Synergy in

Russia opens the world's first international training centre.

With over 40 heads of states set to convene at the Nuclear Security Summit to be held in April 2010 in Washington, the matter of nuclear security remains a focus of international concern. Though the world has not yet been struck by a 'dirty bomb,' the risk that a terrorist group amasses radioactive material and detonates it in a major city remains.

Among the principal priorities for IAEA Member States that have relatively substantial nuclear material within their borders is to ensure that it is never tampered with, never accessed, and above all else, never stolen. Vast financial resources are spent annually by countries to protect nuclear facilities (sites with reactors, enrichment and/or reprocessing capabilities), and pressure remains on security specialists and equipment to provide seamless safe-keeping as the world prepares for an expected growth in nuclear power.

The IAEA and ISTC work together to offer practical security training to IAEA Member States. (Photo: J. Knapik/IAEA)

While nuclear security has remained an affair primarily dealt with at the state level, a new example of international cooperation can be found 100km south-west of Moscow, in the former Soviet-era closed city Obninsk. Known for having the world's first civilian nuclear power station, Obninsk is also host to the Interdepartmental Special Training Centre (ISTC), a nuclear security training site that aims to be an exemplar of international cooperation in strengthening nuclear security worldwide.

Instituted in 1975, the ISTC is led by a team of veteran security experts who work to train teams of nuclear security guards and professional staff in all matters of protecting nuclear sites. In 1993, the ISTC was allocated to the Ministry of Atomic Energy in the Russian Federation, and now operates under ROSATOM. Throughout its history, the ISTC has been used to train security management, guards and systems operators throughout the former USSR and Russia, and over 12,000 Russian specialists have gone through its courses since 1993. Now the centre is opening up and, with help from the IAEA, has internationalized its services.

Cooperation between the IAEA and the ISTC began in 2001, when both organizations jointly considered cooperation in programmes and activities. It was

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by Dana Sacchetti

quickly determined that a closer relationship could be beneficial, and the IAEA and ISTC began to offer practical security training to IAEA Member States. Given the common language and cultural familiarities, assistance from Obninsk was first provided in the area of staff development to States from central and eastern Europe and the former Soviet Union. The Canadian government has also assisted the international effort, and has provided funding for training, curriculum development, and equipment.

In recent years, course offerings were broadened and made available to several other countries. Training is provided in the form of regional and national courses on practical operation and physical protection systems inspections. This courseware gives training to inspectors, physical protection systems operators, and managerial staff working at nuclear and nuclear-related sites. Over 300 international participants have been trained in these courses and further enrolment is expected in coming years. Reception has been positive.

"I think Obninsk has been a very good programme," said Anita Nilsson, Director of the IAEA's Office of Nuclear Security. "The training that they offer is designed to fulfil requirements from the Russian programme itself, so the knowledge and training is part of a formalized training programme for Russia operators. This is a tremendous strength to have."

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The centre and its cooperation with the IAEA have passed several important milestones over the past 12 months. In May 2009, the ISTC inaugurated newly revamped indoor and outdoor training facilities, and marked the occasion with high-level visits from IAEA Deputy Director General Tomihiro Taniguchi and representatives from the Government of Canada, one of the major donors to the facility.

In November 2009, the ISTC hosted an IAEA-sponsored pan-European course, with professionals hailing from a dozen countries taking part in a two-week training workshop on physical protection and

other elements of nuclear security. Another course designed by the IAEA and the ISTC recently trained university students with an interest in security. Talks are also underway to enhance the centre's capability to offer psychological training to security staff. The site is now considered fully active and receives teams on a monthly basis from states across Europe and Asia.

In addition to training courses, the ISTC has also worked on a request basis to educate and train security personnel who may work at some highly visible nuclear facilities. A delegation of Pakistani security inspection staff were trained at the ISTC in summer 2009, and training courses have also been held for personnel managing security at the Bushehr nuclear power plant in Iran in 2003.

On Site

While at the ISTC, security personnel receive hands-on and classroom training on physical protection, radiation protection, device management, and practical security training and security culture. Courseware and training is conducted on a campus spread out over several hectares in central Obninsk.

The outdoor site is used extensively, simulating the fencing, lighting, detection sensors and other apparatus typically used at a nuclear facility. All sensors are routed to a central alarm station, where students can simulate various security situations. The site also features a testing ground of over 2000 square meters, equipped with 20 detection devices and CCTV systems.

Indoors, staff from the ISTC employ a series of testing laboratories, classrooms, and security simulation facilities to train visitors on several aspects related to security. The training and courseware used is geared towards staff with engineering and technical backgrounds, and typically involves topics related to information protection, physical protection, and emergency response and prevention. Several classrooms are set up for practical training and qualification improvement for specialists in the security field.

Although the ISTC acts as a governmental institution of the Russian Federation, the Centre also works in close cooperation with a variety of geographically dispersed vendors to test and certify equipment for deployment at nuclear-related facilities. This work forms another primary purpose for the ISTC: to ensure that the technologies used to secure nuclear sites are rugged, sound, and capable of withstanding a variety of stress conditions. A large testing certification laboratory, provided by the US Department of Energy (DOE) is on site to put physical protection equipment through rigorous, non-destructive testing. Sophisticated machines are used to simulate extreme temperatures, strong vibrations that mimic an earthquake, and electromagnetic testing in the case of attempted sabotage or mechanical interference. After testing, the ISTC reports whether the machinery has passed certification.

All these features combine to make the ISTC an exceptional nuclear security training site, providing an international platform for training specialists and testing equipment to protect any type of nuclear fuel cycle facility. In years to come, the IAEA-ISTC relationship will broaden, as both organizations work to provide comprehensive nuclear security training for specialists from around the world.

"Science and industry are constantly making headway, and new unique developments aimed at improving the physical protection of nuclear sites continue to appear," explained Yuri Barabanov, ISTC Director. "We hope that our cooperation with the IAEA will continue and grow in the years to come."

Photos, left: Security components are tested in a humidity chamber, along with other environmental stress tests.

Right: Guards receive training on physical protection for nuclear facilities. (D.Sacchetti/IAEA)

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