September 8, 2016

William H. Farland, Ph.D.
Chair, Board on Environmental Studies and Toxicology
National Academy of Sciences National Research Council
Professor, Environmental and Radiological Health Sciences
Colorado State University, Fort Collins, CO
William.Farland@ColoState.edu

Re: NAS NRC DELS-BEST-14-05 Committee on "Assessing Toxicologic Risks to Human Subjects Used in Controlled Exposure Studies of Environmental Pollutants"

Dear Professor Farland,

For your information, I have attached my August 30, 2016 email letter to UCSF Professor Robert A. Hiatt, Chair of NAS NRC DELS-BEST-14-05 Committee on "Assessing Toxicologic Risks to Human Subjects Used in Controlled Exposure Studies of Environmental Pollutants." Please read my comments very carefully, particularly the link to the December 15, 2015 National Association of Scholars article on "Concerns about National Academy of Sciences and Scientific Dissent" (https://www.nas.org/articles/nas_letter). My comments reinforce the evidence contained in the 80-page September 7, 2016 letter to you from Steve Milloy, Publisher of JunkScience.com. Finally, please read the September 6, 2016 Breitbart.com commentary by Joseph L. Bast, President of The Heartland Institute, "Will the National Academy of Sciences Allow EPA to Get Away with Murder?" (http://www.breitbart.com/big-government/2016/09/06/joseph-bast-will-the-national-academy-of-sciences-allow-the-epa-to-get-away-with-murder). All of this material is highly relevant to the current and future scientific integrity and credibility of the National Academy of Sciences. I hope you treat it seriously.

Thank you very much for your consideration.

Sincerely yours,

James E. Enstrom, Ph.D., M.P.H.

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August 30, 2016

Robert A. Hiatt, M.D., Ph.D.
Chair, Department of Epidemiology and Biostatistics
School of Medicine
University of California, San Francisco
Chair, NAS NRC DELS-BEST-14-05 Committee
robert.hiatt@ucsf.edu

Dear Professor Hiatt,

I am writing regarding the August 24, 2016 NAS NRC DELS-BEST-14-05 Committee Meeting on "Assessing Toxicologic Risks to Human Subjects Used in Controlled Exposure Studies of Environmental Pollutants" (http://www8.nationalacademies.org/cp/meetingview.aspx?MeetingID=8840&MeetingNo=6). Before your NAS NRC Report is finalized, I implore your committee to examine the written and verbal statements regarding the toxicological and mortality risks of fine particulate matter (PM2.5) and diesel PM submitted by Steve Milloy, M.H.S., J.D., John D. Dunn, M.D., J.D., S. Stanley Young, Ph.D., and myself (http://junkscience.com/2016/08/report-nas-meeting-on-epas-illegal-human-experiments/). My written comments can be found at this link (http://junkscience.com/wp-content/uploads/2016/08/Enstrom-Comments-to-NAS-NRC-Toxic-Risks-Committee-082416.pdf).

During the past twenty years there have been major challenges to the claim that PM2.5 and diesel PM cause premature deaths in the United States and California. I presented a detailed summary of scientific problems and misconduct involving PM2.5 and diesel PM epidemiology in my August 1, 2009 "None of this is Real" lecture (https://www.youtube.com/watch?v=Tb1UDEzEBBY). In addition, I submitted a detailed December 13, 2011 letter to the California Office of Administrative Law which contains my scientific and legal challenges to the 2008 CARB Truck and Bus Regulation, which is largely justified by invalid claims of premature deaths caused by PM2.5 (http://www.arb.ca.gov/lists/gmbond2011/2-enstrom-letter-to-coal-cornez-re-suspend-carb-diesel-regs-121311.pdf). One of my challenges involves the illegal appointments to the Scientific Review Panel on Toxic Air Contaminants (SRP) of several UC professors, including two from the UCSF School of Medicine, Stanton A. Glantz, Ph.D., and Paul D. Blanc, M.D. (https://www.scientificintegrityinstitute.org/UCASSRP083115.pdf).

Since June 2015 I have aggressively attempted to publish in a peer-reviewed journal my above evidence of PM2.5 epidemiology misconduct, as well as my new evidence based on original research done this year. This evidence conclusively refutes the US EPA, CARB, and SCAQMD claims that PM2.5 causes premature deaths in the United States and California. Unfortunately, I was not yet been able to get this evidence published, or even properly peer reviewed, in two submissions to the New England Journal of Medicine and in five submissions to Science. This evidence is described in detail in the PM2.5 portion of the December 15, 2015 National Association of Scholars article "Concerns about National Academy of Sciences and Scientific Dissent" (https://www.nas.org/articles/nas_letter) and in my August 24, 2016 comments cited above. My effort to publish this evidence in a peer-reviewed journal continues.

Please examine the above weblinks and contact me if you would like to discuss any aspect of this request. I have attached a PDF of this email message, which includes a Summary Table of overwhelming 2000-2016 evidence showing NO relationship between PM_{2.5} and total mortality in California.

