



Delivering Technical Expertise and Innovative Solutions

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NUCLEAR SECURITY & NONPROLIFERATION

Since its inception in 1996, Sigma Science has delivered high quality nuclear safety, security, and professional services to the U.S. Department of Energy (DOE), other federal agencies, and prime contractors in support of the nation's national nuclear security and nonproliferation missions. Now, with more than 25 years of experience as a trusted provider of nuclear professional services, Sigma is recognized as a leading provider of nuclear security and nonproliferation support across the Nuclear Security Enterprise.

Sigma Science provides nuclear security and nonproliferation solutions through:

- ◆ Provision of nuclear security and nonproliferation subject matter experts and professionals.
- ◆ Performance of discrete nuclear security and nonproliferation tasks.
- ◆ Participation in nuclear security and nonproliferation reviews, studies, and assessments.

Capabilities

Founded in 1996, Sigma is a small disadvantaged business with 80-plus full-time employees and access to more than 1,000 nuclear subject matter experts, engineers, scientists, and professional staff.

Nuclear Material Safeguards and Security. Capabilities include defense nuclear security; security policy and programs; security oversight and assessment; security risk review; security analysis, response, and testing; systems engineering; classified document management and control; classified visits and access requirements. Sigma staff include security program analysts, weapons analysts, project controls, systems engineers, and project managers.

Material Control and Accountability. Capabilities include Nuclear Material Control and Accountability program development, review and assessment and nuclear materials inventory support.

Nonproliferation. Sigma staff provide services in the areas of fissile materials disposition, international plutonium management, nuclear materials attractiveness, detection, proliferation resistance, nonproliferation research and development support, treaty verification, and next generation nuclear physical protection.

Global Security. Sigma staff include expertise in nuclear deterrence, nuclear surety, and physical security.

Cybersecurity. Capabilities include cybersecurity compliance reviews and information technology cybersecurity requirements determinations.



In the last five years alone, Sigma Science has provided nuclear security and nonproliferation support at the following sites: Los Alamos National Laboratory, Nevada National Security Site, Savannah River Site, Pantex Plant, Y-12 National Security Campus, Sandia National Laboratories, Oak Ridge National Laboratory, Pacific Northwest National Laboratory, and to NNSA Headquarters organizations including NA-MB, NA-10, NA-22, NA-70, and NA-122 as well as support to the U.S. Air Force Ground Based Strategic Deterrent.

Sigma Contract Vehicles

- Honeywell Supply Chain Management Center (SCMC) Strategic Sourcing Agreement, WS190223, \$225M, October 2020 to September 2025
- Technical, Engineering and Programmatic Support (TEPS) Services Blanket Purchase Agreement (BPA) III, \$400M, IDIQ, January 2023 to December 2027

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RELEVANT EXPERIENCE

NNSA Nuclear Security Enterprise Mission

Sigma is currently providing or has recently provided support to the nuclear security and nonproliferation missions at five major NNSA Nuclear Security Enterprise sites – Los Alamos, Savannah River, Y-12, Pantex, Nevada, and Sandia – as well as multiple NNSA Headquarters organizations including NA-MB, NA-10, NA-22, NA-70, and NA-122. These include services provided via task orders under our SCMC and TEPS II/III contract vehicles. Recent Sigma experience includes:

- ◆ **NNSA NA-22.** Sigma provides nuclear non-proliferation subject matter experts to NNSA Office of Defense Nuclear nonproliferation (DNN) R&D under this 5-year, \$11.7M contract. Sigma professionals provide access to five onsite FTEs and reach back to 13 SMEs that provide input and guidance to DNN’s nuclear non-proliferation research portfolio in the areas of data science, artificial intelligence, remote sensing, nuclear physics, and nuclear engineering supporting the monitoring of global nuclear arm’s treaties and global foreign nuclear weapon development activities.
- ◆ **NNSA NA-122.** Under this 3-year, \$41.M contract supporting the office of Nuclear Weapons Stockpile Sustainment (NA-122) Stockpile Service Division (NA-122.1) Sigma SMEs provide Weapons Life-Cycle Sustainment Analyses and Assessments, Stockpile Life Extension Planning; support the implementation of planning, programming, budgeting, and execution (PPBE) for the multi-weapon systems and production operations work scope; and support stockpile operations logistics in delivering limited life components, spares, support equipment, surveillance activities, and managing weapon production data.
- ◆ **Sandia National Laboratory.** Sigma provided NNSA security and nuclear non-proliferation SMEs under this 5-year, \$3.6M contract supporting Sandia in the areas of nuclear materials and accountability, security policy, nuclear materials/weapons vulnerability assessments, security systems technology, and nuclear security program management assistance. Specifically, Sigma experts assisted in the development of the operating plan for CSTART, assisted in the definition and implementation of the Security Improvement Program at Pantex/Y-12, the Security Improvement Replacement Program at Pantex/Y-12, and the West End PIDAS Reduction at Y-12. Sigma SMEs also supported the development of the NNSA nuclear security collaboration roadmap, providing input to the Physical Security System of the Future, and application of the Remote Targeting and Engagement implementation strategy.
- ◆ **Oak Ridge National Laboratory.** Under this 4.5-year, \$2.4M contract, Sigma provided nuclear non-proliferation technical and administrative support to the Fissile Materials Disposition Program for the DOE Office of Nuclear Energy (DOE-NE) at Oak Ridge. Sigma provided technical support to the Fissile Materials Disposition Program to include the Gas Turbine Helium Reactor Plant project, supported international nuclear material accountability and management efforts including the U.S./Japan plutonium management activities, international support for Russian engagement, NA-21 and NA-26 plutonium roundtable, and the special analysis of nuclear material attractiveness to the international community.
- ◆ **Pacific Northwest National Laboratory.** Sigma is providing technical advisory services to NA-70 as part of NNSA’s Security Management Improvement Program. Sigma SMEs are participating as key members to the NNSA Security Policy Review Group, providing NA-70 actionable recommendations to enhance the effectiveness of NNSA security policy, and make recommendations to improve existing NNSA security related processes, policies, and tools.

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Delivering technical expertise and innovative solutions.