

## HOWARD B. SPIELMAN

### EDUCATION

B.S. Public Health - U.C.L.A. - 1956

M.A. Health & Safety Science - California State University at Los Angeles - 1967

### PROFESSIONAL CREDENTIALS

Certified Industrial Hygienist, Comprehensive Practice; Certificate No. 653 (1970)

Certified Safety Professional; Certificate No. 1097 (1971)

Community College Instructor Credential (California); Credential No. 89575

Certified Asbestos Consultant (California); Certificate No. 92-0830

Certified Lead Inspector/Assessor (California); Certificate No. I611

Certified Lead Project Monitor (California); Certificate No. M611

Registered Professional Engineer (California); Certificate No. 2845 (1978-2006)

Registered Environmental Health Specialist (California); Certificate No. 2065 (2016 ret.)

### EXPERIENCE

#### **1974 - Present      President - Health Science Associates (HSA)**

HSA is a multi-service occupational and environmental health and safety firm providing a wide range of consulting and technical services. The firm performs its work for industrial, commercial, governmental, association, professional, insurance, legal, community and academia clients.

Mr. Spielman has managed the development, growth, and delivery of HSA's services and continues to do so. The company has grown on the basis of reputation and referral, including a branch operation in Northern California.

The areas of HSA's (and Mr. Spielman's) activities and expertise are enumerated below.

#### **MANAGEMENT CONSULTATION AND PROGRAMS**

Safety and health management planning; program audits; safety and health program administration; procedures and practices for prevention of accidents and compliance with legal requirements; safety and health training; up-to-date information on standards, codes and regulations; liaison with government and insurance agencies; asbestos, lead based paint and mold assessments and project management.

#### **OCCUPATIONAL HEALTH**

Industrial hygiene surveys and evaluations; air sampling for toxic substances; ventilation evaluation, monitoring and design; toxic material evaluation and control programs; data sheets; respirator and personal protective equipment programs; noise surveys and hearing conservation programs; laser, microwave, light, et.al. protective programs; ELF/EMF/RF evaluations, dermatitis control; ergonomic hazard assessment & control; Safety Data Sheet preparation and review; hazardous waste management; record keeping systems.

#### **OCCUPATIONAL SAFETY**

Safety program evaluation, development and administration; facilities and equipment design review; facilities and work practices surveys, hazard identification and control; accident/injury/illness investigation, accident prevention programs; job safety analysis; injury recording/reporting systems; protective equipment requirements; machine guarding; OSHA/Cal-OSHA surveys; administrative assistance and development programs.

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### **OCCUPATIONAL SAFETY AND HEALTH TRAINING PROGRAMS**

Employee "right-to-know"; hazard recognition and identification; hazardous material handling; material handling techniques; confined spaces; respirator use & maintenance; noise and hearing conservation; introduction to industrial hygiene; safety management; key man training; accident investigation; forklift training; job safety analysis; state accredited asbestos and lead worker/supervisor training; Hazwoper training; microbiological evaluation and mitigation.

### **ENVIRONMENTAL**

Property environmental assessments; asbestos assessments, management programs, specifications, and monitoring/surveillance; lead assessments, management programs, specifications, and monitoring/surveillance; microbiological assessments, specifications, monitoring; community noise assessment and control; off-site and property line airborne contaminant surveys; risk assessments; community "right-to-know" programs; Proposition 65 compliance. Safety Officer services for remediation sites.

### **LITIGATION SUPPORT AND EXPERT TESTIMONY**

Attorney-client privilege work; technical investigations and retrospective assessments (including accident and/or exposure reconstruction); expert testimony in workers compensation, civil, tort and product liability cases, expert consultation.

## **1967 - 1974 Hughes Aircraft Company, Culver City, CA**

Initially hired as Head, Industrial Hygiene and Safety; promoted to Corporate Manager, Environmental Health and Safety. During this period Hughes Aircraft Company employed approximately 30,000 people and was a diversified electronics and aerospace government contractor engaged in research, development and manufacturing at numerous plant-sites.

Was responsible for developing, implementing and maintaining the Corporate Environmental Health and Safety Program. This program included safety engineering, industrial hygiene, environmental pollution, health physics and workers compensation.

Acted as company chief executive on environmental health and safety matters. Recommended new and revised company policies. Developed, coordinated, issued and maintained environmental health and safety practices and standards; these appeared in the Company Environmental Health and Safety Manual which was initiated by Mr. Spielman. Audited safety and health performance of operating groups and divisions. Was responsible for ensuring compliance with applicable regulations and contractual requirements.

