. With Bay Area winds blowing from west-to-east between 70-100 percent of the time, it is almost assured that tons of coal particulate pollution would drift off trains, entering the City's soils, water, and residents' lungs. Long Decl. (Doc. 161-1), Ex. 17, at 18 (Public Health Advisory Panel Report).

Surfactants are also harmful themselves. Potential impacts include surface and groundwater deterioration, soil contamination, toxicity to humans, air pollution, and species die-offs. *Id.* at 26.

OBOT further proposes mitigating coal dust emissions by using rail car covers. Pl.'s Compl. ¶ 83. Covers would not adequately reduce emissions. By the Terminal developer's own estimate, roughly seven percent of coal dust would escape from rail cars during unloading. Long Decl. (Doc. 161-1), Ex. 17, at 24 (Public Health Advisory Panel Report). Again, any amount of coal particulate is harmful to communities and the local environment—even a reduced percentage of the whole.

Covered rail cars would introduce their own substantial risks. Similar to coal piles, stored solid coal and its dust can catch fire or explode. Long Decl. (Doc. 159), Ex. 1, at 7 (Ordinance No. 13385). Covering rail cars would cause heat to build up and dust to accumulate, thereby increasing the risk of a

highly dangerous, or even catastrophic, event. Long Decl. (Doc. 161-1), Ex. 17, at 24 (Public Health Advisory Panel Report). Even OBOT acknowledges this risk. Myre Decl. (Doc 141), Ex. 47, at 7.[6]

Coal dust blowing from rail cars also creates a danger of train derailments. Coal dust absorbs and holds water, turning into a slick, plastic-like substance when wet. Erol Tutumluer, et al., *Effect of Coal Dust on Railroad Ballast Strength and Stability*, University of Illinois and BNSF Railway (Oct. 2008), http://railtec.illinois.edu/CEE/pdf/PPT%27s/fall08/Tutumluer%20-%2010_10_2008.pdf. This reduces the friction needed by trains to operate safely. *Id.* The Surface Transportation Board found that "the weight of the evidence shows that coal dust is a harmful foulant that could contribute to future accidents by destabilizing tracks." Surface Transportation Board Decision, "Arkansas Electric Cooperative Corporation - Petition for Declaratory Order," Dkt. No. FD 35305, ID 40436 (March 3, 2011). A derailment spilling coal in Oakland could devastate local soils, waterways, and air quality, as well as endanger workers. Long Decl. (Doc. 159), Ex. 1, at 2 (Ordinance No. 13385). Just one such event would impose tremendous harms and costs on residents and the City. *Id.*

C. Port-adjacent communities like West Oakland, already suffering from heavy pollution, would face disproportionate and compounded health and safety risks from coal handling and storage in their neighborhoods.

The Terminal site is located in West Oakland, a community disproportionately burdened by poor air quality and health outcomes due to existing Port operations and other industrial activities.[7] Delivering, handling, and storing millions of tons of coal each year to West Oakland would add to the existing, well-documented health and safety hazards residents have long endured and are trying to change.

West Oakland covers six square miles and supports a population of around 25,000. City-Data, "West Oakland Neighborhood Detailed Profile, 94607", http://www.city-

[6] Further, as Defendant notes, covered rail car technology has not ever been tested nor used. Def.'s Mot. for Summ. J., at 17.

[7] The Terminal site is 1.5 miles southwest of residential and commercial areas in West Oakland. Pl's RJN (Doc. 49-11), Ex. E, at 17; *see also* The City of Oakland, "Oakland Army Base Project", http://www2.oaklandnet.com/government/o/CityAdministration/d/project-implementation/o/OaklandArmyBase/index.htm (last visited Nov. 29, 2017).

data.com/neighborhood/West-Oakland-Oakland-CA.html (last visited Oct. 18, 2017) (amalgamating census and other demographic data). The median household income is $20,000 less than the rest of Oakland. *Id.* Nearly one-third of residents live below the poverty level, with one-quarter of those households a full 50 percent below the poverty line. *Id.* The neighborhood is 85 percent people of color: 49 percent African American, 17 percent Latino, 13 percent Asian Pacific Islander, and 6 percent mixed/other residents. Alameda County Public Health Department ("ACPHD"), *East and West Oakland Health Data* 3 (Sept. 3, 2015), http://www.acphd.org/media/401560/cumulative-health-impacts-east-west-oakland.pdf.

