Committee on Energy and Commerce
U.S. House of Representatives
Witness Disclosure Requirement - "Truth in Testimony"
Required by House Rule XI, Clause 2(g)

1. Your Name: DR. PETER A. VALBERG		
2. Are you testifying on behalf of the Federal, or a State or local government entity?	Yes	(No)
3. Are you testifying on behalf of an entity that is not a government entity?	Yes	(No)
4. Other than yourself, please list which entity or entities you are representing: None		
5. Please list any Federal grants or contracts (including subgrants or subcontracts) that you or the entity you represent have received on or after October 1, 2009: None		
6. If your answer to the question in item 3 in this form is "yes," please describe your position or representational capacity with the entity or entities you are representing:		
7. If your answer to the question in item 3 is "yes," do any of the entities disclosed in item 4 have parent organizations, subsidiaries, or partnerships that you are not representing in your testimony?	Yes	No
8. If the answer to the question in item 3 is "yes," please list any Federal grants or contracts (including subgrants or subcontracts) that were received by the entities listed under the question in item 4 on or after October 1, 2009, that exceed 10 percent of the revenue of the entities in the year received, including the source and amount of each grant or contract to be listed:		
9. Please attach your curriculum vitae to your completed disclosure form.		

Signature: [redacted] Date: June 22, 2012

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Areas of Expertise

Public health, inhalation toxicology, epidemiology, human health risk assessment, risk communication, indoor / outdoor air quality, comparative toxicology, modeling of human exposure and retained dose, health effects of ionizing and non-ionizing radiation.

Education

M.S., Human Physiology and Inhalation Toxicology, Harvard School of Public Health.

Ph.D., Physics, Harvard University, Graduate School of Arts and Sciences.

M.A., Physics, Harvard University.

A.B., Physics and Mathematics, *summa cum laude*, Taylor University.

Professional Experience

2001 – Present (and 1990 – 1998) GRADIENT, Cambridge, MA
Principal. Environmental consulting practice includes inhalation toxicology, environmental health, human health risk assessment, use of epidemiology in public health decisions, health effects of airborne gases and particles, and health effects of ionizing and non-ionizing radiation.

1998 – 2000 CAMBRIDGE ENVIRONMENTAL, INC., Cambridge, MA
Senior Scientist.

1985 – 2000 HARVARD SCHOOL OF PUBLIC HEALTH, Boston, MA
Associate Professor of Human Physiology. (Adjunct, after 1990) Research work included: (1) human health effects of air toxics, (2) lung macrophage function measured with magnetic particles, and (3) lung deposition and clearance of radioactive tracer particles.

1987 INSTITUTE OF OCCUPATIONAL HEALTH, Helsinki, Finland
Visiting Researcher. Developed a magnetometric assay to be used for studying pulmonary macrophage function for lung cells lavaged from human subjects.

1984 INHALATION TOXICOLOGY RESEARCH INSTITUTE, Albuquerque, NM
Visiting Scientist. Examined the effect of exercise and hypercapnia on deposition, lung clearance, and lung distribution of inhaled radioactive aerosol.

1976 – 1985 HARVARD SCHOOL OF PUBLIC HEALTH, Boston, MA
Assistant Professor of Respiratory Physiology.

1970 – 1976 AMHERST COLLEGE, Amherst, MA
Assistant Professor of Physics.

Professional Activities

- National Academy of Sciences and National Research Council, Evaluating Health-Risk-Reduction Benefits of US EPA Regulations (2001 – 2003).
- Harvard School of Public Health: Research Advisory Committee Member for NIH-Sponsored Research on "Mechanisms of mortality/morbidity due to air particulate" (1997 – 2005).
- Member of the Committee on Man and Radiation (COMAR) (1999 – 2006).
- Health Effects Institute, Cambridge, MA, *ad hoc* reviewer (1984 – 1994).
- National Research Council, Commission on Life Sciences: Committee on Passive Smoking (1986 – 1988).
- Editorial Board, *Journal of Aerosol Medicine* (1987 – 2000).
- Center for Indoor Air Research, grant-application reviewer (1989 – present).
- NIOSH: Environmental Center Grants, Site Visit Delegation (1990).
- NIH Reviewer: Cardiovascular and Pulmonary Study Section, Radiation Study Section, and Health of the Population Study Section.
- DOE: Office of Health and Environmental Research, reviewer.
- Harvard Center for Risk Analysis: Review of Cellular Telephones (1994 – 1999).
- Physical and Biological Sciences Study Committee, Town of Needham Planning Board.

