

JEROME E. SPEAR, CSP, CIH

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PROFESSIONAL EXPERIENCE

Jerome E. Spear, CSP, CIH, is President of J.E. Spear Consulting, LP and has over 21 years of experience helping organizations prevent injuries and illnesses, control losses, and achieve regulatory compliance. He held the positions of Technical Services Manager with XL Specialty Risk Consulting (a division of XL Specialty Insurance Company) and Corporate Industrial Hygiene Manager for Chicago Bridge and Iron Company, a worldwide steel fabricator and construction company. Spear is also an adjunct instructor for Texas A&M University, School of Rural Public Health.

EDUCATION, CERTIFICATIONS, AND LICENSES

- MBA (Specialization in Management), Sam Houston State University
- B.S. in Industrial Engineering (Specialization in System Safety Engineering), Texas A&M University
- Certified Safety Professional, Construction Specialty (# 13421)
- Certified Industrial Hygienist, Comprehensive Practice (# 7690)
- Diplomate, American Academy of Industrial Hygienists
- Professional Safety Source and Field Safety Representative, Arkansas and Texas Workers' Compensation Commissions
- Licensed Mold Assessment Consultant, Texas Department of State Health Services (License # MAC0259)

WORK HISTORY

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| 4/04 to Present | J.E. Spear Consulting, LP
President |
| 1/99 to 4/04 | XL Specialty Risk Consulting
Senior Consultant, Associate, Technical Services Manager |
| 5/90 to 1/99 | Chicago Bridge & Iron Company, Inc.
Project Safety Engineer, Regional Safety Manager, Corporate Industrial Hygiene Manager |

REPRESENTATIVE PROJECTS

Accident Investigations

- Conducted a fatality investigation involving an 9-year old boy falling through a pit and into a refuse truck at a solid waste transfer station I in California.
- Conducted an investigation and root cause analysis of a fall incident that resulted in multiple fractures during the construction of pressure vessels at a petroleum refinery in California.
- Conducted incident investigation and root cause analysis training for various organizations. The training included using structured analytical techniques to identify root causes. Topics included events and causal factors charting, change analysis, hazard-barrier-target analysis, cause-and-effect diagram, tree diagramming, behavior analysis, sources of evidences, and mapping/diagramming techniques.

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- Prepared an expert witness report based on a review of depositions and documents pertaining to a mobile crane accident at a multi-employer worksite.
- Investigated an incident that resulted in head injuries to an operator of a front-end loader working at a compost site for a municipality in Texas. Provided expert witness testimony.
- Conducted an investigation and root cause analysis of an incident involving burn injuries to an employee performing maintenance and repairs on an existing tank at a petroleum refinery.
- Investigated an incident involving the failure of a jib on an American 9310 Crawler crane at a petroleum refinery in California.
- Conducted an accident analysis study involving rear-end collisions to parked police cars for a municipality in Texas.
- Prepared an expert witness report based on a review of depositions and documents pertaining to an electrocution fatality that occurred to an employee of a contractor installing an air-conditioning system in a mobile home.
- Provided consulting expert services to legal counsel pertaining to a workers' compensation case involving allegations that the claimant's stroke was caused from welding activities performed on a construction site in Pennsylvania.
- Conducted an accident investigation involving burn injuries from hot fly ash that occurred while cleaning fly ash from the upper vestibule of a boiler at a power plant. Prepared a subsequent expert witness report related to this incident.

