

L. SAMUEL KEITH

Health Physicist

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SUMMARY OF QUALIFICATIONS

<ul style="list-style-type: none"> • HPS Board of Directors (2011–2014) • Certified Health Physicist (through 2019) • TS, DOQ Q, and SCI security clearances • U.S. Delegate to IRPA (2012–2016) • FDA TEPRSSC committee (2016-present) 	<ul style="list-style-type: none"> • MARSSIM developer and decommissioning site manager • Emergency responder with event and exercise experience • Radiation Safety Officer for broad scope licenses • ISO/IEC 17025 quality program assessor
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Education

B.S. Chemical Engineering

Georgia Tech

M.S. Health Physics (Environmental and medical) Georgia Tech

Professional Experience

- 1974 - 1993 Nuclear accident responder, Charleston Naval Shipyard, Charleston, SC, (Off-Site Team Manager, Off-Site Effects Evaluator, Liaison with SC DHEC, responder trainer)
- 1974 - 1976 Nuclear Engineer, Charleston Naval Shipyard, Charleston, SC
 - Design shielding, initiate extremity dosimetry monitoring system
- 1976 - 1978 Radiation Safety Officer, Charleston Naval Shipyard, Charleston, SC
 - RSO for industrial radiography, instrument calibration facility, and x-ray users.
 - Ship radioactive materials
 - Manage transuranic/radium inventories and radioactive waste facility
- 1978 - 1993 Supervisory Environmental Health Physicist, Charleston Naval Shipyard, Charleston, SC
 - Manage environmental monitoring, dosimeter calibration lab, and sample analysis lab
 - Decontaminate personnel and develop such methods
 - Helped develop workforce reduction plan and reorganize an 800 person 7 division office. Chair the office mission statement writing group. Write PDs and performance elements.
- 1993 - 1994 Director, Radiation Safety Office, Emory University, Atlanta, GA
- 1994 - 1996 Environmental Scientist, US Environmental Protection Agency, National Air and Radiation Environmental Laboratory, Montgomery, AL
 - Develop radiological health assessments, represent EPA on MARSSIM workgroup, environmental project officer, interface with public and Native Americans.
 - Radiation Safety Officer (October 1995 – February 1996) during facility decommissioning
- 1996 - Present Senior Health Physicist, Agency for Toxic Substances and Disease Registry, Atlanta, GA
 - Chemical manager for developing toxicological profiles for radionuclides and metals
 - Leader, Research and Results Implementation Team (2007–2012)
 - Emergency responder, member of the Advisory Team for Environment, Food, and Health (CDC, EPA, FDA, USDA). Evaluated or participated in responses to NPP IPXs, e.g., Dwayne Arnold (9/2008), Calvert Cliffs (10/2009), Millstone (10/2010), Turkey Point (5/2013), Watts Bar (10/2013), Gotham Shield (4/2017), Oyster Creek (2017).
 - CDC Liaison to NRC for the Fukushima-Daiichi NPP response (2011–2012). Evaluated portions of the U.S. actions supporting the Fukushima NPP accident response from March-August 2011, e.g., DOE aerial surveys, inerting of reactors by novel approach, and international transfer of KI supplies.
 - Manage MARSSIM decommissioning of research and radwaste buildings (2005-2006).
 - Consultant to CDC RSO (March 2005–present)
 - Represent DHHS on ISCORS Federal Guidance Subcommittee (2002–present)
 - Chair ISCORS Medical Workgroup (2007-2015) that wrote Federal Guidance Report 14
 - WHO technical advisor and developer of toxicological documents (2006–2013)
 - U.S. Delegate to the International Radiation Protection Association (2012–2016)
 - FDA Technical Electronic Products Radiation Safety Standards Committee (2016-present)

Certifications

Certified Health Physicist (through 2019) by American Board of Health Physics.
 Health Physics Society ISO-17025 assessor for laboratory accreditation (2007-2014)
 Security clearances (TS, DOE Q, SCI)

