Project Management

We have an excellent reputation in project management and extensive experience in the development and implementation of DOE management systems, management of large government and private industry projects, and extensive international project management experience. Most of our project managers are certified as Project Management Professionals by the Project Management Institute, widely recognized as the industry standard for project management certification.

The group is widely recognized within the DOE national laboratory system for providing and implementing state-of-the-art management systems and processes that support management of strategic client mission areas. PNNL takes a risk-based approach to project management, successfully leveraging modern technologies and best-in-class project management practices. PNNL has a reputation for providing expert delivery of research and operational products on time and within budget.

Markets

Our diverse and multi-disciplinary technical group leverages years of experience, state-of-the-art facilities and technology developed for government clients for application and customization in addressing government and commercial needs. Our markets include:

**Key Industrial Markets**
- Nuclear
- Chemical
- Petroleum
- Energy
- Aviation
- Aerospace
- Maritime
- Ground transportation.

**Key Government Markets**
- U.S. Department of Energy
- U.S. Department of Homeland Security
- U.S. Department of Defense
- U.S. Nuclear Regulatory Commission
- Defense Threat Reduction Agency
- U.S. Department of State
- State and local governments
- International agencies.

About Pacific Northwest National Laboratory

Pacific Northwest National Laboratory is a U.S. Department of Energy Office of Science research facility that delivers breakthroughs in the areas of environment, energy, health, fundamental sciences and national security. Battelle, based in Columbus, Ohio, has operated PNNL since 1965. A unique agreement with the DOE enables us to work with industrial clients and leverage DOE’s vast resources. We have a strong history of working with industry over the past 40 years. PNNL is located in Richland, WA, and has an annual business volume of more than $700 million and 4,000 employees. Since 1965, PNNL staff members have been involved in the protection of high-value assets utilizing an integrated systems approach for the U.S. Government and industry. Personnel have worked with the local, state, national and international level clients to:

- Identify assets that require protection
- Identify threats to the assets
- Evaluate risks to the assets
- Design, install and operate protection systems
- Integrate response personnel
- Control and account for assets
- Conduct performance test of critical systems elements to ensure adequate protection of assets
- Program management.

For more information, contact:

Cary Crawford, Manager
Safeguards, Security Analysis and Operations
Pacific Northwest National Laboratory
PO Box 999, KE-14
Richland, WA 99352
Phone: 509.375.2090
Email: Cary.Crawford@pnl.gov

Sept. 2005 PNNL-SA-46522
Safeguards, Security Analysis and Operations

In the post-9/11 environment, many critical infrastructure industries such as power plants, oil companies, and domestic and international shipping ports face the threat of nuclear, chemical and biological weapons and materials proliferation. The Pacific Northwest National Laboratory’s Safeguards, Security Analysis and Operations group offers a wide range of capabilities to help private industry and government clients protect their vital assets.

A key feature to our approach is the development of integrated solutions that take into consideration the interdependencies among procedures, policies, workplace culture, expertise and best use of technology. With experience in physical site surveys, process and program inspections, and systematic evaluations, our staff are proficient in:
- Threat, Vulnerability and Consequence-Based Risk Assessments
- Physical Protection Systems and Processes
- International Safeguards
- Protective Force Programs
- Nuclear Material Control and Accountability (MC&A)

As an industry leader in these areas, we are able to tailor our approach to meet any size challenge, and provide the greatest cost benefit to our customers.

Methods and Tools
- Project and program management
- Performance testing, inspection and surveys
- Strategic planning
- Crisis negotiation
- Project and program management
- Non-nuclear materials characterization, e.g., ultrasonic.
- Nuclear engineering
- Radiation detection technologies
- Environmental sample collection, analysis and technologies
- Non-nuclear materials characterization, e.g., ultrasonic

International Safeguards

The International Safeguards program provides technologies and system studies to maintain and enhance international safeguards and the nonproliferation regime. PNNL has extensive experience in all phases of protective force including the following:
- Basic officer training including mechanical and explosive breaching techniques for special response teams
- Advanced officer training including mechanical and explosive breaching techniques for special response teams
- Readiness assessment of physical protection capabilities
- Consultation on design and development of physical protection programs
- Analysis for streamlining and enhancing operational effectiveness through proceduralized response to security events.

Nuclear Material Control and Accountability

The MC&A program provides information and control measures necessary to establish and track nuclear material inventories, control access to materials, detect loss or diversion of nuclear materials, and ensure the integrity of those systems and measures.

Areas of Emphasis

PNNL staff have extensive expertise and experience in the following program areas:
- Advanced Safeguards Technologies – develops and tests methods to enhance the international safeguards and nonproliferation regime. PNNL has developed methods for nuclear material measurements, tamper-indicating seals, analysis of environmental samples, and analysis of safeguards information.
- Safeguards Approaches – performs studies systems to assist policy makers and international organizations in developing new approaches to enhance safeguards. PNNL has participated in studies of the Additional Protocol, black markets, uranium enrichment, and the IAEA special committee on safeguards and verification.
- Safeguards Implementation – provides methods, technologies and expertise to maintain the international safeguards regime. PNNL has assisted the U.S. government and the IAEA by developing training programs; implementing IAEA safeguards in the United States, collaborating with other nations and international organization to enhance their capabilities, analyzing information on nuclear facilities, analyzing environmental samples for the IAEA, and developing computer software for safeguards.
- Proliferation-Resistant Technologies – identifies and develops technologies for peaceful use of nuclear energy in a manner that reduces the risk of nuclear proliferation. PNNL has developed a proliferation-resistant reactor concept and is assisting in advanced concepts for uranium enrichment safeguards.

Protective Force

Protective forces are a critical element in the detection and assessment phase of an integrated physical protection program because they are responsible for resolution of the event. Protective force input is needed in the initial design phase and subsequent testing of the system.

Areas of Emphasis

- Development and evaluation of the effectiveness of training programs;
- Rigorous testing, calibration and maintenance of an effective physical protection system to ensure performance and reliability.
- Performance testing to ensure that physical protection systems and components are capable and effective in protecting assets.
- Onsite characterization of facility physical protection strategy and recommended enhancements.