The community is home to individuals whose families have lived in the neighborhood for generations. *Id.* The faith community is active, along with multiple community organizations that support residents' advocacy, cultural identity, and advances towards social, economic, and environmental equity. *Id.* This resiliency is important—but not alone enough—to achieve improved health outcomes. Decades of industrial siting in West Oakland has left deep scars on people and the landscape, making strong and informed action by government a crucial ingredient in assuring improved health and safety.

1. Poor air quality in West Oakland currently leads to serious, deleterious health impacts

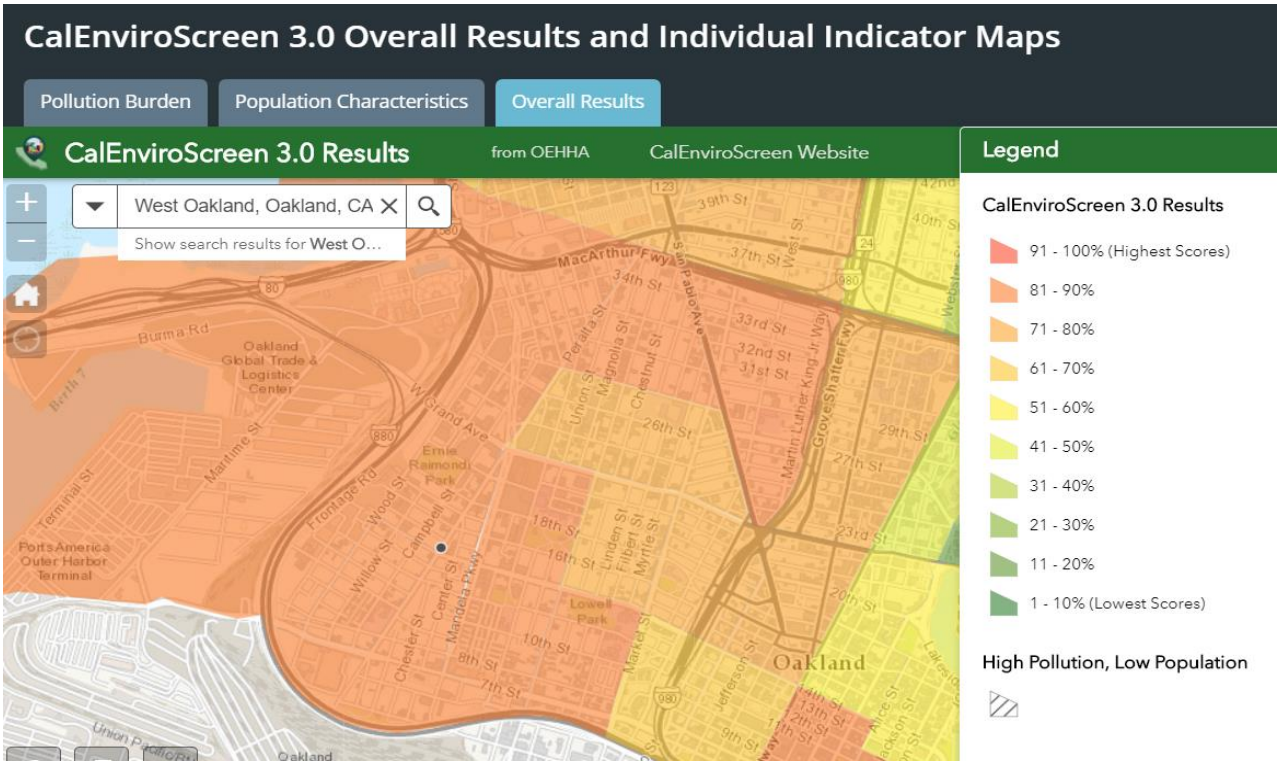
The evidence revealing pollution's impacts on West Oakland is staggering. The neighborhood is currently in nonattainment for several state and federal ambient air quality standards, including ozone and $PM_{2.5}$. Long Decl. (Doc. 159), Ex. 1, at 6 (Ordinance No. 13385). Existing industry, rail traffic, and freeways in the area expose residents to three times the amount of diesel PM than elsewhere in the Bay Area. Long Decl. (Doc. 161-1), Ex. 17, at 8 (Public Health Advisory Panel Report). One air monitoring site, located less 4000 feet (i.e. less than a mile) from the Terminal, found that air quality violated the World Health Organization annual $PM_{2.5}$ standard. *Id.*[8]