Respirator qualified

Training courses attended

FEMA/CDC Disaster Responder Emergency Assessment and Monitoring (DREAM) Course (8/2018)
FEMA emergency response courses for Tiers 1 and 2
Radiological Operations Support Specialist (ROSS) qualified (2017)
EPA contract administration (1994) and grants project officer (1994)
Responding to radiological contamination using Superfund (1994, EPA)
Technology transfer of radiation risk assessment (1997, EPA Region 4)
Science, technology, and public policy management (1997, OPM)
Basic project officer for research and development (1999, DHHS)
Genetics and disease prevention (1999, CDC)
DOE Transportation emergency preparedness program (2003, DOE)
ISO/IEC17025:2005 training: Requirements for laboratory accreditation and auditing to ISO/IEC17025 (2006, PQS)
National emergency response courses recommended by CDC and HHS
HAZWOPER
DOE NNSA (FRMAC Assessment Scientist 2016; FRMAC liaison LN200 2011, LN100 2013)

Additional Emergency Response Experience:

- Radiological Operations Support Specialist (ROSS) qualified (2017)
- Completed IS100, IS120a, IS130, IS200, IS331, IS700, IS700a, IS800b, IS836, AS100, LN100, CDC video, and RadResponder webinars,
- Perform pre-exercise, exercise, and post-exercise activities regarding nuclear power plants and warships
- Team Leader and lead evaluator for off-site response to radiological emergencies (DON)
- Field radiological monitoring-ambient radiation monitoring:
 - Managed a field monitoring program and a sample analysis program for routine work and emergency response
 - Implemented standard procedures and developed others to meet supplemental needs.
- Plume dose projection:
 - Developed plume projections based on initial projections and adjustments for field radiological data
 - Use FRMAC plume projections to assess human and environmental impacts.
- Field radiological monitoring-airborne radioiodine and particulate activity monitoring:
 - Managed and developed procedures for monitoring environmental media (air, water, soil, vegetation) and individuals internally and externally exposed to radioactive materials.
 - Established procedures for monitoring radioiodine and particulates in the field and for analyzing the sample
 - Implemented those procedures during emergency response exercises and following major releases.
- Plume protective action decision making
 - Use plume projections and PAGs to recommend public health actions to decision makers
- Mobile laboratories:
 - Designed and developed a mobile radioactive material analysis laboratory for emergency response
 - Worked with other agencies in developing and using their mobile laboratories
- Post-emergency sampling
 - Managed the off-site monitoring program for a nuclear capable shipyard, naval base, and weapons station
 - Developed the program for pre- and post-event sampling of actual and potential releases
- Ingestion exposure dose projections:
 - Estimated doses from actual ingestion exposure events and from FRMAC exposure projections
- Protective action decision making implementation:
 - Worked with EPA in their development of PAGs before and after the Fukushima-Daiichi disaster
 - Worked with Customs and Border Protection to develop the method they used to assess and clear airplanes, passengers, luggage, ships, and cargo containers exposed to Fukushima air and ocean plumes
 - Worked with NRC, Department of State, National Security Staff, Government of Japan, and the Consortium in recommending protective actions for the public in Japan following the Fukushima-Daiichi disaster. Some of those included establishing and adjusting the evacuation zone for ships in the Pacific Ocean, opening the Tokyo to Sendai highway and railroad, reopening the Sendai International Airport, and resolving differences between the Japanese and U.S. recommended evacuation zones.

-Relocation, re-entry, and return decision-making and implementation:

- Work with FRMAC to develop relocation, re-entry, and return recommendations for decision makers.
- Worked with NRC, Department of State, and National Security Staff in identifying opportunities for reasonable re-entry and return time frames based on field radiological data and modeled projections.

Other activities

- Member FDA's Technical Electronic Products Radiation Safety Standards Committee (TEPRSSC) (2016-present)
- Participated in emergency response for World Trade Center (2001), fall of space Shuttle Columbia (2003), and as the CDC Liaison Officer to NRC for the Fukushima Dai-ichi Japan disaster response supporting the US response (2011).
- Participated in emergency response exercises Gotham Shield 17, TOPOFF series, and nuclear power plant ingestion pathway exercises as member of national Advisory Team for Environment, Food, and Health.
- Advisor to New York State General Assembly Committees on Health and Veterans Affairs regarding legislative action on health effects from uranium on reservists. 2006.
- Advisor to US Army on health effects of depleted uranium associated with training use of Davy Crockett weapons system on military artillery ranges. 2007-2008.
- Liaison from CDC to NRC for the Fukushima-Daiichi nuclear power plant disaster, 2011-2012.