Other responsibilities included review and recommendation of policies and practices in medical administration, system safety and industrial defense. Coordinated Environmental Health and Safety programs with corporate and division management. Maintained liaison with governmental agencies, trade, industry and professional associations, and other companies. Chaired Corporate Environmental Health and Safety Committee. Was secretary of Corporate Radiation Committee. Was member of Corporate System Safety Committee and Industrial Relations Committee.

Provided technical assistance to division Environment Health and Safety organizations. Served as Company Radiation Protection Officer and arranged for and administered AEC and state radioactive material licenses. Personally provided technical occupational health and safety services for Hughes Research Laboratories.

Special projects of interest were (1) a review of the company's posture with regard to environmental pollution with recommendations for a control program, (2) a cost-effectiveness study of the company's policy on pre-employment physical examinations, (3) an analysis of workers' compensation administration and organization and (4) establishment of a program to comply with the Radiation Control for Health and Safety Act of 1968 (PL 90-602).

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### **1963 - 1967 Northrop Corporation, Norair (Aircraft) Division, Hawthorne, CA**

Employed as Industrial Hygienist. The Norair Division was involved in government and commercial aircraft manufacturing, testing and related research and development and employed approximately 10,000 people. Via interdivisional work orders, also provided Industrial Hygiene and Safety services for Nortronics (electronics and missile), Ventura Division (fabrication and composites) and Architectural Systems Division. Was the first Industrial Hygienist employed by Northrop.

Developed and administered the industrial hygiene program designed to anticipate, recognize, evaluate and control occupational and environmental health hazards; assisted the Chief Safety Engineer in technical safety and health programming; alleviated environmental health and safety emergencies; prepared and issued technical reports and procedures; consulted with other Norair disciplines and Northrop Divisions; coordinated with the Medical Chief; assisted with proposals and pertinent contracts; investigated illness and injury reports; liaison with governmental agencies and vendors. These primary duties resulted in accomplishments of special note. These were the development of a toxic and hazardous materials control program (forerunner of hazard communication and MSDS programs); improvement in the management of protective clothing and equipment; establishment of close working relationships with facilities and plant engineering, materials and process engineering, research and development, research and test laboratories, and manufacturing disciplines; major contributions to a newly developed Norair Safety Manual; technical development and surveillance of industrial hygiene activities of four safety engineers; installation of an Industrial Hygiene Laboratory; full time participation in two Chemical Hazards Potential Studies accomplished by Northrop Space Laboratories for NASA; development of laser control procedures; and initiation of a hearing conservation program. Also, was chairman of a four-man multi-disciplinary study team (Process Engineering, Plant Engineering, Maintenance, Health and Safety) that conducted a comprehensive study of all Norair chemical processing facilities. The recommendations of the team resulted in the adoption of corporate standards for chemical processing facilities (including ventilation design, labeling & maintenance).

The enactment of Los Angeles County A.P.C.D. Rule 66 (Control of Organic Solvent Emissions) resulted in the establishment of a Rule 66 Task Force at Norair. Represented the safety organization on this Task Force, thereby coordinating training activities and assuring that, in plans to comply with Rule 66, industrial hygiene and safety controls were not compromised.

### **1959 - 1963 Los Angeles City Health Department**

Employed as Industrial Hygienist in the Division of Occupational and Radiological Health. The Division was responsible for enforcing the Toxic Chemical Ordinance and promoting healthful working conditions in more than 10,000 industrial establishments.

Duties and assignments included surveys and studies in all types of industrial establishments; enforcement of the Los Angeles Toxic Chemical Ordinance; radiological health surveys and studies; recommendation of corrective procedures, practices and installations; review and approval of facility and ventilation plans; use, maintenance and calibration of industrial hygiene instrumentation; hazard evaluation of trade name materials; promulgation of bulletins, laws and regulations; and investigation of occupational diseases.

Special assignments included a public safety study of hazards in commercial trampoline centers, a study of residential gas heaters for carbon monoxide hazards, a study of retail coin operated dry cleaning installations to determine public and operator hazard potential from perchloroethylene, a study of aircraft maintenance activities at Los Angeles International Airport, and liaison with industry advisory committees.

### **1957 - 1959 United States Air Force**

Second lieutenant in pilot training for five months. Dropped out of flying training due to change in Air Force administrative policies. Assigned to USAF Hospital, Maxwell AFB, Alabama as Medical Service Administrator. Assignments were Assistant Adjutant, Commander of Patients' Squadron, and Security Indoctrination Officer. Supervised two civilian and eight military personnel. Completed active duty as first lieutenant.

