BAKERRISK
San Antonio

JAY S. IDRISS, P.E.

Manager, Wilfred E. Baker Test Facility
Senior II Engineer
BAKER ENGINEERING AND RISK CONSULTANTS, INC.

Education:

B.S., Civil Engineering, Texas A&M University

M.E., Civil Engineering, Texas A&M University

Areas of Practice:

Mr. Idriss manages the Wilfred E. Baker Test Facility, which is located approximately 45 minutes east of San Antonio in La Vernia, Texas. In addition to housing one of the largest and most fully featured Shock Tubes in the world, it is the home of multidisciplinary testing teams evaluating high speed projectile behavior, flammable material dispersion, and jet fire. The teams also conduct custom and specialty testing and experiments for clients world-wide, including litigation support.

Prior to joining BakerRisk, Mr. Idriss served as a Structural Engineer and All-Source Intelligence Analyst for the U.S. Army National Ground Intelligence Center (NGIC). He has authored numerous studies on foreign military weapon and fortification technologies, as well as threat analysis reports for U.S. military systems, including Naval Special Warfare and large-caliber ammunition. Mr. Idriss has experience in explosives use and handling, threat characterization for various military and civilian facilities, and intelligence warning and analysis.

Experience:

- Performs as a field team member and site lead for incident investigations in the United States and overseas, involving reactor explosions, pressure vessel ruptures, vapor cloud explosions, and other energetic events resulting in structural damage and fire with injuries and fatalities. Performs physics-based structural and blast analysis calculations, as well as laboratory incident recreations to assist in the determination of event root cause scenarios. Experienced in gathering of evidence on sites and management of evidence control. Experienced in authoring protocols for evidence collection and site control under OSHA, CSB, and other regulatory agency umbrella atmospheres.
- Performs dynamic structural design and analysis and retrofit/upgrade of numerous occupied buildings located on industrial plant sites. These designs range from conceptual to detailed final designs for new and existing buildings subjected to blast loads from postulated vapor cloud explosions and other energetic events.
- Performs facility siting studies and quantitative risk assessments (QRAs) for numerous domestic and overseas facilities, including those with non-standard construction types.
- Performs the final detailed design of high-pressure tool test cells, explosive manufacturing rooms, reactor bays/bunkers, and other proof testing bays and containment structures to protect personnel from hazards associated with internal explosions and overpressure events. Experienced in the upgrade and retrofit of containment structures for cost effective use of existing test facilities subject to new load requirements.
- Performs dynamic structural design, analysis, and retrofit studies for numerous government facilities subject to high explosive threats and other munition attack to meet anti-terrorism-force-protection (ATFP) requirements.
- Conducts numerous full scale shock tube blast testing analytical research programs for both private sector and government clients.

Professional Chronology:

United States Army National Ground Intelligence Center, (Structural Engineer / Analyst, 2005-2007); Baker Engineering and Risk Consultants, Inc., (Consultant, 2007-2009, Project Engineer, 2009-2013, Senior Engineer 2013-Present).

Professional Registrations/ Certifications

Registered Professional Engineer (Texas) License # 106074, (Minnesota) License # 50520, (Utah) License # 8739612-2202, (Virginia) License #0402058417

Certified Fire and Explosion Investigator (NAFI)

Professional Memberships:

American Society of Civil Engineers (ASCE), Structural Engineers Association of Texas (SEAoT)

Publications

Dynamic Analysis of Insulated Metal Panels for Blast Effects, 2016, STRUCTURE Magazine

Static and Dynamic Testing and Analysis of Insulated Metal Panels, 2013, ASCE Engineering Mechanics Institute Conference

SDOF Resistance Function Methodology Study for Hollow Metal Doors, 2011, National Institute of Building Sciences and USACE Protective Design Center

Testing and Analytical Evaluation of Doors, 2011, ASCE Structures Congress

Evaluation and Practicality of Door Hardware Systems for Blast Mitigation, 2009, SAVIAC 80th Shock and Vibration Symposium