Project officer responsibilities

EPA administrator for contracts, grants, IAGs, and projects

EPA Project Officer, \$2M from DoD to assess radioactivity in U.S. harbors visited by nuclear-powered warships

Managed MARSSIM decommissioning of 5 CDC lab buildings and radioactive waste building

Honors and awards received

VP Gore's 1998 Hammer Award from Committee for Reinventing Government for developing MARSSIM

DHHS 2002 Distinguished Service Award from Secretary Thompson for contributions while a member of the World Trade Center and Anthrax Investigation Emergency Response Team (2002)

CDC 2004 Honor Award for collaborative success on the NCEH/ATSDR nuclear, radiological response team

CDC 2005 Distinguished Service Award from Dr. Gerberding for managing the MARSSIM radiation decommissioning of 3 lab buildings used for radiation research (December 1, 2005)

ATSDR/CDC outstanding performance awards (1998 through 2016)

WHO Temporary Technical Advisor (2008-2014)

Health Physics Society Fellow (2009)

NCEH/ATSDR Excellence in international emergency response award (2011)

EPA Bronze Medal (2015) for Commendable Service for chairing development of U.S. medical x-ray guidance

Government, professional society, other

Health Physics Society (HPS) (1975-present)

-U.S. Delegate to the International Radiation Protection Association Congress (2012-2016)

-Board of Directors (2011-2014), responsible for 5 committees, 6 chapters, and 2 sections

-Managed HPS effort that gained NACLA recognition as an internationally compliant accreditation body

-Laboratory Accreditation Policy Committee (1993-1996, 1999-2003, chair 2003-2009 and 2010-2011)

-Laboratory Accreditation Assessment Committee (2003-2009 and 2010-2011)

-Research Needs Committee (2000-2003)

-Continuing Education Committee (2016-2019)

HPS Charleston Chapter (1991-1994, Founding President 1991-1993)

HPS Atlanta Chapter (1994-present, Pres Elect 2002-2003, President 2003-2004, BOD 2004-2005)

Committee service (additional to professional society above)

oMARSSIM Workgroup (EPA, DOE, NRC, and DOD) (1994-2000)

- oEPA uranium in drinking water workgroup (1997-1998)
- oAluminum-in-Vaccines Interagency Workgroup (1998-2002)
- oNCRP – represent ATSDR as a collaborating organization (2000-2010)
- oISCORS Federal Guidance Subcommittee (2002-present), representing DHHS
 - Developing guidance for protecting the public from radiation
 - Medical Workgroup Chair, revised federal guidance on diagnostic and interventional x-ray use
- oISCORS Subcommittee on Environmental Protection (2004-2015), representing DHHS
- o3rd Annual Reserve Component Workshop on Terrorism, CDC representative on weapons and dirty bombs (2004)
- oATSDR committees: Profile, Mixtures, Listing and Consultation, Emergency Response, and Counterterrorism
- oFederal Radiological Preparedness Coordinating Committee Advisory Team subcommittee, representing ATSDR
- oNCEH/ATSDR Continuity of Operations Plan development committee (representing ATSDR/DTEM, 2005)
- oCDC Chemical and Radiation Goal Team member (2006-2009)
- oNCEH/DLS Safety Committee (2005-2014), representing CDC/NCEH/OD
- oFood and Drug Administration Technical Electronic Products Radiation Safety Standards Committee (2016-present)

Academic activities

Instructor for senior HP/graduate NE course, Radiological Assessment and Waste Management, Georgia Institute of Technology, Atlanta, GA (Spring 2004)

Seminars presented

Keith LS, 2002. Health effects of natural and depleted uranium. 3rd Gulf Cooperative Council Symposium on Military Medicine and Protection from Weapons of Mass Destruction. Doha, Qatar.

Keith, LS. 2002. CDC homeland security emergency response initiatives, Physician’s seminar on radiological health, University of South Carolina School of Medicine, Columbia, SC

Keith, LS. 2003. Radiation safety and basics for reporters, for Knights Journalism Fellowship at CDC

Keith LS, 2003. ATSDR reference values and their derivation for chronic exposure to ionizing radiation, for ATSDR special expert panel for ionizing radiation.

