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8
9 UNITED STATES DISTRICT COURT
10 EASTERN DISTRICT OF CALIFORNIA
11

12 CALIFORNIA DUMP TRUCK OWNERS
13 ASSOCIATION

14 Plaintiff,

15 vs.

16 MARY D. NICHOLS, Chairperson of the
California Air Resources Board; JAMES
17 GOLDSTENE, Executive Officer of the
California Air Resources Board; and DOES 1-
18 50

19
20 Defendants,

21 NATURAL RESOURCES DEFENSE
22 COUNCIL, INC.,

23 Defendant-Intervenor
24

Case No. 2:11-CV-00384-MCE-GGH

**DECLARATION OF JAMES E.
ENSTROM IN SUPPORT OF
OPPOSITION TO MOTION FOR
SUMMARY JUDGMENT**

1 I, James E. Enstrom, declare as follows:

2 1. The facts stated in this declaration are true of my own personal knowledge, and if
3 called as a witness in this matter I could and would testify competently thereto.

4 2. I have a 1970 Ph.D. in physics from Stanford University and I am a life member
5 of the American Physical Society. Since 1973 I have been conducting epidemiologic research at
6 the UCLA School of Public Health, where I obtained an M.P.H. and postdoctoral certificate in
7 epidemiology. My epidemiologic research has focused primarily on the relationship of mortality
8 to healthy lifestyles, active and passive smoking, smoking cessation, vitamin C, and air pollution.

9 3. Since 1976 I have held research faculty positions in the School of Public Health
10 and the Jonsson Comprehensive Cancer Center. Since 1981 I have been a founding Fellow of
11 the American College of Epidemiology (ACE) and during 2009-2011 I served as Chair of the
12 ACE Ethics Committee.

13 4. Since 1990 I have been a biographee in Who's Who in America because of my
14 epidemiologic research.

15 5. Since 2005 I have been President of the Scientific Integrity Institute, which I
16 established in Los Angeles in order to promote scientific integrity in epidemiology and to fully
17 address controversial epidemiologic relationships, such as, the one discussed in this declaration.

18 6. I have identified and documented several major flaws in the public health
19 justification used by the California Air Resources Board (CARB) with regard to the Truck and
20 Bus Regulation ("Truck Rule") (<http://www.arb.ca.gov/regact/2010/truckbus10/truckbus10.htm>).
21 This documentation is summarized in my December 13, 2011 letter to the California Office of
22 Administrative Law (COAL) ([http://www.arb.ca.gov/lists/gmbond2011/2-
23 enstrom_letter_to_coal_cornez_re_suspend_carb_diesel_regs_121311.pdf](http://www.arb.ca.gov/lists/gmbond2011/2-enstrom_letter_to_coal_cornez_re_suspend_carb_diesel_regs_121311.pdf)).

24 7. A very strong case can be made that the Truck Rule, which does not exist
25 anywhere else in the world, is primarily due to 22 years of scientific and legal activism by three
26 agencies within the California Environmental Protection Agency (Cal EPA): Office of
27 Environmental Health Hazard Assessment (OEHHA), Scientific Review Panel on Toxic Air
28 Contaminants (SRP), and CARB. Important additional contributions to this effort have been

1 made by the US Environmental Protection Agency (US EPA), the Health Effects Institute (HEI),
2 and a small, but highly influential, group of faculty members at the University of California,
3 Harvard University, Brigham Young University, and the University of Ottawa.

4 8. The scientific and public health justification for the Truck Rule began in 1989
5 when the International Agency for Research on Cancer (IARC) classified diesel engine exhaust
6 as a Group 2A carcinogen, “probably carcinogenic to humans.” In 1990 OEHHA declared diesel
7 engine exhaust to be a “chemical known to the State to cause cancer,” as per Proposition 65.
8 Diesel exhaust is not classified as a carcinogen anywhere outside of California.

