

### J. Bradley Mason, P.E.

Mr. Mason is a licensed chemical engineer with over 40 years engineering and project management experience. Commercialized several chemical and thermal treatment processes from conceptualizing and patenting process technology, developing process flowsheets, planning and executing process scale-up from pilot plant test programs, supervising detailed process design and engineering of full-scale production facilities, and providing oversight of plant construction and technical support for plant start-up and operations. US DOE and international companies have invested more than US\$800 million in design, construction and operation of technologies and processes developed by Mr. Mason. Holder of over 30 US and international patents.



#### Key Experience

- Process development
- Pilot plant testing and process optimization
- Radioactive waste processing facility design and operations
- Modular and transportable system design
- Pressure vessel and process equipment design
- Piping, instrumentation and integrated system design and operations
- Remote maintenance and shielding design
- Pyrolysis, steam reforming and mineralization reactions and operations
- High temperature filtration
- Solids transfer system design and operations
- Procedure development
- HAZOP studies
- Explosion protection

#### Qualifications

##### BSc

Chemical Engineering

##### Professional Engineer

Chemical Engineering

##### Principal Working Location

Pasco, Washington USA

#### Relevant Experience (Short Version: see CV/Resume for detailed experience)

##### Director, Technology and Founder - CEtech LLC

- Developed ScrollTherm thermal treatment process for treatment of hazardous and radioactive wastes. Designed pilot test system, operated pilot plant and verified process operating and design specifications. Prepared test report and technology report. Currently proceeding with commercialization of ScrollTherm process.

##### Vice President and Chief Engineer - THOR Treatment Technologies, LLC

- Developed process flowsheets and process design for utilizing the THOR fluidized bed steam reforming (FBSR) system for immobilization of numerous US DOE and international radioactive wastes including SRS Tank 48H high benzene, high nitrate tank waste; INL acidic Sodium Bearing Waste (SBW); and Hanford Low-Activity Waste (LAW) and secondary waste (SW) to immobilized, water insoluble NAS and related minerals. Supervised numerous large-scale test programs for demonstration of FBSR mineralization of US DOE tank wastes.
- Developed pyrolysis process for removal of prohibited items (sealed containers, liquids and reactive metals) from US DOE TRU waste and for conversion of uranium metal fuel pieces to stable oxide form. Supervised design and commissioning of full-scale drum autoclave pyrolysis system for thermal treatment of TRU and MLLW.

##### Chief Engineer and Founder - Studsvik, Inc

- Developed Studsvik's pyrolysis and steam reformer thermal treatment processes. Supervised extensive pilot-scale and full-scale test programs for THOR FBSR processing of a variety of radioactive and hazardous wastes including US DOE high nitrate tank waste, organic based ion exchange resins, oils, decontamination solvents, and carbons. Supervised conceptual and detailed designs and commercial start-up for the turnkey Studsvik Processing Facility (SPF) located in Erwin, TN. The SPF has been in commercial operation since mid-1999, processing over 11300 cubic meter (400,000 cubic feet) of IEX resins with contact dose rates of up to 6 Gy/hr (600 R/hr).
- Developed nitrate treatment process for ORANO (previously AREVA) for conversion of millions of gallons of Tc-99 contaminated nitrate slurry into stable water insoluble mineral product. Project is ongoing with pilot plant testing and design completed. Project permitting is in progress.

#### Employment History (see CV/Resume for detailed experience profile)

2020 - Present	CEtech LLC
2005 - 2017	THOR Treatment Technologies, LLC
1995 - 2021	Studsvik Inc –Chief Engineer
1980 - 1995	Vectra Technologies, Inc (formerly Pacific Nuclear Systems, Inc., formerly United Nuclear Corporation)
1974 - 1980	Atlantic Richfield Company (ARCO)