Keith LS, 2004. Radiological emergency response. For CDC Director’s Emergency Response Center orientation.

O’Connell T and Keith LS. 2005. Enhanced state response. Health Physics Society Midyear meeting. New Orleans, LA

Keith LS, 2005. Radiological agents. As part of class for University of South Florida students

Keith LS, Jones R, and Caldwell K. 2005. CDC radioanalytical capability regarding emergency response. for FRMAC Laboratory Analysis Workgroup meeting, NNSA. Las Vegas, NV

Keith LS. 2005. Radiation safety for multi-element method training, as part of CDC/DLS Technology Transfer Training to state laboratories

Keith LS, Schwahn S, Swinth K. 2006. Technical auditing for health physicists, Health Physics Society Annual Meeting. Providence, RI. July 2006.

Keith LS, Schwahn S, Swinth K, SLowey T. 2007. Technical auditing for health physicists, Health Physics Society Midyear Meeting. Portland, OR. Jan 2007.

Keith LS and Schwahn S. 2008. Assessor training part I: Techniques for successful technical assessments

Wahl L and Keith LS. 2008. Assessor training part II: The assessor's role in technical assessments

Keith LS, Sears S, Boyd M. 2009. Status of updating Federal guidance on diagnostic and interventional radiography. 2009 Annual meeting of the Health Physics Society. Minneapolis, MN. February 1, 2009.

Keith LS. 2010. The Advisory Team for Environment, Food, and Health. Millstone Nuclear Power Plant outreach for ingestion pathway exercise. Millstone, CT.

Keith LS, Sears S, Boyd M. 2010. Revising Federal guidance on medical x-rays. 2010 Annual meeting of the Conference of Radiation Control Program Directors. Newport, RI. April 19, 2010.

Keith LS, Sears S, Boyd M. 2010. Radiation protection guidance for diagnostic and interventional x-ray procedures. 2010 Annual meeting of the Health Physics Society. Salt Lake City, UT. June 30, 2010.

Keith LS. 2011. Radiation protection guidance for diagnostic and interventional x-ray procedures: Requirements, rationale, and rollout. Presentation for DHHS HQ managers. July 21, 2011.

Keith LS. 2011. Radiation protection guidance for diagnostic and interventional x-ray procedures: Requirements, rationale, recommendations, and rollout. International meeting of the American Association of Physicists in Medicine and Canadian Organization of Medical Physics. Vancouver, British Columbia, Canada. August 4, 2011.

Keith LS and Keith CR. 2011. Keynote presentation: Nuclear Plant Disaster: The Fukushima Experience. 20th Massachusetts Hazardous Materials Education Conference. Plymouth, MA. September 28, 2011.

Keith LS, Cleveland G, Keith CR. 2011. Keynote presentation. The Fukushima Daiichi crisis and interactions between the Advisory Team for Environment, Food, and Health and the Nuclear Regulatory Commission. Joint meeting of Health Physics Society Atlanta and Deep South Chapters. Destin, FL. October 28, 2011.

Keith LS, Sears ST, Hamdy RC, Leidholdt EM, Paunovich ED, Miller DL, Topping EH, Bower MW, Boyd MA, Fletcher DW, Elmore CL, Hill DG, Winston JP. U.S. radiation protection guidance for diagnostic and interventional x-ray procedures: A guide for medical, dental, and veterinary practice. 13TH International Radiation Protection Association Congress. Glasgow, UK. May 16-17, 2012.

Keith LS, Miller DL, Bower MA, Boyd MA, Elmore CL, Fletcher DW, Hamdy RC, Hill DG, Leidholdt EM, Paunovich ED, Sears ST, Winston JP. Finalizing FGR No. 14: Radiation Protection Guidance for Diagnostic and Interventional X-ray Procedures. 2013 Midyear Meeting of the Health Physics Society. Scottsdale, AZ. January 28, 2013.

Mumtaz M, Keith L, Wohlers D, and Murray E. Cumulative Risk Assessment for Radon and Confounder Health Effects, Society of Toxicology 2013 Annual Conference. San Antonio, TX. March 11, 2013.