Professional Affiliations

Fellow of the Academy of Toxicological Sciences • Society of Toxicology (full member) • International Society for Environmental Epidemiology • Society for Risk Analysis • Health Physics Society (full member) • Sigma Xi • American Association for the Advancement of Science • American Conference of Governmental Industrial Hygienists (associate member)

Projects *(abbreviated)*

Carbon Black Manufacturers: Evaluated the toxicology and epidemiology of carbon black inhalation and ingestion.

Charter School in Washington, DC: Prepared a health risk assessment for the school board on the health risks of handling asbestos-containing materials that might release fibers.

City of Newton Health Department: Measured RF levels from a local transmitting antenna, reviewed RF field calculations, and provided scientific literature critique on RF health effects.

Confidential Client: Prepared a risk assessment for a Massachusetts landfill containing both chemical and radioactive waste and including multiple pathways of contaminant uptake by a trespasser.

Confidential Client: Prepared a model predictive of asbestos fiber drift and inhalation health hazard applicable to industrial processes where asbestos-containing materials are used.

Confidential Clients: Prepared an analysis of relative risks of TCE in drinking water *versus* health hazards from background levels of chemicals in air, water, and soil, as well as other routine risks to life and health.

Electric-Power Generating Companies: Prepared and delivered expert reports and public testimony on the potential health effects of airborne emissions from coal fired, gas-fired, oil-fired, and wood-fired electric utility power generating plants.

Electric Power Research Institute: Reviewed and analyzed the mechanisms by which biological systems may be affected by environmental electric and magnetic fields (EMFs). Organized a public workshop on the causes and characteristics of childhood leukemia.

Engine Manufacturers Association: Evaluated US EPA and California EPA health assessment documents on the potential carcinogenicity of diesel exhaust and ambient air particulate matter.

Harvard School of Public Health: Continuing Education for Professionals: Prepared material on special topics on inhalation toxicology for graduate students and health professionals. Presented lectures on risk assessment and risk communication.

Health Effects Institute: Prepared an analysis entitled "Ozone Molecular Dosimetry and Interaction with Biological Macromolecules."

Health Effects Institute: Organized, supervised, and documented a feasibility study for the Health Effects Institute initiating a national research program on the health effects of electric and magnetic fields.

Manufacturing Company: Analyzed multi-pathway human health risk for a site contaminated with polychlorinated biphenyls (PCBs) and chlorinated organic solvents. Analyzed experimental data to derive a fraction of PCBs that are picked up from concrete when touching the concrete.

Manufacturing Company/FUSRAP Site: Prepared a radionuclide health risk assessment and site management plan for site contaminated by nearby storage of uranium ore.

Massachusetts Department of Public Health: Prepared a public communications essays on what citizens can do to support improved air quality.

Medical Product Manufacturer: Prepared a risk assessment for air toxics produced during malfunction of a medical device used to assist breathing.

Michigan Occupational and Environmental Medical Association (MOEMA): Prepared and delivered a risk assessment tutorial for MOEMA's Continuing Education program.

Mining Company: Evaluated the epidemiological basis for the toxicity of arsenic in soils. Evaluated metals toxicity factors and site-specific bioavailability of metals.

National Institute of Environmental Health Sciences – Division of Research Grants: Reviewed grant applications for the Radiation Study Section Panel on Health-Effects Research.