[8] The monitor recorded a three-year annual average ending in 2015 of 10.8 $\mu g/m^3$. *Id.* The State of California and Federal annual air pollution standards for PM2.5 are both 12 $\mu g/m^3$ and the World Health Organization standard is 10.0 $\mu g/m^3$. *Id.* The agencies that promulgate these standards make clear that they do not represent thresholds of safety, and that adverse health effects due to PM2.5 exposure occur below these levels. *Id.*

Neighborhood advocacy groups have long recognized West Oakland's dire situation, and City and regulatory agencies are beginning to catch on. In a 2015 report, the Alameda County Health Department noted that a "long history of policy and practices, such as racial segregation" caused the West Oakland community to suffer disproportionately from chronic disease and death attributable to pollution. ACPHD, *East and West Oakland Health Data*, *supra*, at 7. The California Environmental Protection Agency ("CalEPA") describes West Oakland as one of the highest-risk communities in California due to its heavy and persistent air pollution. Long Decl. (Doc. 161-1), Ex. 17, at 18 (Public Health Advisory Panel Report). The Bay Area Air Quality Management District's ("BAAQMD") Community Air Risk Evaluation ("CARE") found West Oaklanders continue to suffer among the worst health outcomes due to a combination of toxic air contaminants, relatively high exposures of youth and seniors to impaired air quality, and high levels of poverty. Myre Decl. (Doc. 141), Ex. 28, at 6 (Oakland Staff Report). While CARB's 2010 strategy to reduce emissions in West Oakland had an impact, there remains an excess risk to residents, leaving room for improvements. Long Decl. (Doc. 161-1), Ex. 17, at 11 (Public Health Advisory Panel Report). BAAQMD recently ranked the neighborhood in the highest quintile in their Bay Area Pollution Vulnerability Index. *Id.*

High pollution exposure levels, combined with generational poverty, have implications beyond shocking statistics. Peoples' lives are detrimentally affected in a multitude of ways. Residents suffer elevated levels of asthma, premature and low-birth weights, heart disease, and other pollution-related ailments. Myre Decl. (Doc. 141), Ex. 28, at 5 (Oakland Staff Report); *see also* CalEnviroScreen Results for Census Tract 6001401700. The neighborhood has some of the highest rates for emergency room visits linked to air pollution. ACPHD, *East and West Oakland Health Data*, *supra*, at 9.[9] The cancer risk for West Oakland residents from diesel PM is 2.5 times higher than the Bay Area average.

[9] West Oaklanders visited Emergency Departments for asthma at 1,015 visits per 100,000 residents, a number almost two times the County rate. ACPHD, *East and West Oakland Health Data*, *supra*, at 9.



CalEnviroScreen Results for West Oakland, California. The Global Trade & Logistics Center appears in the upper left. The red and orange blocking covering West Oakland indicates a higher CalEnviroScreen score revealing the burden of pollution from multiple sources in communities while accounting for potential vulnerability to the adverse effects of pollution. Source: https://oehha.ca.gov/calenviroscreen.

2008 CARB Study, *supra*, at 22-25; Long Decl. (Doc. 161-1), Ex. 17, at 9, 13 (Public Health Advisory Panel Report).[10]

The children of West Oakland are the most vulnerable. The Alameda County Public Health Department found that African American children born in West Oakland live 15 fewer years than a child born in the Oakland hills. ACPHD, *Life and Death from Unnatural Causes* vii (Aug. 2008), http://www.acphd.org/media/53628/unnatcs2008.pdf. Infants are 1.5 times more likely to be born premature or low birth weight. *Id.* West Oakland children under five visit the emergency room for asthma at double the rate of elsewhere in Alameda County. Long Decl. (Doc. 161-1), Ex. 17, at 9 (Public Health Advisory Panel Report).

[10] The estimated background potential cancer risk due to diesel PM in the San Francisco Bay Area is about 480 excess cancers per million. 2008 CARB Study, *supra*, at 22. West Oakland's overall population-weighted cancer risk due to the diesel PM emissions is nearly 1,200 chances per million. *Id.* at 25.

