



Our aviation experience ranges from operations to maintenance to accident investigations. It includes both fixed and rotary wing, piston and turbine powered aircraft, and airport ground equipment.

Investigations typically involve overall inspection of accident wreckage and detailed laboratory examination of components of concern. An in-depth review and analysis of the aircraft or engine documentation is conducted, including type certificate data, manufacturers' manuals, assembly and parts diagrams, service instructions, service difficulty reports, airworthiness directives, and NTSB reports. Investigations may expand beyond the aircraft to include pilot actions and airport / heliport configuration.

Our approach has proven very effective, combining expertise as needed from aviation science, materials, mechanical, and other engineering and scientific disciplines. Further, our chemistry and environmental group has the expertise to address aviation issues involving aircraft cabin air and air management systems, fuels, lubricants, sealants, and coatings.

Services

- Accident investigation and reconstruction
- Aerial (Drone / UAS) inspections and laser scanning for accident scene documentation
- Aviation operation and maintenance review
- Component failure analysis
- Evidence collection, preservation and management
- Cabin environment analysis
- Aviation fuels analysis
- Ground vehicle accident investigation
- Airport Health, Safety and Environmental incident investigations



Roch J. Shipley, Ph.D., FASM, P.E. – Principal Engineer, Materials/Metallurgical



Dr. Shipley performs engineering investigations and failure analysis from a materials engineering perspective. His evaluations involve design, manufacturing, materials, and operational factors of aircraft components. He specializes in complex issues involving multiple disciplines and/or accident reconstruction. He has experience with both ferrous and non-ferrous alloys, including aluminum, titanium, and nickel-base superalloys. Dr. Shipley is licensed by examination as a Professional Engineer and has testified in both State and Federal Courts.

John A. O'Neill, FAA A&P / IA – Senior Aviation Consultant



Mr. O'Neill brings over 35 years of experience with BP Amoco during which he assumed increasing levels of responsibility for BP's aviation activities worldwide. His experience ranges from fixed wing corporate jets to helicopters serving off shore platforms. He consults in all areas of aviation maintenance, operations, and safety. He provided aviation oversight for BP's aviation vendors, conducted operator reviews, and has participated in accident investigations. He continues to serve on various industry committees. Mr. O'Neill is a licensed Federal Aviation Administration (FAA) Airframe and Power Plant mechanic, with an Inspection Authorization (A&P/IA), and a licensed private pilot.

Michael G. Koehler, Ph.D. – Principal Scientist, Chemistry



Dr. Koehler performs investigations involving materials and chemistry. His extensive experience in aerospace component research and development brings a practical design perspective to each problem. His expertise spans the airframe materials as well as the fuels and lubricants. Dr. Koehler also has extensive experience on the aircraft cabin environments.

Timothy M. Hicks, P.E. - Principal Engineer, Mechanical



Mr. Hicks performs investigations, component testing, design review, and failure analysis from a mechanical engineering perspective for many transportation related industries. His projects have involved engine failures, landing gear failure, airport ground equipment, product liability, intellectual property, manufacturing, accident investigation and reconstruction, fire cause and origin, testing, and project management.