### **1956 - 1957 Los Angeles City Health Department**

Employed as Public Health Sanitarian and assigned to the Downtown Rehabilitation Health District. Made health inspections of restaurants, hotels, apartment houses, barber shops, et.al. Enforced the Los Angeles City Health Code. Worked in close cooperation with the Los Angeles Department of Building and Safety and the Los Angeles Fire Department.

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### **PROFESSIONAL MEMBERSHIPS**

Industrial Hygiene Foundation (IHF) - Director 2002 - 2005

California Industrial Hygiene Council (CIHC) - Founding President 1990 - 1996 and president again in 2009. Vice President 2006 - 2008. Board member 1997 - 2005 and 2010 to present.

American Board of Industrial Hygiene (ABIH), Director 1990 - 1996.

American Industrial Hygiene Association (AIHA)

Fellow member since January, 1994

Past chair of Audit Committee, Public Affairs Committee.

Past member of various technical committees.

Past member of Emerging Issues Committee

Past Member of Awards Committee

Past Member of PEL advisory group.

AIHA, Southern California Section

Past President (1965 & 1978); past Secretary-Treasurer;  
chaired symposium committee; member of ad hoc committees.  
Recipient of Leadership Award, 1999.

AIHA, Orange County Section

Founding Board Member; Section appointee to CIHC Board.

American Academy of Industrial Hygiene; Diplomate (since 1970)

American Society of Safety Engineers (ASSE)

### **OTHER PROFESSIONAL ACTIVITIES**

Member, ASSE Professional Safety journal editorial/board 2012 - 2016.

Member, Cal/OSHA Health Expert Advisory Committee (HEAC) 2007 - 2012.

Member, Cal/OSHA PEL Process Committee 2006 - 2012.

Member, Southern California Education and Research Center (ERC) Advisory Board 2004 - Present.

Member, ABET Employer Advisory Committee for the UCLA Industrial Hygiene Program 2005 - Present.

Member, U.C. Irvine Occupational Safety and Health Advisory Committee 2004 - 2010.

Cal/OSHA - Member of Mold Advisory Committee 2001 - 2002.

Presented "Industrial Hygiene: History, Scope and Guidance for Safety Practitioners", March 19, 2014 at the Orange County ASSE PDC

Presented "Lead In Construction - Lessons Learned", December 3, 2013 at the CIHC Annual Conference.

Presented "Industrial Hygiene: A Look Back and a Look Forward", October 23, 2013 at the AIHA San Diego Local Section meeting.

Presented "Industrial Hygiene: A Look Back and a Look Forward", October 16, 2013 at the Joint Technical Conference.

Presented "Investigation of a Cancer Cluster in a Multiple Story Office Building", December 8, 2010 at the CIHC Annual Conference.

Presented "California's Leadership Role in Establishing PELs", December 6, 2010 at the CIHC Annual Conference.

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Presented “PEL - Setting Process in California and HEAC Process for Recommending Specific Standards to DOSH” , October 23, 2008 at the Southern California Joint Technical Symposium.

Presented “Industrial Hygiene, Past, Present and Future” on December 2, 2004 at the California Industrial Hygiene Council Annual Conference.

Presented “Professional Ethics Workshop” on April 22, 2004 at the Sacramento Section, American Industrial Hygiene Association.

Presented “Industrial Hygiene, Past, Present and Future” on January 8, 2004 at the AIHA Southern California Section meeting.

Presented “Identifying, Resolving and Disclosing Environmental and Structural Hazards” 2003, California Mortgage Bankers Association, 6<sup>th</sup> Annual Western States Conference, Las Vegas, NV

Presented “Toxic Molds or Toxic Myths” on October 25, 2002 at the California State Bar Environmental Law Conference

Presented “Industrial Hygiene Aspects: Mold and Fungi, January 2002, Fireman’s Fund

Presented “Technical and Political Aspects of Mold Issues in California” at the July 12, 2001 Meeting of AIHA, Southern California Section

Presented “Current Issues in Academic Institutions Including PPE Requirements”, January 7, 2000, College of Natural Sciences and Mathematics, California State University, Long Beach

Presented “Sampling Methods, Risk Assessment and Toxicity of Microbiologicals ” at the 1997 Annual Technical Symposium jointly sponsored by the Southern California and Orange County Sections of the AIHA..

Presented “Downsizing: Consultants View”, October 4, 1994 at the Professional Conference on Industrial Hygiene.

Presented “Industrial Hygiene Update for the 1990's” at the 1994 Western Safety Congress.

Presented “Overview of Occupational and Environmental Lead Issues”, December 8, 1993 at the 25<sup>th</sup> Annual SCAIHA Symposium.

California Department of Health Services - Lead Workshops; Member 1996 - 1998.