Keith L, Wohlers D, Mumtaz M, Tarrago O, and Doyle J. Health effects of radon exposure. 2013 Annual Meeting of the Health Physics Society. Madison, WI. July 8, 2013.

Keith LS. Health effects of radon. American College of Medical Toxicology seminar series. February 17, 2015.

Keith LS, Argo WP, Bower MW, Boyd MA, Elmore CL, Hamdy RC, Leidholdt EM, Miller DL, Sears ST, Wieder JS, Winston JP. Publication of FGR 14: Radiation Protection Guidance for Diagnostic and Interventional X-Ray Procedures. 2015 Annual Meeting of the Health Physics Society. Indianapolis, IN. July 13, 2015.

Keith LS, Boyd MA, Miller DL, Leidholdt EM, Wieder JS. National webinar for Federal agencies and medical

facilities detailing the new Radiation Protection Guidance for Diagnostic and Interventional X-Ray Procedures. Washington, DC. August 17, 2015.

Publications: Peer-reviewed

Peer reviewer:

IEEE Transactions on Nuclear Science
Journal of Environmental Radioactivity
International Journal of Human and Ecological Risk Assessment

Keith LS, Jones DE, and Chou C-HSJ. 2002. Aluminum toxicokinetics regarding infant diet and vaccinations. *Vaccine*; 20:S13-S17.

Faroon OM, Keith LS. 2002. Effects of PCBs on development and reproduction. *Toxicol and Ind Hlth*; 17(3):63-93.

Faroon OM, Keith LS, Jones DE, and De Rosa C, 2002. Carcinogenic effects of PCBs. *Toxicol and Ind Hlth*. 17(2):41-62.

ATSDR, 2004. Case studies in environmental medicine: Radiation exposure from iodine-131

Faroon, OM; Keith, LS; Williams, M; Murray, HE; Jones, DE; and De Rosa CT, 2004. Letter to the editor, Comments on "Potential human cancer risks from exposure to PCBs: A tale of two evaluations." *Critical Reviews in Toxicology*. 34(6):499-502.

Chou S, Fay M, Keith S, and Ingerman L. 2005. Minimal risk levels for hydrogen sulfide (update). *The Toxicologist*. 84(S-1):3002.

Keith LS, Wohlers DW, Moffett DB, and Rosemond, ZA. (2007) ATSDR evaluation of potential for human exposure to tungsten. *Toxicol and Ind Health* 23:309-345.

Keith LS, Moffett DB, Rosemond ZA, and Wohlers DW. (2007) ATSDR evaluation of health effects of tungsten and relevance to public health. *Toxicol and Ind Health* 23:347-387.

Wilbur S., Wohlers D., Paikoff S., Keith S., Faroon O. ATSDR Evaluation of Potential for Human Exposure to Benzene. *Toxicology and Industrial Health*. 2008.

Wilbur S., Wohlers D., Paikoff S., Keith S., Faroon O. ATSDR Evaluation of Health Effects of Benzene and Relevance to Public Health. *Toxicology and Industrial Health*. 2008.

EPA 2014. Federal Guidance Report No. 14. Radiation Protection Guidance for Diagnostic and Interventional X-Ray Procedures. U.S. Environmental Protection Agency, Washington, DC.

Publications: Proceedings of scientific meetings

Keith, LS. 1995. Training to reduce gamma range calibration errors, HPS midyear meeting.

Keith LS, Jones DE, and Chou C. 2000. Aluminum toxicokinetics regarding infant diet and vaccinations, San Juan, Puerto Rico

Keith LS. 2000. Health effects of uranium and implications for homeland security. Keynote address, Health Physics Society Midyear Meeting and 2002 ALARA Symposium, Orlando, FL.

Keith LS. 2003. DHHS risk communication preparation for radiological emergencies, for Health Physics Society Midyear Meeting, San Antonio, TX.

O'Connell T and Keith LS. 2005. Enhanced state response. Health Physics Society Midyear meeting. New Orleans, LA.

Chou S, Fay M, Keith S, and Ingerman L. 2005. Minimal risk levels for hydrogen sulfide – an update. Society of Toxicology meeting, New Orleans, LA.

