ROSATOM

Technical Academy
Rosatom Tech

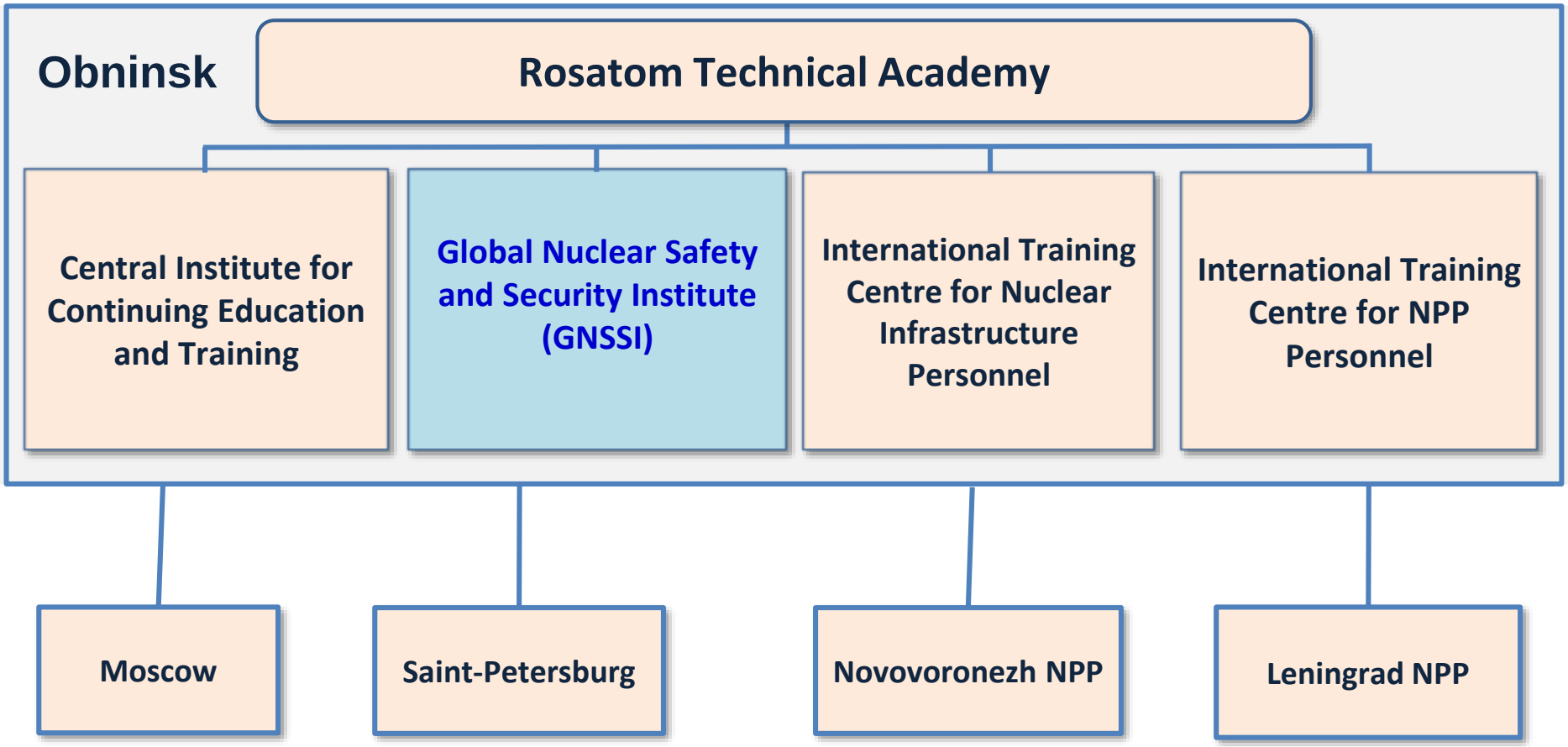
STATE ATOMIC ENERGY CORPORATION «ROSATOM»

Capacity Development of the Global Nuclear Safety and Security Institute in the Field of Nuclear Security

History

- In 1993, the Intersectoral Special Training Center was established to train Russian specialists in the field of physical protection, which was later transformed into the Global Nuclear Safety and Security Institute (GNSSI).
- In 2017, the Institute became part of the Rosatom Technical Academy.