OSHA Compliance

- Performed an on-site evaluation to assist with the investigation of a fatality due to a fall that occurred during the construction of a water tower in Minnesota. Retained by legal counsel to assist with contesting alleged OSHA violations.
- Performed mock OSHA audits and inspections, personal protective equipment (PPE) hazard assessments, and task hazard assessments at various facilities.
- Prepared lockout/tagout energy control procedures and machine guarding assessment at tobacco facilities in Florida and West Virginia.
- Conducted 10-hour OSHA outreach training covering various topics including the Occupational Safety and Health Act, occupational health and environmental controls/hazard communication, cranes and derricks, material handling, motor vehicles and construction equipment, excavations and trenching, concrete and masonry construction, electrical, welding and cutting, demolition, scaffold safety, and fall protection.
- Authored various safety and health standards and programs for various firms and work sites. Topics included, but are not limited to, fall protection, permit-required confined spaces, respiratory protection, scaffolding safety, excavation and trenching safety, ladder safety, first aid, portable fire extinguishers, air-sampling methods, lift truck safety, elevated work platforms, electrical safety, hydrogen sulfide, benzene, cadmium, hexavalent chromium, industrial hygiene exposure assessments, heat stress, and return-to-work.
- Performed a contractor safety assessment during the painting of the containment dome of a nuclear operating company located in Ohio.

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- Performed a construction site assessment for legal counsel pertaining to OSHA violations a contractor received while performing welding operations inside a confined space at a power plant in Pennsylvania.

Loss Control

- Performed loss control surveys involving multiple lines of insurance coverage (including general liability, products liability, auto liability, workers' compensation, and pollution liability) for a wide variety of clients, including service companies, steel mills, manufacturing facilities, mining operations, and construction sites.
- Assisted insurance underwriters in assessing the risk of mold and environmental claims by performing mold risk reviews and on-site mold/environmental risk assessment surveys for various clients including, but not limited to, commercial buildings, retail establishments, apartment complexes, hospitals, universities, dormitories, warehouses, and manufacturing facilities.
- Prepared a training program on Facilities Management and safety meeting topics for a captive risk pool for municipal entities in Pennsylvania.
- Performed a construction gap analysis for a Fortune 500 biotech firm with sites located in California, Washington, Colorado, Rhode Island, and Puerto Rico.

Industrial Hygiene

- Modeled potential exposures to volatile organic compounds (VOCs) for contractors painting inside confined spaces. Also calculated airborne concentrations of VOCs for a paint booth to determine if the specified ventilation rate was adequate for the products at the anticipated painting application rate.
- Conducted heat stress evaluations at a facility in Kansas for a Fortune 500 electronics manufacturing company as well as other manufacturing and construction workplaces.
- Provided consultation on heat stress monitoring and control for a steel erection company performing welding operations inside a confined space during a turnaround project at a petroleum refinery in Illinois.
- Conducted industrial hygiene training for supervisors and managers of a world-wide engineering and construction firm. Topics covered included the recognition, evaluation, and control of chemical agents and physical agents (such as noise, heat/cold stress, etc.).
- Conducted industrial hygiene air sampling studies involving hexavalent chromium, welding fumes, silica, organic vapors, isocyanates, fibers, carbon monoxide, formaldehyde, and various other analytes.
- Prepared lead compliance plans for bridge demolition and replacement projects located in California.
- Performed safety planning and management oversight for a project involving weld repairs and modifications to wind tunnels (coated with lead-based paint) at a NASA facility in California.
- Assisted the Steel Tank Institute and Steel Plate Fabricators Association (STI/SPFA) with preparing public comments related to OSHA's hexavalent chromium standard.
- Investigated a dermatitis case experienced by an employee working at an ink printing facility in Texas.

