

International Safeguards

The International Safeguards Program supports U.S. initiatives to increase the effectiveness and efficiency of international verification regimes. This provides the international community with independent assurances that countries are in compliance with their own nonproliferation commitments.

Specific activities:

- Developing, testing, and evaluating strengthened safeguards measures to be applied globally by the International Atomic Energy Agency (IAEA)
- Providing technical expertise in implementing international safeguards at nuclear facilities in the United States
- Initiating and supporting cooperation agreements between the U.S. Department of Energy (DOE) and foreign safeguards organizations
- Assisting with the implementation of more-effective materials accounting and physical protection systems at foreign installations
- Performing proliferation resistance studies and assessments



Oak Ridge National Laboratory is the DOE's largest multi-program science and energy laboratory.

ORNL was established in 1943 as a part of the Manhattan Project to pioneer a method for producing and separating plutonium. Since April 2000, it has been managed by a partnership between the University of Tennessee (UT) and Battelle.

With a staff of more than 4000, ORNL annually hosts approximately 3000 guest researchers who spend two weeks or longer in Oak Ridge.

ORNL is in the final stages of constructing 13 new facilities that support missions related to nanophase materials, advanced microscopy, and supercomputing. In addition, the newly completed Spallation Neutron Source, combined with the recently upgraded High Flux Isotope Reactor, makes Oak Ridge the world's foremost center for neutron research.

All of these vital capabilities are available to support the mission of the International Safeguards Program.

For more information about the International Safeguards Program, please contact:

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International Safeguards Program



Providing independent assurances of compliance with national and international commitments that promote the safeguards and peaceful uses of nuclear material

Verification Technologies

- **Development of technologies for safeguards applications**
 - Safeguards data management
 - Environmental sampling
 - Enrichment safeguards
 - Unattended remote monitoring
 - Real-time process monitoring
- **Technology demonstrations and testing**
 - Radiation field testing of unit robustness
 - Operational testing of systems
 - In situ technical support for safeguards measurements and equipment

Training Services

- **Safeguards instrumentation training** in realistic laboratory and facility settings
- **In situ training** —domestic and foreign— in client facilities using client instrumentation.
- **Bilateral and multilateral training in safeguards methodologies and practices**
- **DOE/IAEA-sponsored training on State System of Accounting and Control (SSAC)**
- **Training on methods and procedures** for conducting physical inventories



Facilities for Promoting International Safeguards

Dedicated Safeguards Laboratory for calibrating, performance testing, demonstrating, training, and procedure development on nondestructive analysis instruments in realistic environments

Radiation facilities for field testing unit robustness of existing and new safeguards technologies when exposed to substantial neutron and gamma fields in realistic operating conditions

High-performance computing for advanced modeling of new detector technologies and environmental responses at the DOE Office of Science's National Leadership Computing Facility

State-of-the-art conference facilities for promoting initiatives



International Initiatives

- Strengthen the application of safeguards to secure nuclear materials through safeguards cooperation agreements
- Promote Global Nuclear Materials Threat Reduction through upgrades to physical security at research reactors and upgrades to nuclear material accounting, control, and physical protection systems around the world
- Promote peaceful uses of nuclear energy through sister-laboratory arrangements
- Promote nuclear initiatives and treaties by conducting technical assessments and exchanges
 - Nuclear Nonproliferation Treaty
 - Additional Protocol
 - Global Nuclear Energy Partnership
 - Advanced safeguards