The City of Oakland recognized these facts when passing the Ordinance, noting that West Oakland residents "are disadvantaged and disproportionately suffer health problems and bear the brunt of health-related impacts caused by industrial and other activities." Long Decl. (Doc. 159), Ex. 1, at 2 (Ordinance No. 13385).

2. Pollution exposure from coal would lead to increased incidences of disease, work and school absences, lost recreational opportunities, and increased economic stress in West Oakland

Impacts on West Oakland residents from air pollution extend into all areas of life. Residents simply cannot afford any additional burdens that could make it harder for them to succeed. Bringing coal into their neighborhood would set back the progress those in the community have worked hard to achieve.

Storing and handling coal in West Oakland would increase air pollution exposure, causing adverse health effects and deaths. Coal dust triggers asthma. Long Decl. (Doc. 161-1), Ex. 17, at 15 (Public Health Advisory Panel Report). Inhaling even low levels of coal dust would cause the disproportionately high number of children suffering from asthma in West Oakland further loss of lung function. *Id.* at 13. The neighborhood's already high cancer risk would rise even higher with the OBOT coal project. *Id.* The Public Health Advisory Panel submitted to the City of Oakland that the West Oakland zip code 94607 would "likely experience an increase in cancer risk from the OBOT project, even though it already has the highest cancer risk from air pollution in the County." *Id.*

Illnesses caused by poor air quality contribute to lost work days and increased school absences. *Id.* at 14. Money spent on asthma inhalers or doctor's visits stresses incomes in a neighborhood where 30 percent of residents live below the poverty line. *See* City-Data, "West Oakland Neighborhood Detailed Profile, 94607", http://www.city-data.com/neighborhood/West-Oakland-Oakland-CA.html (last visited Oct. 18, 2017). Coal in Oakland would worsen these effects. Long Decl. (Doc. 161-1), Ex. 17, at 14 (Public Health Advisory Panel Report).

Heavy coal trains and coal loading/unloading would also add to noise exposures, increasing the risk of disrupted sleep and reduced academic and work performance for those living and working

nearby. *Id.* at vii, 85-97; *see also* Long Decl. (Doc. 159), Ex. 7, at 5 (OBOT Basis of Design) (hours of Terminal's operation would be 24 hours/day, 362 days/year). According to a Port of Oakland study cited by the Public Health Panel, West Oakland residents are already experience an average noise exposure of 74 dB, which puts residents at risk of a 29 percent impairment in recall and reading and a 4 percent impairment in recognition and attention relative to a typical 60 dB residential environment. Long Decl. (Doc. 161-2), Ex. 17, at 93 (Public Health Advisory Panel Report). Among children, lost sleep due to causes like noise can contribute to behavior problems and reduced educational attainment. *Id*. at vii (Doc. 161-1).

Moreover, many important West Oakland community resources—such as schools, parks, and community services—are located near the proposed Terminal. *Id.* at 14. This structurally locks in higher exposures for more vulnerable populations who cannot afford to attend school or recreate elsewhere. *Id*. For example Raimondi Park—located less than two miles from the Terminal—receives 27,000 annual visits, many from West Oakland residents. *Id.* at 19, 95-96. Exercise increases respiration rates and the total amount of pollution dose, putting those who recreate in this popular park at risk. *Id.* at 19.

Should the coal stored and handled at the Terminal catch fire, large amounts of pollutants—including $PM_{2.5,}$ $PM_{10,}$ organic compounds, sulfur, nitrogen oxides, and toxic metals—would permeate the West Oakland neighborhood. Long Decl. (Doc. 159), Ex. 1, at 7 (Ordinance No. 13385); *see also* U.S. Dep't of Energy, *The Fire Below: Spontaneous Combustion in Coal*, *supra*, at 1. Arguably the smoke from such a fire would be worse than that from a coal-fired power plant, as the burn would not be subject to emission control technologies. A coal fire would therefore cause serious health hazards for surrounding communities and increase the risk of hospitalization and adverse cardiovascular and respiratory effects.

