



**Professional Analysis
and Consulting, Inc.**

Agricultural Engineering & Science



The agricultural industry experiences one of the highest rates of industrial accidents. Our team has decades of experience in accident investigations, scene documentation, and litigation. Our diverse technical team includes agricultural, mechanical, materials, and electrical engineers, chemists, and fire investigators. This combination of skills allows our team at Professional Analysis to tackle complex investigations, which include farm vehicle accidents, mechanical systems failures, fertilizers / pesticides contamination, crop loss evaluations, farm injuries, grain storage system failures, grain dryer fires, and farm equipment accidents.

Professional Analysis and Consulting, Inc. provides experienced agricultural engineers and scientists who cover the full spectrum of agriculture and related support industries.

Services

- Agricultural building failure evaluation
- Aerial (Drone / UAS) inspections and laser scanning for scene documentation
- Farm machinery fire damage and related injuries
- Precision Agricultural technology performance validation
- Farm accident investigation and reconstruction
- Product design analysis and performance evaluation
- Mechanical testing and systems analysis
- Product liability analysis and investigation
- Animal herd loss assessment
- Crop loss evaluation and assessment
- Co-op infrastructure operations analysis
- Plant operations / processing issues
- OSHA, USDA, EPA and FDA regulation evaluation
- Full litigation support services
- Commercial storage, drying and material handling special investigations



Charles A. Ogborn – Mechanical / Agricultural Consultant



Mr. Ogborn specializes in mechanical and agricultural engineering, with extensive experience in farming and agriculture environments. His industrial equipment knowledge includes tractors, combines, self-propelled chemical applicator sprayers, farm/commercial grain storage systems, tower and modular dryer systems, material handling systems, bucket elevators, and grain bin unloading systems. Mr. Ogborn provides farm infrastructure, crop loss evaluations, identifies plant operation / processing issues, and has extensive experience with precision guidance and machinery controls. His experience also includes OSHA and FDA regulation evaluations. He specializes in engineering matters regarding failure analysis, farm machinery damage and related injuries, accident reconstruction, fires, and testing.

Louis J. DeFilippi, Ph.D. – Senior Scientist, Biochemistry/Environmental



Dr. DeFilippi performs investigations and analyses from a chemistry, biochemistry and microbiology standpoint. He often combines these scientific approaches and analyses with an understanding of OSHA, EPA and USDA regulations, as well as environmental processes, to draw his conclusions. Dr. DeFilippi specializes in a number of diverse areas, including regulatory compliance, safe use of agrochemical, biochemical (enzymatic) and microbiological (fermentative) processes. His investigations have addressed anhydrous ammonia, groundwater contamination and bioremediation. He is experienced in worker safety, accident prevention, and training on an industrial scale.

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. 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.

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



Mr. Hicks performs investigations and failure analysis from a mechanical engineering perspective. He is certified for the Bosch Crash Data Retrieval System (“Black Box”). His projects have involved accident investigation and reconstruction, design analysis, product liability, intellectual property, manufacturing, fire cause and origin, and testing. His vehicle experience includes commercial vehicles, automobiles, RVs, motorcycles, buses, railroad, agricultural, and construction equipment. Non-vehicle related projects have involved medical, athletic, and wheelchair accessibility equipment, forklifts, elevators, wind energy systems, lawn equipment, bicycles, plumbing, consumer products, and other mechanical systems.