Thank you very much for your consideration of this important request.

Sincerely yours,

James E. Enstrom

James E. Enstrom, Ph.D., M.P.H. UCLA and Scientific Integrity Institute http://scientificintegrityinstitute.org/jenstrom@ucla.edu

NAS	Marcia K. McNutt, Ph.D. (UCSD)
NAS	Ralph J. Cicerone, Ph.D. (UCI)
NAS	Bruce M. Alberts, Ph.D. (UCSF)
NAS	Geraldine L. Richmond, Ph.D. (UCB)
NAS	Susan R. Wessler, Ph.D. (UCR)
NAS	Nancy E. Lane, M.D. (UCSF,UCD)
CARB	C. Arden Pope, III, Ph.D. (USSR)
CARB	John R. Balmes, M.D. (UCSF,UCB)
CARB	Daniel Sperling, Ph.D. (UCB,UCD)
CARB	Linda T. Smith, Ph.D. (UCSD)
CARB	Hien T. Tran, Ph.D. (UCD)
CARB	Alvaro Alvarez, Ph.D. (UCR)
CARB	Matthew E. Kahn, Ph.D. (UCLA,USC)
CARB	Suzanne E. Paulson, Ph.D. (CIT,UCLA)
CARB	Yifang Zhu, Ph.D. (UCLA)
CARB	Kent E. Pinkerton, Ph.D. (UCD)
SRP	John R. Froines, Ph.D. (UCB,UCLA)
SRP	Stanton A. Glantz, Ph.D. (UCSF)
SRP	Michael T. Kleinman, Ph.D. (UCI)
SRP	Beate R. Ritz, M.D., Ph.D. (UCLA)
SRP	Paul D. Blanc, M.D. (UCSF)
SRP	S. Katharine Hammond, Ph.D. (UCB)
OEHHA	Melanie A. Marty, Ph.D. (UCD)
OEHHA	Bart D. Ostro, Ph.D. (UCD)
AQMD	George D. Thurston, Sc.D. (USSR)
AQMD	Joseph K. Lyou, Ph.D. (UCSC)
AQMD	Jean J. Ospital, Dr.P.H. (UCLA)
AQMD	Chung S. Liu, D.Env. (UCLA)
	Philip M. Fine, Ph.D. (UCB,CIT,USC)
	Rob S. McConnell, M.D. (USC)
AQMD	Frank D. Gilliland, M.D., Ph.D. (USC)
	NAS NAS NAS NAS NAS NAS NAS CARB CARB CARB CARB CARB CARB CARB CARB

AQMD Edward L. Avol, M.S. (CIT, USC)

Comments to NAS NRC DELS-BEST-14-05 Committee

Assessing Toxicologic Risks to Human Subjects Used in Controlled Exposure Studies of Environmental Pollutants

James E. Enstrom, Ph.D., M.P.H.
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August 24, 2016

New Evidence on the Lack of Lethality of Fine Particulate Matter (PM2.5), the Difficulty of Peer-Reviewing and Publishing This Evidence, and a Request to Fully Access This Evidence

- 1. Since 2005 I have published, assembled, and presented strong epidemiologic evidence that there is no relationship between PM_{2.5} and total mortality in California. The latest version of this evidence is the attached table with 17 null or essentially null results by many investigators using six different California cohorts (http://scientificintegrityinstitute.org/NoPMDeaths081516.pdf).
- 2. In 2015 a very strong case was made by nine accomplished experts, including myself, that "Particulate Matter Does Not *Cause* Premature Deaths." It is described in detail in the attached 2015 National Association of Scholars document (https://www.nas.org/articles/nas_letter).
- 3. During 2016 I have conducted major analyses that do not support the positive nationwide relationship between PM_{2.5} and total mortality found the 1982 American Cancer Society (ACS) Cancer Prevention Study II (CPS II) cohort during 1982-1989, as published in Pope 1995, HEI 2000, and HEI 2009. The null findings in my analyses indicate that the published positive findings are not robust and depend upon the selective use PM_{2.5} data and CPS II subjects.
- 4. The evidence described above, which is highly relevant to the toxicity and lethality of PM_{2.5} and the public health justification for the PM_{2.5} NAAQS, was immediately rejected for internal or external peer-review by *Science* in five separate submissions since June 2015, including two submissions in July 2016. My efforts continue to peer-review and publish the above evidence.
- 5. Based on a recent survey conducted by the National Association of Scholars, very few National Academy of Sciences (NAS) members expressed any concern about the suppression of scientific dissent in three key areas, including PM2.5 epidemiology, by former *Science* Editor-in-Chief and new NAS President Marcia K. McNutt (https://www.nas.org/articles/nas_letter).
- 6. I request that the NAS NRC Committee fully assess the evidence on PM_{2.5} described above and in the three major presentations today. I further request that the Committee properly include this evidence in its final assessment of the toxic risks to humans of PM_{2.5} and other pollutants.
- 7. Finally, in the interest of credibility and transparency, I request that the NAS publish the number of NAS member votes for and against the election of President McNutt. In addition to the total vote, the vote should be shown by state for the 15 states with the most NAS members.