Keith LS, Wu C-F, 2005. The HPS Laboratory Accreditation Program. HPS Annual meeting, Spokane, WA.

Bush C, Watters M, Keith S, Hryhorczuk D, Smolinske S, and White S. 2005. Multi-agency collaboration results in “Evaluating aluminum exposure” factsheets. Michigan Association for Local Public Health Conference, Grand Rapids, MI.

Publications: Books / book chapters / review articles / Toxicological Profiles

Keith, LS, 1983. Assessment of environmental radioactivity and population exposure resulting from nuclear propulsion plant work, Department of Defense

EPA, 1997, Multiagency Radiation Survey and Site Investigation Manual, EPA, NRC, DOE, and DOD

ATSDR, 1997. Public health assessment for Monticello mill tailings and radioactively contaminated properties

ATSDR, 1999. Toxicological Profile for Aluminum. Agency for Toxic Substances and Disease Registry

ATSDR, 1999. Toxicological Profile for Ionizing Radiation. Agency for Toxic Substances and Disease Registry

ATSDR, 1999. Toxicological Profile for Uranium. Agency for Toxic Substances and Disease Registry

EPA, 2000, Revision 1, Multiagency Radiation Survey and Site Investigation Manual, EPA, NRC, DOE, and DOD

WHO, 2001. Protective measures, health monitoring, and medical management, in: Depleted uranium: Sources, exposures, and health effects. WHO/SDE/PHE/01.1. World Health Organization

NCEH, 2003. Prenatal radiation exposure: A fact sheet for physicians

NCEH, 2003. Fact sheets for Cs, Co, I, Pu, Sr, and U

Keith LS, Wang R, and Susten A. 2003. The use of Prussian blue as a countermeasure for radiation exposure and its listing as a pollutant in the Clean Water Act

Faroon OM and Keith LS, 2003. Concise International Chemical Assessment Document for PCBs. World Health Organization, International Program for Chemical Safety

ATSDR, 2004. Toxicological Profile for Americium. Agency for Toxic Substances and Disease Registry

ATSDR, 2004. Toxicological Profile for Cobalt. Agency for Toxic Substances and Disease Registry

ATSDR, 2005. Toxicological Profile for Tungsten. Agency for Toxic Substances and Disease Registry

ATSDR, 2005. Case Study in Environmental Medicine: Ionizing Radiation (reviewer and guest author)

Risher JM and Keith LS. 2006. Concise International Chemical Assessment Document for Iodine. International

Programme for Chemical Safety, World Health Organization

Faroon OM, Keith LS, Hansen H, and Fowler BA (2007). Germanium. In Nordberg GF, Fowler BA, Nordberg M, and Friberg LT eds. Handbook on the Toxicology of Metals. Elsevier Amsterdam

Keith LS, Faroon OM, and Fowler BA (2007). Uranium. In Nordberg GF, Fowler BA, Nordberg M, and Friberg LT eds. Handbook on the Toxicology of Metals. Elsevier Amsterdam

De Rosa C, Keith S, Mumtaz M, Pohl H, Hatcher M, Hicks H, Holler J, Ruiz P, Johnson B. 2008. Hazardous Wastes. In: Kris Heggenhougen and Stella Quah, eds. International Encyclopedia of Public Health, Vol 3. San Diego: Academic Press. 2008. pp107-121

ATSDR, 2009. Toxicological Profile for Aluminum. Agency for Toxic Substances and Disease Registry

ATSDR, 2009. Addendum to the Toxicological Profile for 1,2-Diphenylhydrazine. Agency for Toxic Substances and Disease Registry

ATSDR, 2010. Toxicological Profile for Plutonium. Agency for Toxic Substances and Disease Registry

Ruiz P, Pohl H, Mumtaz M, Wilson J, Fay RM, Jones D, Demchuk E, Keith LS, Hansen H, and De Rosa CT. Concise International Chemical Assessment Document on Alkoxyethanols (WHO FRB draft). International Programme for Chemical Safety, World Health Organization (2011)

Faroon OM, Keith LS, Scinicariello F, Todd GD, Moffett DB, De Rosa CT (WHO FRB Draft). Concise International Chemical Assessment Document on DDT/DDD/DDE. International Programme for Chemical Safety, World Health Organization