Rosatom Technical Academy – a Unique Training Centre for the Atomic Industry



Tasks in Ensuring the Nuclear Security Regime

- Interagency cooperation with various competent authorities of the Russian Federation on providing training of specialists in the field of physical protection and nuclear security of nuclear, radiological and other vital state facilities;
- Participation in the development of regulatory documents;
- Development and coordination of industry and interdepartmental training programmes;
- Organization and conduct of training for Russian trainees;
- Participation in the development and conduct of international training courses;
- Testing and certification of technical means of physical protection;
- Organization of joint events with international organizations and foreign partners;
- Exchange of best practices.

New Organizational Chart Aimed to Development the Global Nuclear Safety and Security Institute

Vice rector of the Rosatom Technical Academy – Director of the Global Nuclear Safety and Security Institute (GNSSI)

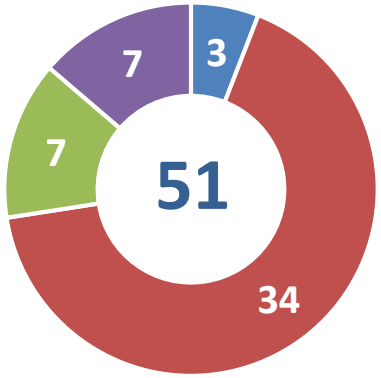
- Deputy Director on Organizational Activities
- Group on Support for Training Process
- Group on Design Special Video, Multimedia and Printed Materials

Departments:

- Information Protection
- Technical Protection of Information
- Physical Protection
- Asset Protection

- Testing and Certification Center
- Testing Laboratory
- Project on Special Information Systems

- Deputy Director on International Relations



GNSSI staff:

- Faculty staff, including 2 PhD
- Employees of Testing and Certification Center
- Supporting personnel
- Managers

Investment Programme of Rosatom Technical Academy

- Developed in 2017, the investment programme envisages measures for the period from 2018 to 2021. Main measures:
  - Recruitment and training of instructors to support international training activities;
  - Development of training facilities;
  - Equipping training sites with simulators and technical training facilities;
  - Creation of a set of standard training material for international training programmes;
  - Development of computer-based management system for planning and training of personnel for nuclear power plants being built abroad;
  - Supplying and accreditation of the industry Center for testing and certification of technical means of physical protection;
  - Development of electronic courses for the industry-wide distance learning system.

Facilities

Classrooms, laboratories and outdoor training areas are equipped with the most various technical means of physical protection of the world's leading manufacturers

Name	Total
Classrooms equipped with advanced technical means	11
Training laboratories	8
Computer classrooms	4
Modular classroom	1
Modular pedestrian and vehicle access point	1
Training facilities for engineering and technical systems of physical protection	2
Facility for guard force training	1
Test facility for physical protection technical means	1
Gym	1
Interactive fire range	4