9 9. Since 1991 important evidence that diesel exhaust is NOT carcinogenic in
10 California has been repeatedly presented to and systematically ignored by OEHHA and SRP and
11 CARB. The two epidemiologic studies most relied upon by OEHHA and SRP during the 1990s
12 were conducted by Eric Garshick, M.D., and others at Harvard University. They consisted of a
13 1987 case-control study and a 1988 retrospective cohort study which examined diesel exhaust
14 exposure and lung cancer deaths in railroad workers during 1959-1982.

15 10. A 1991 independent analysis by Kenny S. Crump, Ph.D., of the 1988 Garshick
16 study concluded that “No relationship between measures of diesel exposure and lung cancer
17 mortality is demonstrated in this study.” A 1995 HEI report on diesel exhaust found that “A
18 wealth of information is available about the potential for diesel emissions to cause cancer.
19 However, the lack of definitive exposure data for the occupationally exposed study populations
20 precludes using the available epidemiologic data to develop quantitative estimates of cancer
21 risk.”

22 11. Then, Dr. Garshick unequivocally stated in a 1997 letter to CARB, OEHHA, and
23 SRP “I have been extensively involved in the reassessment of the retrospective cohort data that
24 OEHHA has been using to form the basis for its risk assessment for diesel exhaust. . . . the
25 relationship between lung cancer mortality and exposure cannot be summarized by a positive
26 slope as presented by OEHHA. This means that the current results cannot be summarized using
27 a single number relating cumulative exposure to diesel exhaust to health outcome. . . .”
28

1 12. In spite of the clear reservations in the above statements, the SRP identified the
2 particulate matter (PM) portion of diesel exhaust as a toxic air contaminant (TAC) in 1998 and
3 established a specific quantitative relationship between lung cancer risk and diesel exhaust
4 exposure. It is worth noting that the three SRP members primarily responsible for this
5 identification (toxicologist, biostatistician, and epidemiologist) did not have legal SRP
6 appointments in 1998, based on the requirements stated in the legislation that established the
7 SRP. Since 1998 there have been essentially continuous scientific and/or legal efforts to get this
8 TAC identification reversed or modified.

9 13. The major public health justification for the Truck Rule has been the fact that
10 diesel PM is classified as a TAC by CARB. The CARB claim in 1998, based on an invalid
11 interpretation of the Garshick studies, was that diesel PM was responsible for 14,000 annual lung
12 cancer cases in the general California population. During the past several years, CARB has
13 claimed the diesel PM is causing “premature deaths” in the general California population. The
14 most recent CARB claim is the diesel PM causes 2,000 annual “premature deaths” in California
15 and that fine particulate matter as a whole (PM2.5) causes 9,200 annual “premature deaths.”
16 However, CARB calculations indicate that the Truck Rule will prevent only about 300 of the
17 2,000 annual diesel PM deaths. These “premature deaths” exist only because of the CARB and
18 US EPA assessment that PM2.5 causes a small increase in the total (all cause) mortality rate in
19 one major national epidemiologic study.

20 14. However, there is overwhelming evidence that PM2.5 is not related to total
21 mortality in California. This evidence comes from eleven separate analyses of five major
22 epidemiologic cohorts and is detailed in my December 13, 2011 COAL letter. Unfortunately,
23 CARB has ignored all of this California-specific evidence and has relied upon one outdated
24 national study that does not apply to California. A fair assessment of all the available evidence
25 indicates that PM2.5 and diesel PM are not causing “premature deaths” in California.

26 15. Finally, California is largely in compliance with the current US EPA National
27 Ambient Air Quality Standard (NAAQS) for PM2.5 (15 $\mu\text{g}/\text{m}^3$ annual and 35 $\mu\text{g}/\text{m}^3$ daily).
28 While certain regions in California, particularly the San Joaquin Valley Air Basin and South

1 Coast Air Basin, may exceed the NAAQS to some extent, there is overwhelming epidemiologic
2 evidence that these two regions do not have any increased mortality risk associated with PM2.5.
3 Indeed, there are no regions of California that have an increased PM2.5 mortality risk.