Lead Safe California - Lead Task Force; Member 1996 - 1998.

Los Angeles County Health Department - Occupational Health Task Force: Member 1997.

Occupational Safety & Health Continuing Education Advisory Board, University of Southern California: Member (1982-2000).

Delegate, 1st Occupational Health Delegation from the United States to the Peoples Republic of China, 1982

Governor's Advisory Council for development of California OSHA plan: Member (1972-73).

Various California advisory committees established by the Cal/OSHA Standards Board for development of occupational health and safety standards: Member (1973-1984). Including the asbestos, airborne contaminants, noise, confined space and coke oven emissions standards.

California Safety Council Board of Directors (1980-1994); President 1983-1985.

California Manufacturers Association Workers Compensation and Occupational Safety & Health Committee: Member of Steering Committee (1968-1974). Chairman (1971-1973).

Organized, developed and/or presented health, safety, environmental seminars, workshops, programs for such organizations as AIHA, American Medical Association, California Safety Council, L. A. Chapter of National Safety Council, California Manufacturers Assn.,

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Merchants & Manufacturers Assn., University of Southern California, Society of Manufacturing Engineers, Public Agency Safety Mgmt. Assn., and Cal/OSHA.

Taught Radiation Health and Safety & Industrial Accident Prevention semester courses for Los Angeles City Schools and Long Beach Community College.

Past member of Occupational Safety Advisory Committee, Los Angeles City College.

Past member of Aerospace Industry Assn. and Electronics Industry Assn. Safety & Health Committees.

Past member Orange County Lung Assn. Indoor Air Pollution Committee.

Served as member of qualifications appraisal and interview panel for professional Industrial Hygiene position examinations for the State of California, City of Los Angeles and Los Angeles Unified School District.

Taught segments of AIHA, Southern California Section's Industrial Hygiene review course; also taught same for MBA Associates course of a similar nature.

### **POST-GRADUATE COURSES:**

- Radiological Monitoring
- Radiation Physics
- Industrial Sanitary Engineering
- Hearing and Its Measurement
- Labor Relations and Collective Bargaining
- Safety Education
- Administration of Health and Safety
- Appraisal and Guidance in Health and Safety
- Chronic and Degenerative Diseases
- Independent Study (Health and Safety Law)
- Radiation Safety
- Thesis (Legal Aspects of Radiation Health and Safety)

### **SPECIAL TRAINING OR COURSES:**

- Elements of Industrial Hygiene - California State Health Dept.
- X-Ray Protection - U. S. Public Health Service
- Radiation Health Physics Training Program - The Budd Company
- Radiological Monitoring - Los Angeles Civil Defense Agency
- Analysis and Control of Noise - U. S. Public Health Service
- Industrial Hygiene Engineering - U. S. Public Health Service
- Industrial Ventilation - U. S. Public Health Service
- Liquid Missile Propellants - Rocketdyne/Northrop
- Cryogenics Course - Northrop
- Effective Writing - U. S. Air Force
- Non-Ionizing Radiation - U. S. Public Health Service
- Evaluation of Laser Hazards - U. S. Public Health Service
- Introduction to Computers, Information Technology and Management Sciences - Hughes Aircraft Company
- Management and Communications - California Manufacturers Assoc.
- Management of a Workers Compensation Program - Cal. Tech.
- Sampling & Evaluating Airborne Asbestos Dust (NIOSH 582) - NIOSH
- Supervisory Safety Management Course - National Safety Council
- Techniques of Teaching - California State Department Education
- Electromagnetic Spectrum Course - U. S. Public Health Service

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Emergency Care of The Sick & Injured - U. C. L. A.  
Inspecting Bldgs. For Asbestos-Containing Materials - USC/ISSM  
Management Planning for Asbestos - USC/ISSM  
Asbestos Abatement Contractors & Supervisors Course - DNA, Inc.  
AHERA Project Designer - National Environmental  
Ergonomics - USC/ISSM  
Laboratory Techniques & Trends - MBA Associates/HSA  
Operator Certification for XRF - Scitec Corporation  
Operator Certification for XRF - RMD Corporation  
Operator Certification for XRF - Niton Corporation  
Confined Spaces - Orange County AIHA  
Risk Assessment, Inspection, & Abatement of Lead-Based Paint Hazards - AIHA Professional Development Course  
Indoor Air Quality - Orange County AIHA  
Lead-Based Paint Issues for Certified Industrial Hygienists - University of California, Berkeley  
Nanotechnology Update for Industrial Hygienists - AIHA  
Asbestos Litigation Conferences - Perrin 2012 - 2016  
Asbestos Litigation Seminar - DALs 2016.