Summary Table. Epidemiologic cohort studies of PM2.5 and total mortality in California, 2000-2016 Relative risk of death from all causes (RR and 95% CI) associated with increase of $10 \mu g/m^3$ in PM2.5 (http://scientificintegrityinstitute.org/NoPMDeaths112215.pdf)

Krewski 2000 & 2010 CA CPS II Cohort N=40,408 RR = 0.872 (0.805-0.944) 1982-1989 (N=[18,000 M + 22,408 F]; 4 MSAs; 1979-1983 PM2.5; 44 covariates)

McDonnell 2000 CA AHSMOG Cohort N $^{\circ}$ 3,800 RR $^{\circ}$ 1.00 (0.95 – 1.05) 1977-1992 (N $^{\circ}$ [1,347 M + 2,422 F]; SC&SD&SF AB; M RR=1.09(0.98-1.21) & F RR $^{\circ}$ 0.98(0.92-1.03))

Jerrett 2005 CPS II Cohort in LA Basin N=22,905 RR = 1.11 (0.99 - 1.25) 1982-2000 (N=22,905 M & F; 267 zip code areas; 1999-2000 PM2.5; 44 cov + max confounders)

Enstrom 2005 CA CPS I Cohort N=35,783 RR = 1.039 (1.010-1.069) 1973-1982 (N=[15,573 M + 20,210 F]; 11 counties; 1979-1983 PM2.5) RR = 0.997 (0.978-1.016) 1983-2002

Enstrom 2006 CA CPS I Cohort N=35,783 RR = 1.061 (1.017-1.106) 1973-1982 (11 counties; 1979-1983 & 1999-2001 PM2.5) RR = 0.995 (0.968-1.024) 1983-2002

Zeger 2008 MCAPS Cohort "West" N=3,100,000 RR = 0.989 (0.970-1.008) 2000-2005 (N=[1.5 M M + 1.6 M F]; Medicare enrollees in CA+OR+WA (CA=73%); 2000-2005 PM2.5)

Jerrett 2010 CA CPS II Cohort N=77,767 RR \sim 0.994 (0.965-1.025) 1982-2000 (N=[34,367 M + 43,400 F]; 54 counties; 2000 PM2.5; KRG ZIP; 20 ind cov+7 eco var; Slide 12)

Krewski 2010 (2009) CA CPS II Cohort

(4 MSAs; 1979-1983 PM2.5; 44 cov) N=40,408 RR = 0.960 (0.920-1.002) 1982-2000 (7 MSAs; 1999-2000 PM2.5; 44 cov) N=50,930 RR = 0.968 (0.916-1.022) 1982-2000

Jerrett 2011 CA CPS II Cohort N=73,609 RR = 0.994 (0.965-1.024) 1982-2000 (N=[32,509 M + 41,100 F]; 54 counties; 2000 PM2.5; KRG ZIP Model; 20 ind cov+7 eco var; Table 28)

Jerrett 2011 CA CPS II Cohort N=73,609 RR = 1.002 (0.992-1.012) 1982-2000 (N=[32,509 M + 41,100 F]; 54 counties; 2000 PM2.5; Nine Model Ave; 20 ic+7 ev; Fig 22 & Tab 27-32)

Lipsett 2011 CA Teachers Cohort N=73,489 RR = 1.01 (0.95 - 1.09) 2000-2005 (N=[73,489 F]; 2000-2005 PM2.5)

Ostro 2011 CA Teachers Cohort N=43,220 RR = 1.06 (0.96 - 1.16) 2002-2007 (N=[43,220 F]; 2002-2007 PM2.5)

Jerrett 2013 CA CPS II Cohort N=73,711 RR = $1.060 (1.003-1.120) 1982-2000 (N=[^32,550 M + ^41,161 F]; 54 counties; 2000 PM2.5; LUR Conurb Model; 42 ind cov+7 eco var+5 metro; Table 6)$

Jerrett 2013 CA CPS II Cohort N=73,711 RR = 1.028 (0.957-1.104) 1982-2000 (same parameters and model as above, except including co-pollutants NO2 and Ozone; Table 5)

Ostro 2015 CA Teachers Cohort N=101,884 RR = 1.01 (0.98 -1.05) 2001-2007 (N=[101,881 F]; 2002-2007 PM2.5) (all natural causes of death)

Thurston 2016 CA NIH-AARP Cohort N=160,209 RR = 1.02 (0.99 -1.04) 2000-2009 (N=[~95,965 M + ~64,245 F]; full baseline model: PM2.5 by zip code; Table 3) (all natural causes of death)

Enstrom 2016 unpub CA NIH-AARP Cohort N=160,368 RR = 1.001 (0.949-1.055) 2000-2009 (N=[$^{\circ}$ 96,059 M + $^{\circ}$ 64,309 F]; full baseline model: 2000 PM2.5 by county)