

Nuclear Non- Proliferation Program

The Oak Ridge National Laboratory Nuclear Nonproliferation Programs (NNP) develop, coordinate, and assist in implementing domestic and international policy aimed at reducing threats—internal and external—to the United States from weapons of mass destruction (WMD). The primary focus is reducing the proliferation of nuclear materials and nuclear weapons.



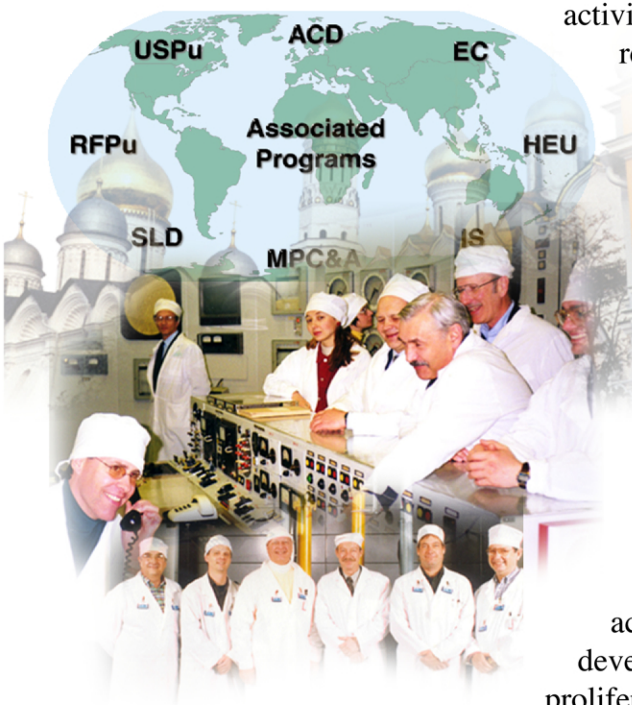
Background

The proliferation of nuclear materials and nuclear weapons poses a strategic threat to the United States. Through its nonproliferation programs, the ORNL NNP is a primary contributor to U.S. policy efforts to detect, prevent, and reverse the proliferation of WMD. The NNP supports a range of

activities related to national security, spanning from research and development activities through technology deployment and technical assessments. Activities include work related to chemical sciences and technology; metals and ceramics; instrumentation and controls; engineering technology; biology and health sciences; computational physics and mathematics; energy, robotics, and process systems; solid state physics; physical security assessments; and system analysis and deployment.

Oak Ridge is actively involved in several programs to reduce the proliferation threat.

These programs cover the whole spectrum of activities from weapon dismantlement to business development, all with the goal of preventing proliferation. The overall goal of the NNP is to open channels of communication among organizational structures and coordinate and focus efforts to enhance Oak Ridge's role in the nonproliferation and threat reduction arenas.



Programs

Dismantlement and Transparency (D&T)

Enhances the safety and security of nuclear weapons dismantlement in both the U.S. and the Russian Federation; counters nuclear terrorism; and monitors blend down operations.

Warhead Dismantlement Transparency

Focuses on the safe and secure storage of fissile materials and transparent monitoring of nuclear warheads; provides for advanced technologies to detect, prevent, and mitigate the effects of unauthorized or terrorist use of nuclear, radiological, or high explosive weapons.

Highly Enriched Uranium Transparency

Highly Enriched Uranium Purchase Agreement through on-site monitoring, data exchanges, and the use of continuous non-intrusive monitoring equipment.

Export Control

Providing technical support for national and international export control as a key part of U.S. national security and foreign policy, emphasizing nuclear and nuclear dual-use equipment, materials, and technologies.

Global Threat Reduction Initiative

Providing technical, logistical, regulatory, and analytical support to identify and recover the highest risk materials.

International Safeguards

Supporting U.S. initiatives to increase the effectiveness and efficiency of the International Atomic Energy Agency, which provides the international community independent assurance that countries are in compliance with their own nonproliferation commitments.

Material Protection, Control, and Accounting

Securing weapons-usable nuclear materials, helping improve safeguards and security systems at Russian facilities, and improving their nuclear material accounting systems.

Nonproliferation Research & Development Program

Developing tools, technologies, and techniques to reduce threats to national security and world peace posed by nuclear weapons proliferation and to assist in fulfilling U.S. commitments for treaty monitoring.

Russian Federation Plutonium Disposition

Developing enabling technologies in Russia to irradiate plutonium-bearing fuel to nuclear power plants and constructing and modifying Russian power plants to carry out plutonium disposition.

Second Line of Defense

Improving the protection of Russia's borders and customs sites against illicit trafficking of nuclear and nuclear-related materials, equipment, and technology.

Security Technology Development & Deployment

Working with DOE and NNSA sites to identify, procure, develop, deploy, and evaluate security technologies that enhance the capabilities and responsiveness of protective forces and improve site-wide security systems.

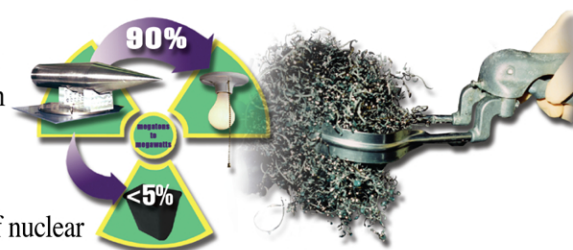
United States Plutonium Disposition

Immobilizing and burning part of the plutonium inventory as reactor fuel at U.S. commercial reactors.

Defense Threat Reduction Agency Support

Preventing the proliferation of weapons of mass destruction and related materials, technologies, and expertise from former Soviet Union states.

Nuclear Nonproliferation Programs



Contact:

Larry Satkowiak
phone: (865) 576-5650
email: satkowiaklj@ornl.gov