Classrooms and Laboratories

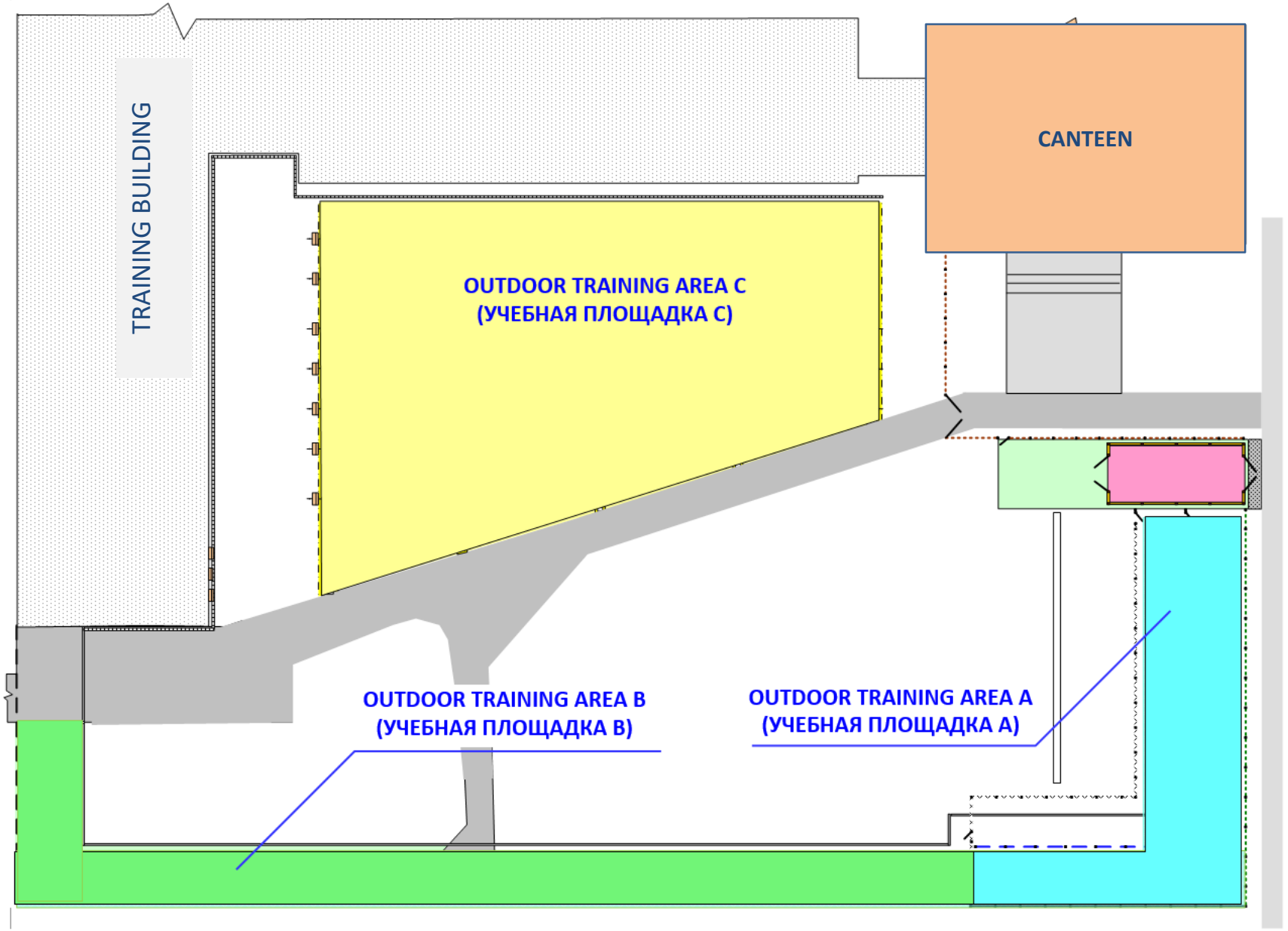
Mock-up Model of Nuclear Facility

Outdoor Training Area Equipped with Physical Protection Systems

Integrated Data Collection and Visualization System

Central alarm station with Geutebrück security system

Layout of Outdoor Training Areas



Outdoor Training Areas Equipped with Physical Protection Systems

Training Vehicle Access Control Check Point

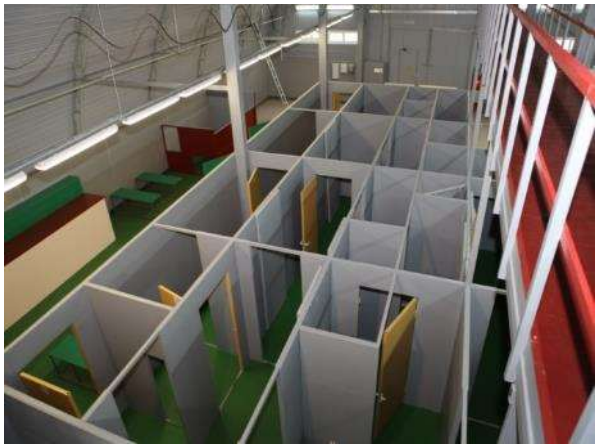
Training Pedestrian Access Control Check Point








Guard Forces Training Site









Center of Conformity Assessment and Testing Laboratory

- Inaugurated in June 2019.
- Since 2020, Accreditation of Laboratory in Rosatom Corporation, testing of physical protection equipment on electromagnetic compatibility (EMC).
- Since 2021, testing of operational indicators of physical protection equipment and its resistance to environmental factors.
- Since 2022, accreditation of the laboratory in Federal Service for Accreditation, testing of equipment for compliance with the requirements of Technical Regulations and testing of technical means of transport security.