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Indoor Air Quality

- Assisted Texas A&M TEEK with developing curriculum for its mold assessment and remediation courses.
- Prepared mold management plans for facilities such as hospitals, apartment complexes, manufacturing facilities, warehouses, commercial buildings, and retail establishments.
- Conducted indoor air quality and mold assessment surveys for various types of buildings including office and commercial buildings, residential homes, warehouses, hospitals, and educational institutions. Environmental parameters included mold and bioaerosols, temperature, relative humidity, carbon dioxide, carbon monoxide, ultrafine particles, formaldehyde, and volatile organic compounds (VOCs).
- Prepared mold remediation protocols and performed post-remediation clearance assessments for various project types including offices and commercial buildings, college classrooms, storage rooms, and residential buildings.
- Provided oversight and assisted in the preparation and planning of a mold remediation project involving the remediation of a wine cellar at a residential home and cleaning over 7,000 mold-contaminated wine bottles.
- Prepared remediation protocols, project oversight, and post-remediation clearance assessments for an apartment unit and off-site storage unit involving bacteria contamination that resulted from a sewer backup, which impacted both building materials and the occupants' personal belongings.
- Performed an indoor air quality assessment at a single-family residential home in Texas pertaining to alleged air quality issues following the installation of a fiberglass shower pan in the master bathroom. Prepared a subsequent expert witness report based on depositions and additional discovery materials provided. Provided expert witness testimony.

PUBLICATIONS

- Spear, J. Understanding Confined Space Standards for Well Drilling. *Water Well Journal*. September 2011.
- Spear, J. Welding Fume and Gas Exposure. *Occupational Health & Safety*. June 1, 2011. <<http://ohsonline.com/articles/2011/06/01/welding-fume-and-gas-exposure.aspx>>.
- Spear, J. Sound Preparation: Properly Preparing for a DOT Audit Can Help Ease the Nerves. *Water Well Journal*. October 2010.
- Spear, J. Welding Safety: Assessing and Controlling Exposure to Hexavalent Chromium. *Professional Safety (Vol. 55, No. 9)*, September 2010.
- Spear, J. Mobile Crane Safety. *Blueprints (Volume 10, No. 1)*, A Technical Publication of ASSE's Construction Practice Specialty. September 2010.
- Spear, J. Compressed Gas Cylinder Safety. *Water Well Journal*. February 2010.
- Spear, J. Mobile Crane Safety, Part 2: The Importance of Lift Planning. *The Synergist*, February 2009.
- Spear, J. Mobile Crane Safety, Part 1: Factors Affecting Rated Capacity. *The Synergist*, January 2009.
- Spear, J. Bonding and Grounding: Controlling Static Electricity. *The Synergist*, September 2008.
- Spear, J. 10 Success Factors for Effective Safety Committees. *The Synergist*, March 2008.

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- Spear, J. Keeping Safe in Hazardous Cold Weather. *Oil & Gas Product News*, January/February 2008.
- Spear, J. Keep Safety In Mind from the Start. *Construction Executive*, June 2007.
- Spear, J. Staying Safe in Hazardous Cold Weather. *Water Well Journal*, December 2007.
- Spear, J. A Fleet Safety Culture is Critical to Loss Prevention. *IRTA Report*, 4th Quarter 2007.
- Brewer S, King E, Amick B, George G, Spear J, Irvin E, Mahood Q, Lee L, Lewis C, Tetrick L, Gimeno D, Williams R. A Systematic Review of Injury/Illness Prevention and Loss Control Programs (IPC). Toronto: Institute for Work & Health, 2007.
- Brewer S, King E, Amick B, George G, Spear J, Irvin E, Mahood Q, Lee L, Lewis C, Tetrick L, Gimeno D, Williams R. Scoping Review – Injury/Illness and Loss Control Programs, Toronto: Institute for Work & Health, 2007.
- Brewer S, King E, Amick B, George G, Spear J, Irvin E, Mahood Q, Lee L, Lewis C, Tetrick L, Gimeno D, Williams R. Scoping Review – The Sustainability of Safety Culture/Climate in the Workplace, Toronto: Institute for Work & Health, 2006.
- Spear, J. Industrial Hygiene: 5 Steps to Successful Exposure Assessments. *Industrial Safety & Hygiene News*, January 2006.
- Spear, J. Improving Contractor Performance. *The Synergist*, September 2005.
- Spear, J. Industrial Hygiene Exposure Assessments: Worst-Case Versus Random Sampling. *Professional Safety*, August 2005.
- American Industrial Hygiene Association, Construction Committee. *Health and Safety Requirements in Construction Contract Documents. AIHA Guideline 4 – 2005*, Fairfax: AIHA, 2005. (Contributing Author)
- Spear, J. Elements of a Fleet Safety Program. *The Synergist*, May 2005.
- Spear, J. Confined Space Entry: A Review of Confined Space Standards Applicable to Contractors. *The Synergist*, March 2005.
- Spear, J. Mobile Crane Lift Planning. *Tools of the Trade*, Winter 2004.
- Spear, J. Welding Fumes: Protect Your Employees and Your Company. *Tools of the Trade*, Fall 2004.
- Mahoney, D. and Spear, J. Mold Risk Assessment and Remediation. *Professional Safety*, August 2003.
- Spear, J. Incident Investigations: A Problem-Solving Process. *Professional Safety*, April 2002.
- Spear, J. Working Safely Near Overhead Power Lines. *The Synergist*, March 2002.