National Institute of Environmental Health Sciences / Environmental Protection Agency: Asbestos Workshop, assisted in the review of the summary publication, "A Science-Based Examination of Asbestos and Related Mineral Fibers".

Navy Occupational Health and Preventive Medicine Program: Prepared and delivered seminars and workshops to US Navy medical personnel on the current research on EMFs.

New Mexico Environmental Department: Prepared a health risk assessment for measured and modeled concentrations of 80 airborne chemicals in Albuquerque, NM.

Refineries in US and Canada: Prepared a multi-pathway human health risk assessment for air emissions from petroleum refineries. The risk assessment process was monitored by task forces composed of regulators, educators, union members, and local officials.

School District on Long Island: Assessed possible environmental, occupational, and lifestyle risk factors for early-term miscarriage.

University of Denver: Analyzed the potential health impact of uranium disposal from munitions testing ("depleted uranium") as it was practiced in the 1960s and 1970s.

Uranium Mill: Evaluated the health implications of radioactive substance migration as predicted by different US EPA and DOE models.

US Department of Energy: Prepared a risk communication strategy for a nuclear test site where detonation of underground atomic devices had the potential to contaminate groundwater.

US Department of Justice: Prepared an analysis of the health hazards of the Love Canal Superfund site (Niagara Falls, NY).

US Department of Justice: Prepared a report and provided expert testimony on human toxicology with regard to soil contamination at a RCRA site.

US Department of Justice: Prepared reports and provided expert testimony in several different cases on asbestos, sulfuric acid, and airborne particulate inhalation toxicology.

US Environmental Protection Agency: Provided US EPA with a peer review (scientific critique) of the agency's draft guidance on risk assessment for VOC's present in household water..

US Environmental Protection Agency: Provided US EPA with a peer review (scientific critique) of the agency's draft reference concentration (RfC) methodology for risk assessment.

US Environmental Protection Agency: Analyzed the health risks of a remediation alternative at the Bloody Run Creek section of the Hyde Park Landfill superfund site (Niagara Falls, NY).

US Environmental Protection Agency, Health Effects Research Laboratory: Assisted in preparing a database of non-cancer health effects for 189 Hazardous Air Pollutants.

US Environmental Protection Agency, Environmental Criteria and Assessment Office: Evaluated research proposals on "Indoor and Ambient Air Risk Assessment Methodologies."

Utility: Analyzed the relationship between inhaled carbon monoxide concentration and blood carboxyhemoglobin. Performed sensitivity analysis on all the variables involved.

Waste Management Company: Evaluated health risks for a medical waste incinerator, including a multiple-pathway (ingestion, inhalation, dermal, mothers' milk) health risk assessment.

World Health Organization: Helped prepare a WHO research report on EMF health effects. Presented a lecture on EMF health effects at a WHO workshop in Geneva, Switzerland. Published review article on RF health effects.

Academic Research Projects *(abbreviated)*

National Heart, Lung, and Blood Inst.:	"Physical Determinants of Lung Function and Dysfunction."
National Heart, Lung, and Blood Inst.:	"Pulmonary SCOR: Chronic Diseases of the Airways."
National Cancer Institute:	"Magnetic Field Effects on Macrophages."
National Inst. of Environ. Health Sci.:	"Inhaled Particle Retention in Normal and Diseased Lungs."
National Heart, Lung, and Blood Inst.:	"Particle Location and Ingestion by Lung Macrophages."
National Inst. of Environ. Health Sci.:	"Factors Influencing Deposition of Inhaled Aerosols."

Publications – *Articles*

Hesterberg, TW; Long, CM; Bunn, WB; Lapin, CA; McClellan, RO; Valberg, PA. 2012. "Health effects research and regulation of diesel exhaust: an historical overview focused on lung cancer risk." *Inhalation Toxicology*. Early online at: http://informahealthcare.com/toc/iht/0/0?ai=1295&ui=g64l&af=H.