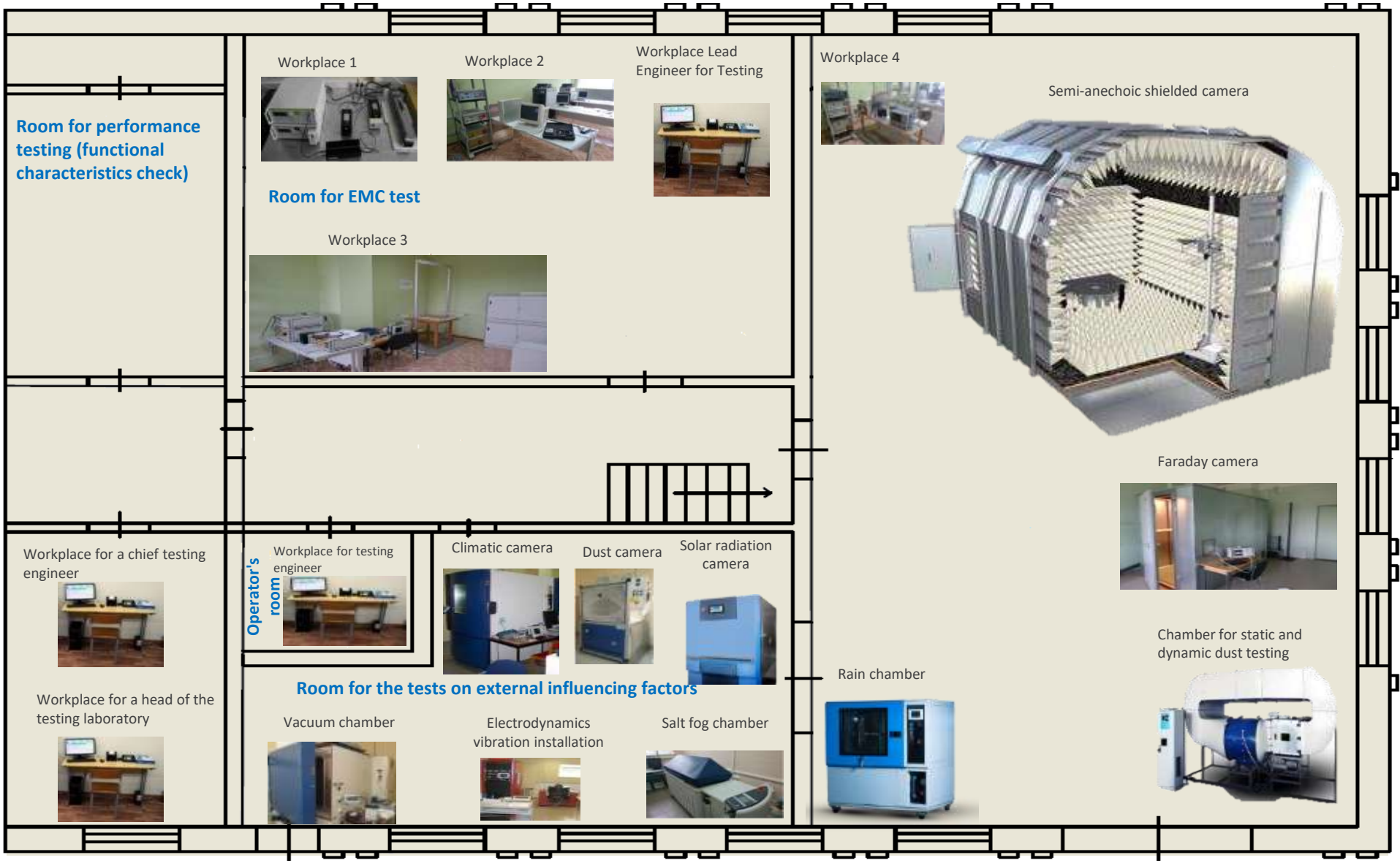
Official opening ceremony by the Rosatom Director General A. Likhachev (June 2019)