Keith LS, Sears ST, Hamdy RC, Leidholdt EM, Miller DL, Paunovich ED, Topping EH, Bower MW, Elmore CL, Fletcher DW, Hill DG, Winston JP. 2013. Federal Guidance Report No. 14: Radiation Protection Guidance for Diagnostic and Interventional X-Ray Procedures, public comment draft. April, 2013

ATSDR, 2012. Toxicological Profile for Radon. Agency for Toxic Substances and Disease Registry

ATSDR, 2013. Toxicological Profile for Uranium. Agency for Toxic Substances and Disease Registry

Wilbur S, Keith LS, and Howe P. (2013). Concise International Chemical Assessment Document on Chromium VI. WHO, IPCS, Geneva. International Programme for Chemical Safety, World Health Organization

Keith LS, Faroon OM, and Fowler BA (2014). Germanium. In Nordberg GF, Fowler BA, and Nordberg M eds. Handbook on the Toxicology of Metals. Elsevier Amsterdam

Keith LS, Faroon OM, and Fowler BA (2014). Uranium. In Nordberg GF, Fowler BA, and Nordberg M eds. Handbook on the Toxicology of Metals. Elsevier Amsterdam

Keith, LS. and Wohlers, D.W. (2014). Addendum to the Toxicological Profile for Thorium. Agency for Toxic Substances and Disease Registry

Keith LS, Sears ST, Hamdy RC, Leidholdt EM, Miller DL, Paunovich ED, Topping EH, Bower MW, Elmore CL, Fletcher DW, Hill DG, Winston JP. 2014. Federal Guidance Report No. 14: Radiation Protection Guidance for Diagnostic and Interventional X-Ray Procedures. Report No. EPA-402-R-10003. U.S. Environmental Protection Agency. November, 2014

ATSDR, 2017. Toxicological Profile for DEET (n,n-diethyl-meta-toluamide). Agency for Toxic Substances and Disease Registry

ATSDR, 2017. Toxicological Profile for Nitrate and Nitrite. Agency for Toxic Substances and Disease Registry

ATSDR, 2017. Toxicological Profile for Parathion. Agency for Toxic Substances and Disease Registry

Faroon O, Keith LS, Mumtaz M, Ruiz P. Minimal risk level derivation for cadmium: Acute and intermediate duration exposures. *J Exp Clin Toxicol* 1(1):1-12.

Publications: Abstracts from scientific meetings

Fletcher D, Rogers R, Saileman O, Keith S, Gilley D. Role of medical physics in Federal and State government. 2011 Joint Annual meeting of American Association of Physicists in Medicine and Canadian Organization of Medical Physicists. Vancouver, Canada. *Medical Physics* 38(6):3865. June 2011.

Mumtaz M, Keith L, Wohlers D, and Murray E. Cumulative Risk Assessment for Radon and Confounder Health Effects, Society of Toxicology 2013 Annual Conference. San Antonio, TX. March 11, 2013.

Other activities

Participated in emergency response for World Trade Center (2001), fall of space Shuttle Columbia (2003), and as the CDC Liaison Officer to NRC for the Fukushima Dai-ichi Japan disaster response supporting the US response (2011).

Participated in emergency response exercises TOPOFF, TOPOFF2, TOPOFF 4, and periodic nuclear power plant ingestion pathway exercises (IPX's) as member of national Advisory Team for Environment, Food, and Health.

Advisor to New York State General Assembly Committees on Health and Veterans Affairs regarding legislative action on health effects from uranium on reservists. 2006.

Interview on aluminum in pediatric vaccines. *Parenting Magazine*. 2008 April.

Advisor to US Army on health effects of depleted uranium associated with training use of Davy Crockett weapons system on military artillery ranges. 2007-2008.

Liaison from the Centers for Disease Control and Prevention to the Nuclear Regulatory Commission for responding to the Fukushima-Daiichi nuclear power plant disaster, 2011-2012.

Boyd M, Keith LS, Miller DL. New federal x-ray guidance published. Published in newsletters and journals of ACR, CRCPD, HPS, ISCD, and RSNA. 2015.