Hesterberg, TW; Bunn, WB; Valberg, PA; Long, CM. 2012. "Potential health effects of exposure to diesel engine exhausts." In *The Praeger Handbook of Environmental Health: Water, Air, and Solid Waste.* (Ed: Friis, RH), Praeger, ABC-CLIO, LLC, Santa Barbara, CA, p185-212.

Brain, JD; Kavet, R; Valberg, PA. 2012. "Observations on power-line magnetic fields associated with asthma in children." *Arch Pediatr Adolesc Med*. 166(1):97-8.

Valberg, PA; Long, CM. 2012. "Do brain cancer rates correlate with ambient exposure levels of criteria air pollutants or hazardous air pollutants (HAPs)?" *Air Quality, Atmosphere and Health*. 5:115-123.

Hesterberg, TW; Long, CM; Valberg, PA. 2011. Letter to the editor, "The Mounting Evidence Differentiating the Health Risks of New Technology Diesel Exhaust (NTDE) versus Traditional Diesel Exhaust (TDE)." *European Heart Journal.* 32(18).

Hesterberg, TW; Long, CM; Sax, SN; Lapin, CA; McClellan, RO; Bunn, WB; Valberg, PA. 2011. "Particulate matter in new technology diesel exhaust (NTDE) is quantitatively and qualitatively very different from that found in traditional diesel exhaust (TDE)." *J. Air & Waste Manage. Assoc.* 61:894-913.

Valberg, PA. 2011. "Magnetic fields: Possible Environmental health effects." In: Nriagu, JO (ed.) *Encyclopedia of Environmental Health*, Vol. 3, pp. 545–557. Burlington: Elsevier.

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Hesterberg, TW; Bunn, WB; McClellan, RO; Hamade, AK; Long, CM; Valberg, PA. 2009. "Critical review of the human data on short-term nitrogen dioxide (NO_2) exposures: Evidence for NO_2 no-effect levels." *Crit Rev Toxicol.* 39(9):743-781.

Valberg, PA; Bruch, J; McCunney, RJ. 2009. "Are rat results from intratracheal instillation of 19 granular dusts a reliable basis for predicting cancer risk?" *Regul Toxicol Pharmacol*. 54(1):72-83.

Hesterberg, TW; Valberg, PA; Long, CM; Bunn, WB; Lapin, CA. 2009. "Laboratory studies of diesel exhaust health effects: Implications for near-roadway exposures." *EM, Air & Waste Management Association Publication for Environmental Managers.* August. p. 13-16.

Goodman, JE; Nascarella, MA; Valberg, PA. 2009. "Ionizing radiation: a risk factor for mesothelioma." *Cancer Causes & Control*. 20:1237-1254.

Prueitt, RL; Goodman, JE; Valberg, PA. 2009. "Radionuclides in cigarettes may lead to carcinogenesis *via* $p16^{INK4a}$ inactivation." *J. Environ. Radioact.* 100:157-161.

Hesterberg, TW; Long, CM; Bunn, WB; Sax, SN; Lapin, CA; Valberg, PA. 2009. "Non-cancer health effects of diesel exhaust (DE): A critical assessment of recent human and animal toxicological literature." *Critical Reviews in Toxicology* 39(3):195-227.

Valberg, PA; Long, CM; Hesterberg, TW. 2008. Comment on the nanoparticle conclusions in Cruts *et al*. (2008), "Exposure to diesel exhaust induces changes in EEG in human volunteers." *Part Fibre Toxicol*. 5(1):10.

Valberg, PA. 2007. "Modulated RF Energy: Mechanistic Viewpoint on the Health Implications." In *Base Stations and Wireless Networks: Exposures and Health Consequences. Proceedings, International Workshop on Base Stations and Wireless Networks: Exposures and Health Consequences, Geneva, Switzerland, June 15-16, 2005*. (Eds.: Repacholi, M; van Deventer, E; Ravazzani, P), World Health Organization, Geneva, Switzerland, p. 33-46. Accessible at http://www.who.int/peh-emf/meetings/archive/valberg_bsw.pdf.

