

## **Description of the Texas Radiation Advisory Board Its Purpose, Mission and Committee Structure**

The Texas Legislature created the Texas Radiation Advisory Board (TRAB or Board) in 1961. The Governor appoints the Board's members, who serve for 6 years and may serve 2 consecutive terms. The TRAB members are the state's advisors on all radiation issues. The Board holds quarterly meetings to review the rules, guidelines and programs of the agencies that regulate radiation. Board members participate in hearings by providing expert testimony. The TRAB makes recommendations about various issues and provides those to the agencies, the Legislature and the Governor. Board members also visit facilities in Texas to review pertinent radiation issues.

The Texas Health and Safety Code, Chapter 401, describes the Board's purpose and mission:

The Advisory Board shall:

- (a) review and evaluate state radiation policies and programs;
- (b) make recommendations and furnish technical advice that may be required on matters relating to development, use, and regulation to the department (the Texas Department of State Health Services), the Texas Commission on Environmental Quality (formerly the Texas Natural Resource Conservation Commission), the Railroad Commission of Texas, and other state agencies; and
- (c) review proposed rules and guidelines of the department, the Texas Natural Resource Conservation Commission, the Railroad Commission of Texas, and other state agencies relating to regulation of sources of radiation and recommend changes in proposed or existing rules and guidelines relating to uses of radiation.

## **Introduction to the Board's Required Positions**

The statutes give the membership requirements for the Board's **18 members**, which are based on categories that each member is to represent. The categories of the Board's membership are:

- one representative from **industry** who is trained in **nuclear physics, science or nuclear engineering**
- one representative from **labor**
- one representative from **agriculture**
- one representative from the **insurance** industry
- one individual who is engaged in the use and application of **nuclear physics in medicine**
- one **hospital administrator**
- one individual licensed by the Texas State Board of Medical Examiners who specializes in **nuclear medicine**
- one individual licensed by the Texas State Board of Medical Examiners who specializes in **pathology**
- one individual licensed by the Texas State Board of Medical Examiners who specializes in **radiology**
- one representative from the **nuclear utility industry**
- one representative from the **radioactive waste processing industry**
- one representative from the **petroleum well-servicing industry**
- one **health physicist**
- one individual licensed by the **State Board of Dental Examiners**
- one representative from the **uranium mining industry**
- three **representatives of the public**

### Texas Radiation Advisory Board - Membership

Name	Representing	Term Exp.
Ken Krieger, MS, CHP	Industry, trained in Nuclear Science	2015
Stephen Harris	Labor	2019
Johnny Johnson, DVM	Agriculture	2017
Bill Campbell	Insurance Industry	2019
Nora Janjan, MD, MBA, MPSA	Nuclear Physics in Medicine	2015
Robert J. Emery, D.Ph., ++	Hospital Administrator	2017
Darlene Metter, MD, ABR, ABNM	Nuclear Medicine	2019
Mark Silberman, MD	Pathology	2017
David Nichols, MD	Radiology	2015
Mitch Lucas, PE, MBA	Nuclear Utility	2019
Ian Hamilton, Ph.D.	Radioactive Waste	2015
Judith Raab	Petroleum Well Service	2019
John Hageman, MS, CHP	Health Physicist	2017
Melanie Marshall DDS.	Dentist	2015
Kevin Raabe	Uranium Mining	2017
Amy Clark	Public	2015
Mark Pittman	Public	2017
Darshan Sachde	Public	2019

## **The Board's Committee Structure**

Texas Radiation Advisory Board: quorum 10/18

Topic Research Committee: quorum: 3/5

Ian Hamilton, Committee Chair  
Robert Emery, Committee Vice Chair  
Amy Clark, TRAB Secretary  
John Hageman, TRAB Chair  
Nora Janjan, TRAB Vice Chair

Industrial, Nuclear Power, Uranium and Waste Committee: quorum: 5/9

Kevin Raabe, Committee Chair  
Mitch Lucas, Committee Vice Chair  
Amy Clark  
John Hageman  
Ian Hamilton  
Stephen Harris  
Ken Krieger  
Jay Murphy  
Darshan Sachde

Medical Committee: quorum: 6/10

Darlene Metter, Committee Chair  
Mark Silberman, Committee Vice Chair  
Robert Emery  
Nora Janjan  
Ian Hamilton  
Melanie Marshall  
David Nichols  
Bill Campbell  
Mark Pittman  
Johnny Johnson

**Matters within the TRAB's jurisdiction  
That may be of interest to the Compact Commission**

The technical experts on the Board involved with radioactive waste include the following:

- The medical industry, including nuclear medicine, and diagnostic and therapy procedures using radionuclides
- Sealed source suppliers, recyclers, and processors
- Uranium mining
- Research and development
- Petroleum production and transmission
- Veterinary practices
- Nuclear power plants

**Other matters that the TRAB can collaborate with the Compact Commission**

- Disposal of legacy radioactive material currently in the State of Texas, with out-of-compact origins
- Disposal of low specific activity and exempted radioactive material in the RCRA disposal site
- Just ask us for our assistance, since that is in our legislated mandate

