



Zachry Nuclear Engineering, Inc. zachrynuclear.com

JFA-Zachry (Mentor-Protégé) Capability Statement

The All Small Mentor-Protégé agreement between JFoster & Associates, LLC (protégé) and Zachry Nuclear Engineering (mentor) received approval from the U.S. Small Business Administration in late 2018.

JFA-Zachry administers robust engineering, design and project management services to support safe and efficient operation of nuclear facilities. *JFA-Zachry* maintains traditional engineering disciplines, including mechanical, nuclear, civil, electrical, and instrumentation and controls. Focus areas include cybersecurity, digital instrumentation and controls, mechanical/structural analyses of systems and components, transient and accident analysis, core design/physics, containment/compartment analysis, radiological analysis, thermal hydraulics analysis, spent fuel management analysis, new plant analyses including alternative coolants and fuel designs, outage planning, inspection support, plant modification evaluation, efficiency improvements, nuclear fuel cycle management, probabilistic risk assessment/risk-informed engineering, and accident analysis.

JFA-Zachry is known internationally for responsive, innovative and effective solutions, strong customer relationships, and long-term value. They have expertise in thermal hydraulics analysis, radiological analysis, safety analysis, and code development, has provided engineering services and software products (including GOTHIC, RETRAN, VIPRE, RADTRAD-NAI, PROTO-FLO, PROTO-HX, PROTO-HVAC and PROTO-SPRINKLER) to the nuclear industry since 1984.

NAICS	Codes
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541330	Engineering Services	541990	Professional, Scientific & Technical Services	
541511	Custom Computer Programming Services	541620	Environmental Consulting Services	
541690	Other Scientific & Technical Consulting	561320	Temporary Help Services	
541712	Research and Development in the Physical, Engineering & Life Sciences	541618	Other Management Consulting Services	
541613	Marketing Consulting Services	561990	All Other Support Services, particularly Inventory Computing	
561210	Facility Support Services	541370	Surveying & Mapping	
562910	Remediation Services	541611	Management Consulting	
611430	Professional & Management Development Training	541715	Research & Development in the Physical, Engineering & Life Sciences	
236220	Construction			



Representative Past Performance

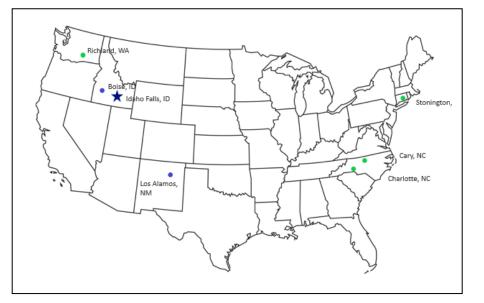
Idaho Cleanup Project	Fire protection engineering, environmental engineering, chemical process engineering and IWTU readiness prep & outage management
Idaho National Laboratory	ATR Reactor & nuclear safety engineering, HVAC Design, TREAT project Startup Support, ATR Reactor Digital Controls Systems Engineering, ATR Experiments Engineering Support and ATR Warm Waste System Analysis & Recommendations; PDQ analyses, software modification for multi-dimensional Neutron Diffusion-depletion
Idaho Transportation Department	Environmental and Engineering Services
TerraPower	Analysis of Sodium-Cooled Reactor Designs and Molten Chloride Analysis
Naval Reactors Facility (DoD)	Engineering and Cost Estimating Services
NuScale	Support for System & Subchannel Analyses and RELAP Code Development
Hanford Site	Developed GOTH for Non-Newtonian Thixotropic Fluid Analysis; Evaluated hydrogen generation and venting for a waste tank
Jacobs Engineering	Project Administration Services
ΤVΑ	Compartment/Containment Pressure-Temperature Evaluation/Fluid Transient Analysis
Waste Isolation Pilot Plant	Engineering Services
United States Forest Service	Records Management
United States National Park Service	Nationwide GIS services

Offices

- 425 North Capital Avenue Idaho Falls, ID 83402
- 410 Memorial Dr., Ste. 205 Idaho Falls, ID 83402
- 1109 West Main, Ste. 355 Boise, ID 83702
- 150 Central Park Square Los Alamos, NM 87544
- 14 Lords Hill Rd. Stonington, CT 06378
- 2810 Coliseum Centre Dr. Bldg. 5, Ste. 200 Charlotte, NC 28217
- 200 Regency Forest Dr., Ste. 330 Cary, NC 27518
- 1955 Jadwin Ave., Ste. 470 Richland, WA 99354

JFoster & Associates, LLC

Julie Foster, President & CEO Julie.Foster@jfaidaho.com 208-709-0508



Zachry Nuclear Engineering, Inc. Jim Harrell, PE, Senior Director, Nuclear Analysis Harrelljr@zachrynuclear.com 919-349-9038 About JFA: (<u>http://www.jfaidaho.com/</u>) JFoster & Associates, a SBA 8(a) Disadvantaged Woman-Owned Small Business, is a premier contractor headquartered in Idaho Falls, Idaho, providing engineering, project management, environmental and technical support services to a variety of government and commercial customers. JFA has offices in Los Alamos, New Mexico; Idaho Falls and Boise, Idaho.

About Zachry Nuclear: (<u>http://www.zachrynuclear.com/</u>) Zachry Nuclear Engineering, Inc. is a corporation with more than 30 years' experience in providing engineering analytical services for commercial and government nuclear facilities. Zachry has been deemed a pace-setter in engineering services to the nuclear power sector with expertise in cyber security; transient and accident analysis, thermal hydraulics, radiological assessments, containment/ environmental qualification; new plant analyses; nuclear software development; and plant design changes. Zachry Nuclear provides services to both domestic and international nuclear clients. Zachry Nuclear has offices in Stonington, Connecticut; Cary and Charlotte, North Carolina; Idaho Falls, Idaho; and Richland, Washington.