Long, CM; Valberg, PA. 2007. Comment on "An Assessment of Risk from Particulate Released from Outdoor Wood Boiler by Brown *et al." Human and Ecological Risk Assessment* 13:681-685.

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Hesterberg, TW; Bunn, W; Chase, GR; Valberg, PA; Slavin, TJ; Lapin, CA; Hart, GA. 2006. "A critical assessment of studies on the carcinogenic potential of diesel exhaust." *Critical Reviews in Toxicology*. 36(9):727-776.

Valberg, PA; Long, CM. 2006. Comment on "Vehicle self-pollution intake fraction: Children's exposure to school bus emissions." *Environmental Science & Technology* 40(9):3123-3132.

Valberg, PA; Long, CM; Sax, SN. 2006. "Integrating studies on carcinogenic risk of carbon black: Epidemiology, animal exposures, and mechanism of action." *Journal of Environmental and Occupational Medicine* 48:1291-1307.

Stout, N; Valberg, PA. 2005. "Bayes' law, sequential uncertainties, and evidence of causation in toxic tort cases." *Michigan Journal of Law Reform* 38(4):781-910.

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Valberg, PA. 2004. "Is PM more toxic than the sum of its parts? Risk-assessment toxicity factors versus PM-mortality 'effect functions'." *Inhal. Toxicol.* 16(Suppl. 1):19-29.

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Abstracts & Reports *(list available on request)*

Invited Lectures *(past 10 years)*

6/11/12 "Portals of Entry: Pulmonary Deposition and Clearance of Particles.*"* To be presented in the course "*Comprehensive Industrial Hygiene"* Harvard School of Public Health, Boston, MA.

3/19/12 "Epidemiology of Diesel Exhaust: An Overview.*"* Presented at the "*International Congress of Occupational Health"* Cancun, Mexico.

6/14/10 "Portals of Entry for Workplace Chemicals / Lung Deposition and Clearance of Inhaled Particles.*"* Presented in the course "*Comprehensive Industrial Hygiene: The Applications of Basic Principles"* Harvard School of Public Health, Boston, MA.

3/24/10 "Do Brain Cancer Rates Correlate with Ambient PM-Levels or with Hazardous Air Pollutant (HAP) Concentrations ?*"* Presented at the AAAR Specialty Conference "*Air Pollution and Health: Bridging the Gap from Sources to Health Outcomes*," San Diego, CA.

6/23/08 "Routes of Entry into the Body: Pulmonary Deposition and Clearance of Particles." Presented in the course "Comprehensive Industrial Hygiene: Practical Applications of Basic Principles," Harvard School of Public Health, Boston, MA.

6/25/07 "Routes of Entry into the Body: Pulmonary Deposition and Clearance of Particles." Presented in the course "Comprehensive Industrial Hygiene: Practical Applications of Basic Principles," Harvard School of Public Health, Boston, MA.

3/29/07 "Non-linear Exposure-Response Relationships between Ambient PM_{10} and Daily Mortality." Presentation with Dr. T. Bowers at the Society of Toxicology Annual Meeting, Charlotte, NC. This presentation was selected as one of the *Top 12 Risk Assessment Abstracts at the SOT Meeting.*

11/7/06 "What is EMF? How EMF Interacts with Organisms." Presented at the Cyprus International Institute for the Environment and Public Health symposium on "Electromagnetic Fields: Sources, Health Effects, and Regulations, Nicosia, Cyprus.

6/19/06 "Pulmonary Deposition and Clearance of Particles." Presented in the course "Comprehensive Industrial Hygiene: Practical Applications of Basic Principles," Harvard School of Public Health, Boston, MA.

5/18/06 "Health Hazards of Nanoparticles." Presented at "A Mock Hearing: Environment, Health & Safety" at the NanoBusiness Alliance Meeting, New York City, NY.

