

Information Note¹

- Event:** *The Arms Control Seminar: Verification and Transparency Challenges in Biological Arms Control and Nonproliferation*
- Organizer(s):** Pacific Northwest National Laboratory (PNNL), U.S. Department of Energy
- Date and venue:** 5-7 February 2013, Richland, Washington, USA
- Participants:** Circa 25 PNNL employees enrolled in the Arms Control Seminar, other PNNL staff, U.S. Department of State representative

1. Objectives of the workshop

The Arms Control Seminar: Verification and Transparency Challenges in Biological Arms Control and Nonproliferation is part of the year-long professional development program established for interested early- to mid-career PNNL professionals from a broad range of technical and policy disciplines with an interest in arms control and nonproliferation issues. The trainees meet once a month for topical discussions facilitated by guest speakers on arms control and nonproliferation and undertake specific projects in these areas, including publishing papers, preparing proposals, supporting relevant projects or giving self-prepared presentations on relevant topics.

A 1540 Committee expert participated in this event to discuss the role of the United Nations Security Council and particularly that of the 1540 Committee in curtailing the proliferation of chemical, biological, and radiological/nuclear weapons, related materials, and their means of delivery.

2. Background

PNNL is one of the ten national laboratories of the U.S. Department of Energy and contributes to the global WMD nonproliferation efforts by inter alia delivering U.S. mission-critical research and development; providing technical and nonproliferation policy analysis; and implementing nonproliferation programs worldwide (website: <http://www.pnnl.gov>).

3. Highlights

The Arms Control Seminar: Verification and Transparency Challenges in Biological Arms Control and Nonproliferation provided an opportunity to “train-the-trainers” in the sense that the seminar trainees and PNNL staff will or are already engaged in the implementation of WMD nonproliferation efforts and the key messages provided by the 1540 expert in her presentation will be shared with others through their international interactions.

The 1540 expert gave a presentation on *The UN Global Counter-Terrorism Strategy and the Role of the Security Council in WMD Non-Proliferation*. Dr. Perkins provided a broad overview of the UN Global Counter-Terrorism Strategy, the UN counter-terrorism efforts (including the role of the 1540 Group of Experts as an entity of the Counter-terrorism Implementation Task Force), and the structure and work procedures of the Security Council and its subsidiary bodies such as the 1540 Committee), before delving

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into the objectives, accomplishments, and challenges associated with implementation of resolution 1540 (2004) and the common tenets toward global health security of resolution 1540 (2004), International Health Regulations and the Biological Weapons Convention. The work of the Security Council in general, the knowledge management challenges of the 1540 Committee and its experts, associated with receiving and accounting for information received from all UN Member States, as well as the process of selecting a US expert to be part of the 1540 Committee's Group of Experts, were among the topics raised for discussion by the trainees.

The PNNL visit agenda also included meetings with PNNL leadership and overview presentations of PNNL's National Nuclear Security Administration Programs in its National Security Directorate. The 1540 expert was also introduced to the work undertaken at PNNL by the Chemical and Biological Signature Sciences Group, Biological Sciences Division, and the Fundamental and Computational Sciences Directorate (via formal presentations, discussions and visit to laboratories), in Applied Statistics and Computational Modeling, Knowledge Discovery and Informatics, Biological Monitoring/Modeling, Systems Toxicology, Safeguards and Nonproliferation Implementation, and Biodefense/Bioforensics.

In particular, the 1540 expert discussed with PNNL staff how the PNNL contributes to the overall US efforts to help build capacity to enable states to meet obligations under the resolution 1540 (2004). One of such assistance programs is illustrated by PNNL's support of the U.S. Department of Energy (DOE) National Nuclear Security Administration's (NNSA) International Nonproliferation Export Control Program (INECP) which has provided export control list and proliferation risk assessment trainings to over 30 licensing agencies worldwide. INECP identifies implementation gaps within national systems of control and addresses them through customized trainings and technical resources.

PNNL staff also discussed with the 1540 expert: i) the Radiological and Nuclear Risk Analysis Model (RNRAM) which is being developed by PNNL for the U.S. Department of Homeland Security's (DHS) Domestic Nuclear Detection Office (DNDO) to support internal DNDO analyses also has applications to other uses and entities such as the IAEA and ii) the synthetic illicit nuclear trafficking (INT) computer model they developed that explores how knowledge about the structure and function of illicit trafficking routes and networks in analogous illicit trafficking domains provides a framework for analyzing and understanding network operations in the more elusive and less documented nuclear smuggling domain.

The 1540 expert also visited the Volpentest Hazardous Materials Management and Emergency Response (HAMMER) Training Center in Hanford, WA, and met with the Director, Training Program Manager and other staff. PNNL contributes to the overall US assistance offered worldwide to help states meet obligations under the resolution 1540 (2004) by inter alia, providing hands-on training designed for the U.S. Customs and Border Protection and international border security officers. Comprehensive programs train U.S. and international border-enforcement officers in the detection, identification, and interdiction of illicit transfers of material, commodities, and components used in the development, production, or deployment of nuclear, chemical, and biological weapons and their associated delivery systems. It also covers comprehensive training in the detection and interdiction of illicit traffic of radioactive materials. The HAMMER Training Center provides classrooms, specialized props (including Scud and cruise missiles), as well as a Port of Entry (POE) facility complete with a host of commercial conveyances, such as seaworthy containers, drums, barrels, gas tanks, trucks, and other transportation means. The POE facility is also equipped with detection equipment to search, detect, and interdict commodities found on and/or in the containers, vehicles, and personnel (website: <http://interdict.pnnl.gov/training/training.stm>).

4. **Additional comments**

For further information, please contact the 1540 Committee's Group of Experts by e-mail at 1540experts@un.org.