West Oakland residents simply have no room for additional health or safety burdens. Long Decl. (Doc. 159), Ex. 1, at 5-6 (Ordinance No. 13385); *see also* Long Decl. (Doc. 161-1), Ex. 17, at 4 (Public Health Advisory Panel Report) (concluding that due to existing environmental harms and low adaptive capacity due to economic and structural inequality, any increase in environmental hazards

would cause substantial harm to West Oakland residents). The Public Health Advisory Panel—after examining published journal articles and government data—put it plainly in the report they submitted to the Oakland City Council: "[A]ny increase in exposure to environmental hazards related to coal . . . would likely have an adverse health impact on the West Oakland population, possibly with greater severity than for others in Oakland were they to face a similar exposure." Long Decl. (Doc. 161-1), Ex. 17, at 4 (Public Health Advisory Panel Report). The City of Oakland, therefore, acted reasonably to protect its most vulnerable residents. Allowing coal handling and storage in West Oakland would have severe and dire consequences, possibly lasting generations.

D. Workers would face serious health and safety risks from employment at a coal terminal

Coal is inherently dangerous for workers who must handle it daily. Long Decl. (Doc. 159), Ex. 1, at 7 (Ordinance No. 13385). This is due to the same risks described above: coal is combustible in solid form, highly explosive when suspended as particles in confined spaces, and toxic to humans when inhaled as dust. Long Decl. (Doc. 161-1), Ex. 17, at 43 (Public Health Advisory Panel Report).

Amici do not oppose development of the former Army Base, including development of the site's bulk terminal, and the additional economic opportunities that would bring to the community. Yet the few permanent jobs created by making coal a part of that development are not worth the substantial and inevitable harms that would befall those employed at the project.[11]

Workers who have prolonged exposure to coal suffer significant health risks. Coal dust is linked to health issues such as chronic bronchitis, decreased lung function, emphysema, cancer, and death. Long Decl. (Doc. 161-1), Ex. 17, at 31-32 (Public Health Advisory Panel Report). The World Health Organization found that coal dust is responsible for most occupational lung diseases linked to airborne particulates. Long Decl. (Doc. 159), Ex. 1, at 2 (Ordinance No. 13385). During the September 2015 hearing before Oakland City Council, International Longshore and Warehouse Union Local 10 member Katrina Booker testified that during her previous job handling coal at the Port of Stockton, she suffered daily ailments including burning eyes, nose bleeds, and chest pain. Mariela

[11] The 2012 Initial Study/Addendum projected the creation of up to 60 permanent jobs at the bulk commodity terminal, excluding the warehouse. Pl.'s RJN (Doc. 49-11), Ex. E, at 25.

Patron, *Hundreds Pack Public Hearing on Coal Transport Through Oakland*, Oakland North (Sept. 22, 2015), https://oaklandnorth.net/2015/09/22/hundreds-pack-public-hearing-on-coal-exports-in-oakland/. While U.S. Department of Labor regulations protect miners from dust exposure, there are no such regulations in place for workers handling coal at a terminal.

The portion of the Terminal handling coal is expected to generate only 60-120 permanent jobs and around 158 construction jobs. Long Decl. (Doc. 161-1), Ex. 17, at 39 (Public Health Advisory Panel Report); Pl.'s RJN (Doc. 49-11), Ex. E, at 25. The health and safety risks to workers, first responders, and the neighborhood simply aren't worth those meager economic contributions—particularly considering similar positions would likely be created were the project to handle another commodity.

IV. CONCLUSION

The Oakland City Council recognized the substantial health and safety risks posed by a massive coal operation when it adopted the Ordinance and Resolution in 2016. It did so based on an independent evaluation of the substantial evidence received from community members and experts. During the comment period, the City received hours of testimony and hundreds of letters all pointing in the same direction: the jobs created from handling and storing coal would not be worth the cost in health, safety, and lives. Further, three expert reports concluded that the Terminal project would seriously endanger the health and safety of Oakland residents and workers—particularly those living in West Oakland.

West Oakland already suffers from impaired air quality and poor health outcomes due to other industrial operations and freeways in the area. The community has recently made strides to improve air quality and other pollution levels. Bringing millions of tons of coal into West Oakland could erase this progress and further entrench residents in a cycle of illness, missed school and work, and generational poverty.

The City of Oakland has a public duty to protect the health and safety of its citizens. The Terminal Development Agreement's clause at section 3.4.2 speaks to this continuing responsibility. The Oakland City Council considered the ample evidence before it and took the necessary steps to

address the costs of pollution on its most vulnerable residents. The City's decision prohibiting coal activities within its borders should stand, and Defendant-Intervenors' motion for summary judgment should be granted.

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Respectfully submitted,

/s/ Jonathan C. Evans

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