**Questions**

**JOHN P. HAGEMAN, M.S., C.H.P.**  
**Principal Scientist**  
Radiation Safety Section  
Environmental and Safety Systems Department

M.S., Radiological Health, University of Texas Health Science Center-San Antonio, 2001  
B.S., Physics, University of Texas at Arlington, 1974

Mr. Hageman has served as the Southwest Research Institute (SwRI) radiation safety officer (RSO) since 1996. As the RSO, Mr. Hageman is responsible for the use of a large variety of radionuclides under a broad scope radioactive material license issued for research and development. He is also responsible for the safe operation of a large variety of radiation-producing machines used for laboratory analysis and for the high-level radiation effects facility. He holds a patent on a charged-particle powered battery. He has been consulted in the design analysis for the IAEA for hot cell design, and managed projects for sealed source recovery, exchange, disposal, and/or security projects for Los Alamos and Sandia National Laboratories and several commercial clients.

Prior to this, Mr. Hageman was principal scientist and manager with the Center for Nuclear Waste Regulatory Analyses (CNWRA or Geosciences and Engineering Division) at SwRI. In this position, he was a manager for several projects related to the Nuclear Regulatory Commission's (NRC) high-level radioactive waste (HLW) program. He was the principal investigator for the "Repository Operational Criteria" project that developed a systematic and comprehensive approach to determine the sufficiency and adequacy of the NRC regulations to ensure safe operations in handling HLW. Mr. Hageman has also served as the manager of several other projects including "Repository Design, Construction, and Operations," "Transportation Risk Study," and other special projects. Mr. Hageman was instrumental in winning the NRC's HLW contract by working with a seven-member team to prepare the proposal; and he was a charter member of the Geosciences and Engineering Division staff (now over 90 individuals) and served as the health physicist for that group.

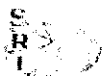
Mr. Hageman was the health physicist and a nuclear inspection engineer in the Nuclear Nondestructive Testing and Services Division. He managed their radiation control program to ensure compliance with NRC, DOT, and Texas regulations on radiation control and was a member of the nuclear inspection engineering staff. He formulated operating procedures and computer programs for the control of radioactive material and for personnel exposure, and is the SwRI instructor for radiation and radiography safety. He has worked with planning and supervising inspections and testing for nuclear plants to meet American Society of Mechanical Engineer (ASME) Section XI requirements. These inspections included nondestructive examinations of reactor plant vessels, piping, hangers, and other components, and preparing performance testing programs for Safety Class 1, 2, and 3 pumps and valves. Mr. Hageman's experience in nuclear power plant operations helped him develop the ASME Section XI pump and valve testing programs for several utility clients. These programs utilized computer generated testing guidelines to ensure plant reliability and safety. Mr. Hageman has also worked with the Nuclear Plant Reliability Data System (NPRDS) and was responsible for development of the NPRDS procedures manual.

Mr. Hageman has also managed projects on the feasibility and design of a national recordkeeping system for nuclear plant radiation workers; measuring the permeability of materials to radioactive particles, solutions, and tritium; radiation exposure from a lignite plant; radiation shielding analysis for a 5- to 20-MeV accelerator and neutron/gamma sources; and remote visual inspections of reactor vessels.

While working with Westinghouse Electric Corporation as a nuclear plant trainer, Mr. Hageman supervised plant operations and the training of naval officers at the Idaho Naval Reactors Facilities. He also helped plan, write, and instruct a new program of seminars for radiation control related to normal plant operations and accident conditions.

**PATENTS & PUBLICATIONS:** Awarded one patent, published several technical papers, articles, and presentations.

**PROFESSIONAL CREDENTIALS:** Certified Health Physicist, 1999, renewed in 2002, 2006, 2010, and is currently certified through 2014.



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HONORS & AWARDS: Associate editor of *Operational Health Physics*; delegate to the 11<sup>th</sup> Congress of the International Radiation Protection Association, Madrid, Spain, 2004; delegate to the 13<sup>th</sup> Congress of the International Radiation Protection Association, Glasgow, Scotland, 2012; appointed to the Texas Radiation Advisory Board, 2008-present and Board's Chairman, 2011-present; Health Physics Society: Board of Directors, 2003-2006 and Treasurer 2009-2012; Bexar County Local Emergency Planning Committee, Treasurer, 2009-present.

PROFESSIONAL CHRONOLOGY: Westinghouse Electric Corporation: nuclear plant trainer, 1975-6; Southwest Research Institute: 1976-[research scientist, 1976-82; senior research scientist, 1982-7; manager, 1987-96; principal scientist, 1996-present].

MEMBERSHIPS: Health Physics Society, 1976-present, named a Fellow in 2004; Bexar County Local Emergency Planning Committee, 2005-present; Texas Radiation Advisory Board, 2008-present; South Texas Chapter (STC) of the Health Physics Society, 1976-present, past President, Editor of the STC Newsletter, Honorary Lifetime Member.

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