PRESENTATIONS

- "Are Your Contractors a Liability? Implementing a Contractor Safety Program." National Institute of Storage Tank Management, 13th Annual Conference on Above Ground Storage Tanks (Orlando, FL). March 2, 2011.
- "The Feasibility of Reducing Welding Fume and Cr(VI) Exposure by Welding Process Changes." American Industrial Hygiene Conference and Exposition (Denver, Colorado). May 25, 2010.
- "Are Your Contractors a Liability? Implementing a Contractor Safety Program at Nonsubscriber Worksites." TXANS20 20th Annual Nonsubscriber Conference (Austin, Texas). April 8, 2010.

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- "Welding in Confined Spaces." National Institute of Storage Tank Management, 12th Annual Conference on Above Ground Storage Tanks (Orlando, FL). March 3, 2010.
- "Assessing and Controlling Health Hazards when Welding in Confined Spaces." Steel Tank Institute (STI) and Steel Plate Fabricators Association (SPFA) Annual Meeting (Palm Springs, CA). January 30, 2010.
- "Assessing and Controlling Hexavalent Chromium Exposures from Welding." American Society of Safety Engineers Professional Development Conference and Exposition (San Antonio, Texas). June 29, 2009.
- "Hexavalent Chromium Exposures During Construction of LNG Tanks." American Industrial Hygiene Conference and Exposition (Toronto, Ontario, Canada). June 2, 2009.
- "Case Studies: Hexavalent Chromium and Respiratory Protection." Steel Tank Institute/Steel Plate Fabricator's Association Annual Meeting (Scottsdale, Arizona). January 28, 2008.
- "Use of Local Exhaust Ventilation to Control Welding Fume Exposure." American Industrial Hygiene Conference and Exposition (Philadelphia, Pennsylvania). June 5, 2007.
- "Hexavalent Chromium." National Safety Council Construction Division Meeting (San Diego, California). November 5, 2006.
- "Puzzled About Welding Fume and Gas Exposure? Putting the Pieces Together." ASSE Region III Professional Development Conference (Austin, Texas). August 7, 2006.
- "Hexavalent Chromium and Welding." Steel Tank Institute/Steel Plate Fabricator's Association Pressure Vessel Conference (Houston, Texas). June 22, 2006.
- "Health Standards' Resurgence: Are You In Compliance?" National Safety Council Congress and Exposition (Orlando, Florida). September 21, 2005.
- "Recognizing and Assessing Industrial Hygiene Exposures in Construction." ASSE Region III Professional Development Conference (Galveston, Texas). August 10, 2005.

PROFESSIONAL AFFILIATIONS

- American Industrial Hygiene Association of (AIHA)
- AIHA Construction Committee (2010/2011 Past Chair, 2009/2010 Chair, 2008/2009 Vice Chair, 2007/2008 Secretary)
- The International Honor Society of Beta Gamma Sigma
- American Society of Safety Engineers (ASSE)
- American Welding Society (AWS)
- Texas A&M University, School of Rural Public Health