



CAPABILITIES STATEMENT

Nuclear Applications Technology Company LLC • Mount Joy, Pennsylvania • Veteran-Owned Small Business (VOSB)
Independent nuclear materials, chemistry, and fuels testing across light water, liquid metal, and very high temperature reactor environments — supporting advanced reactor qualification, irradiation testing, and reactor safety research for DOE, DoD, and NASA programs.

Team Experience: 28 years in nuclear energy spanning operations, engineering, maintenance, chemistry, and radiation protection across U.S. Navy, research reactor, and commercial nuclear domains.

CORE COMPETENCIES

- Nuclear fuels, chemistries, instrumentation, and materials testing in light water reactor (LWR), liquid metal reactor (LMR), and very high temperature reactor (VHTR) environments.
- Test configuration support enabling clients to integrate their own sample-specific instrumentation for in-situ data collection during irradiation
- Radiochemistry and nuclear materials characterization supporting fuel qualification and reactor safety basis development
- Low-cost in-situ (LWR) and ex-core fission irradiation (LMR, VHTR) of client samples, enabling real-time data collection
- Test planning, irradiation experiment design, and data collection
- Support for advanced reactor fuel and materials qualification pathways relevant to DOE Advanced Reactor Demonstration Program (ARDP) and Microreactor priorities

DIFFERENTIATORS

- Team has U.S. Navy, research reactor, and commercial domains, with direct, hands-on experience in the plant and efficient operations to meet mission goals for clients.
- Established access to fission neutron and gamma radiation via contracted irradiation services at the Penn State Breazeale Reactor (PSBR), eliminating the capital cost of an in-house reactor
- Demonstrated federal award performance: prior DOE STTR selection for in-situ LWR instrumentation, validating technical merit and commercialization potential
- Small, agile team structure suited to rapid-turnaround feasibility studies, Phase I/II SBIR-STTR execution, and subscale test campaigns

COMPANY DATA

Nuclear Applications Technology Company LLC
dba NuclearATC

UEI: PFCKBJUKL9B2

CAGE Code: Pending

Business Type: Small Business

1124 Collina Ln

Mount Joy, PA 17552

CERTIFICATIONS

Veteran-Owned Small Business (VOSB) — Certified

NAICS CODES

541715 — R&D in Physical, Engineering, and Life Sciences (except Nanotech/Biotech)

541380 — Testing Laboratories and Services

541690 — Other Scientific and Technical Consulting Services

FACILITIES

Test operations conducted at the Radiation Science and Engineering Center (RSEC), The Pennsylvania State University, University Park, PA. NuclearATC contracts RSEC for fission neutron/gamma radiation via the Penn State Breazeale Reactor (PSBR), providing access to an established, NRC-licensed research reactor without dedicated capital investment.

PAST PERFORMANCE

DOE STTR, FY2024 — “Low-Cost In-Situ LWR Testing” (Phase I)

Developed low-cost in-situ instrumentation for light water reactor fuel and materials testing.

POINT OF CONTACT

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DOE

Advanced reactor fuel qualification, irradiation testing, and materials performance data for ARDP, Microreactor, and fuel cycle R&D programs.

DOD

Materials and fuels test data supporting mobile/microreactor power initiatives and strategic capabilities reactor concepts.

NASA

Materials and instrumentation testing relevant to space nuclear power and propulsion fuel/cladding qualification under representative reactor conditions.