Semi-anechoic chamber for the EMC compatibility testing

Environmental and Mechanical Resistance Testing Sector

By 2022, the corporate Center of conformity assessment of the physical protection equipment will be created:
- testing
- certification
- personnel assessment

Facility for Testing Physical Protection Equipment



Training Programmes for Domestic Trainees

the Institute has developed and regularly implements more than 60 training programmes, of which 28 are in the field of physical protection of nuclear material and nuclear facilities. The most popular topics are:

- Physical protection of nuclear facilities;
- Vulnerability analysis;
- Corporate and facility level inspection of the physical protection of nuclear facilities;
- Implementation and operation of complexes of engineering and technical means of physical protection;
- Physical protection of radiation sources, storage facilities for radioactive materials;
- Control of a complex of engineering and technical means of physical protection from alarm stations;
- Evaluation of the effectiveness of physical protection systems;
- Information Security.

Categories of Trainees

From 1,500 to 2,500 Russian specialists are trained at the Institute annually, about 50% of them are from the Russian nuclear industry; among them:

- Senior managers of security divisions;
- Analysts and designers of physical protection systems;
- Specialists on installation and maintenance of physical protection equipment;
- Operators of engineering and technical means of physical protection;
- Guards and response forces;
- Staff responsible for the transport of nuclear and other radioactive material;
- Specialists of corporate and facility level control;
- Information and computer security specialists.

Teaching Methods

- Lectures;
- Practical exercises;
- Case Studies;
- Training videos;
- Computer testing;
- Self-study using learning software and library stock.

Quality and Effectiveness Evaluation (2/2)

In 2018 the quality management system of Rosatom Technical Academy in the area of training and consulting services in nuclear industry was certified according to the ISO 9001:2015 Standard.

Forms and methods of training evaluation:

- Trainee feedback sheets;
- Examination and attestation results analysis;
- Questionnaires and feedback sheets filled by the customers;
- Direct observation of training performed by external instructors/ experts;
- Polling of customers by the external company.

Joint IAEA - Russian Federation Nuclear Security Cooperation Project

Project start: 2004

The goal of this project was to enlarge the scope and variety, as well as to enhance the quality of training in the physical protection conducted in the GNSSI (former ISTC) in Obninsk for specialists from the IAEA Member States.

Opening of the outdoor training area: 05.2009.

Three phases of the joint project were successfully fulfilled in 2012, a new training area integrated with the central alarm station was created (outdoor training areas A, B, C).

16 samples of perimeter detection sensors with various principles of operation were installed.

Expert mission for the project support

- The IAEA expert mission ***Upgrading existing training equipment and expanding its range at the Global Nuclear Safety and Security Institute*** was held from 19 to 23 October 2015 in Obninsk, Russian Federation.
- International experts from the IAEA and several Member States took part in this mission.
- The IAEA mission provided recommendations on the technical proposals for upgrades of training equipment.

Upgrading existing training equipment and expanding its range

In 2018-2019 the project ***Expanding the range of equipment for the systems in operation at the training complex and putting the equipment at the outdoor training area ["poligon"] back in working ord*****er** was implemented. It included design, installation and commissioning of the following systems:

- Intrusion detection system;
- Access control system;
- CCTV cameras;
- Equipment for the search of prohibited items;
- Replacement of failed/unserviceable sensors/devices.

The project also included integration of some newly installed devices with existing systems operating at the facility.

All works were completed by 29.01.2019

Equipment was put into operation

Training Courses in Collaboration with the IAEA (1 of 2)