4/25/06 "Inhalation Risk Assessment: Extrapolating from Macro-materials to Nano-materials." Overcoming Obstacles to Effective Research Design in Nanotoxicology, Cambridge, MA.

10/6/05 Panelist for: "A Reevaluation of the Association Between Diesel Exhaust Exposure and Lung Cancer." Air & Waste Management Association (AWMA) Specialty Workshop on "Diesel Exhaust," Chicago, IL.

6/20/05 "The Respiratory Tract as a Portal of Entry for Airborne Chemicals in the Work Environment." Lecture at the Harvard School of Public Health course on "Comprehensive Industrial Hygiene," Boston, MA.

6/16/05 "Electromagnetic Fields, Base Stations, and Wireless Networks: Exposures & Health Consequences." WHO Workshop, 15-16 June 2005, at the World Health Organization, Geneva, Switzerland.

2/11/05 "Generation of Charged Aerosols by High-Voltage Electric-Power Lines." American Association for Aerosol Research, Specialty Conference on Particulate Matter, Atlanta, GA.

2/4/05 "Magnetic Microparticles Detect and Probe Cytoplasmic Motions." Bioelectromagnetics Society Winter Workshop, Phoenix, AZ.

6/21/04 "Pulmonary Deposition and Clearance of Particles." Harvard School of Public Health Continuing Education course on "Fundamentals of Industrial Hygiene," Boston, MA.

1/27/04 "Quantitative and Qualitative Factors that Determine Health Risk: Explaining Risk to Judges, Juries, and Communities." Mealey's Water Contamination Conference, Pasadena, CA.

9/14/02 "Health Effects of Air Pollutants." Annual Scientific Meeting of the Michigan Occupational and Environmental Medicine Association "Current Topics in Occupational and Environmental Medicine," Frankenmuth, MI.

6/18/01 "Pulmonary Physiology, and Lung Deposition and Clearance of Particles." Harvard School of Public Health Continuing Education course on "Fundamentals of Industrial Hygiene," Boston, MA.

11/14/00 "Effects of Air Pollution on the Human Lung." Lecture in Tufts University course CEE 136, "Air Pollution," Medford, MA.

7/26/00 "Review of Ambient Air Quality as it Relates to Proposed Emission Standards for Massachusetts Power Plants." Testimony before the Massachusetts Department of Environmental Protection, Boston, MA.

1/10/00 "Useful Concepts in the Physics of RF." RF Safety: Science, Compliance and Communication, Electromagnetic Energy Association and the University of Texas Health Science Center, San Antonio, TX.

Manuscript Peer Reviewer for the Following Research Journals

American Industrial Hygiene Journal; American Journal of Physics; American Journal of Respiratory Cell and Molecular Biology; American Review of Respiratory Disease; Atmospheric Environment; Bioelectromagnetics; Biophysical Journal; Biorheology; Cell Biophysics; Chemical Research in Toxicology; Critical Reviews in Toxicology; Environmental Geochemistry and Health; Environmental Health Perspectives; Environment International; Environmental Science & Technology; Epidemiology; Experimental Lung Research; Fundamental and Applied Toxicology; Hepatology; Human and Ecological Risk Assessment; Human and Experimental Toxicology; IEEE Biomedical Engineering; IEEE Transactions on Plasma Science; International Journal of Radiation Biology; Journal of Aerosol Medicine and Pulmonary Drug Delivery; Journal of Applied Physiology; Journal of Applied Toxicology; Journal of Occupational and Environmental Hygiene; Journal of Occupational and Environmental Medicine; Journal of Occupational Medicine and Toxicology; Journal of the Royal Society Interface; Journal of Toxicology and Environmental Health; Nature; Nonlinearity in Biology, Toxicology, and Medicine; Radiation Research; Risk Analysis: An International Journal; Regulatory Toxicology & Pharmacology; Science; Tissue & Cell; Toxicology and Applied Pharmacology; Toxicological Sciences; USGS Environmental Geochemistry of Mineral Deposits (Reviews in Economic Geology series).