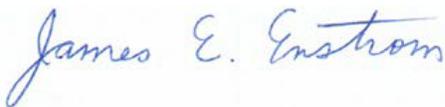
4 16. It is important to keep PM2.5 mortality risk in perspective with general mortality
5 risk. California has the third lowest age-adjusted total mortality rate of the fifty states and Los
6 Angeles County has an even lower age-adjusted total death rate.

7 17. The Truck Rule, if fully implemented, will reduce PM2.5 levels in California by
8 only about 10% because the U.S. EPA emission summary shows that there several sources of
9 PM2.5 in addition to truck and buses. The primary sources of PM2.5 emissions in California are
10 dust, fuel combustion, mobile, fires, industrial processes, miscellaneous, and agriculture. Mobile
11 source emissions account for less than 18% of the total PM2.5 emissions in California and trucks
12 and buses comprise only a subset of all mobile sources, which includes all on road and off road
13 motor vehicles. Attached to this declaration as Exhibit 1 is a true and correct copy of the graph
14 by US EPA depicting the sources of air emissions in California ([http://www.epa.gov/cgi-
15 bin/broker?_service=data&_debug=0&_program=dataprog.state.1.sas&pol=PM25_PRI&stfips=06](http://www.epa.gov/cgi-bin/broker?_service=data&_debug=0&_program=dataprog.state.1.sas&pol=PM25_PRI&stfips=06)).

16 18. In summary, there is no public health justification for the Truck Rule. The Truck
17 Rule does not satisfy California Health and Safety Code Section 39602.5(a), because it is not
18 necessary and it is not cost effective.

19
20 I declare under penalty of perjury under the laws of the State of California that the
21 foregoing is true and correct and based on my personal knowledge, and if called to testify to
22 these facts, I would do so competently and truthfully.

23 Executed this 10th day of January, 2012, in Los Angeles, California.

24
25 

26
27 _____
28 James E. Enstrom

Exhibit 1

<http://www.epa.gov/cgi->

[bin/broker?_service=data&_debug=0&_program=dataprog.state.1.sas&pol=PM25_PRI&stfips=06](http://www.epa.gov/cgi-bin/broker?_service=data&_debug=0&_program=dataprog.state.1.sas&pol=PM25_PRI&stfips=06)

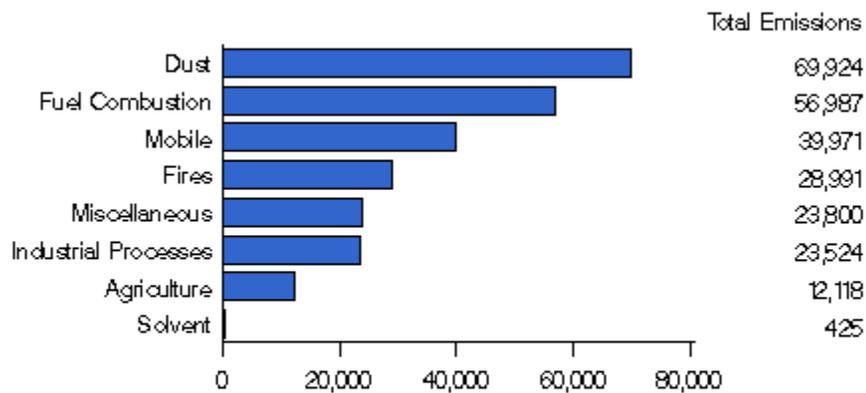
US EPA State and County Emission Summaries

2008 California State Summary

The graph below shows state-level emissions grouped by major source sectors.

[View the chart data in Microsoft Excel](#) ([Download Excel Viewer](#))

PM2.5 Emissions by Source Sector
in California (NEI 2008 v1.5 GPR)



Links

Agriculture	Dust
Fires	Fuel Combustion
Industrial Processes	Miscellaneous
Mobile	Solvent