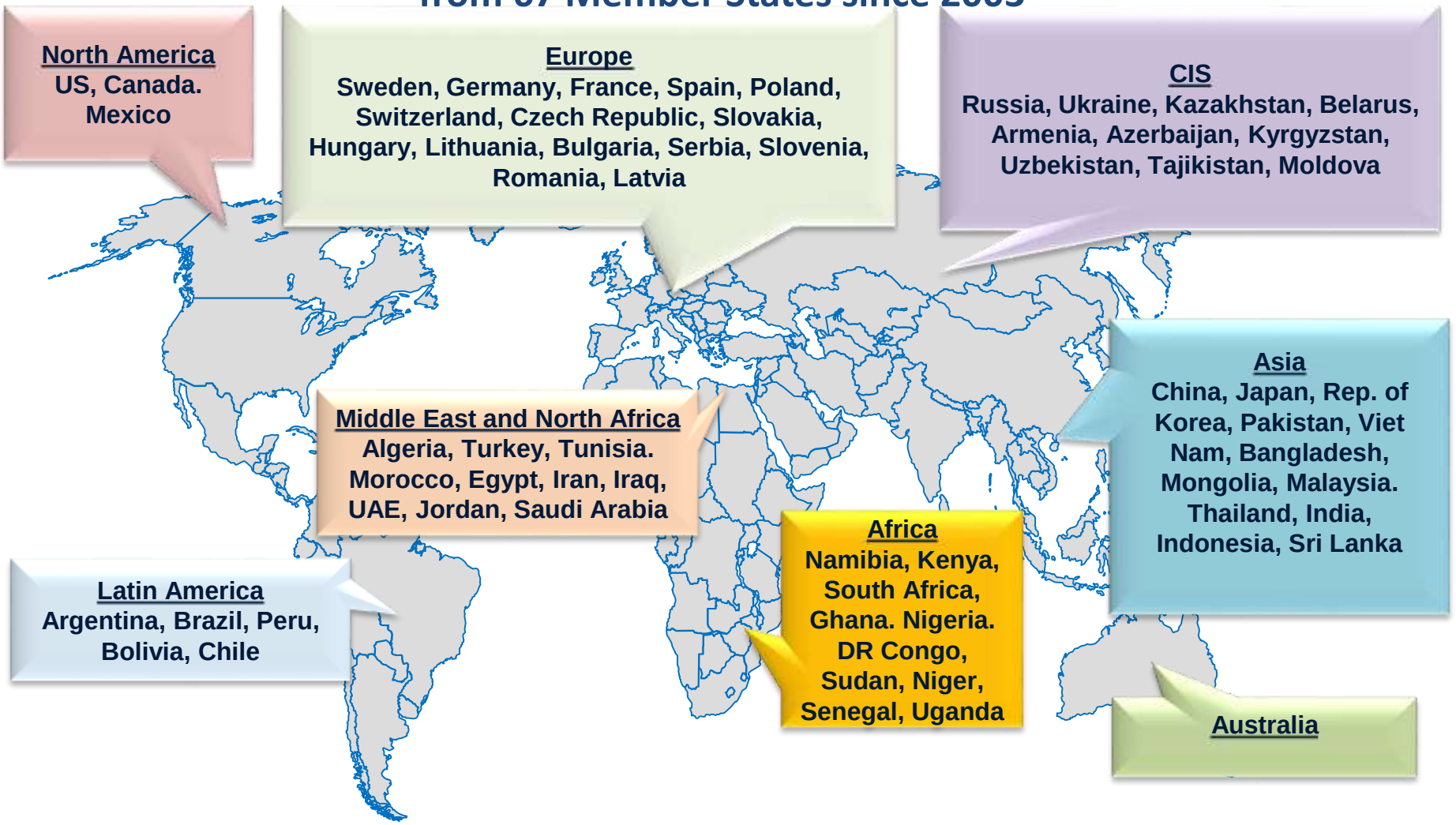
Regular training courses in collaboration with the IAEA:

- International training course on practical operation of physical protection systems at nuclear facilities;
- International training course on physical protection inspections at nuclear facilities;
- International training course on nuclear security in practice: practical training for university students*;
- International training course on the security of radioactive material in use and storage*;
- International training course on the development of a nuclear security regime for nuclear power programmes.

** - the course was conducted as regional and international*

Training Courses in Collaboration with the IAEA (2 of 2)

53 international events were conducted for over than 1100 participants from 67 Member States since 2003



New Status

In 2019, Rosatom Technical Academy was designated as the IAEA Collaborating Centre in the area of knowledge management and human resources development for nuclear energy and nuclear security

IAEA Deputy Director General, Head of the Department of Nuclear Energy Mikhail Chudakov

Rector of Rosatom Technical Academy Youry Seleznev

IAEA Deputy Director General, Head of the Department of Nuclear Safety and Security Juan Carlos Lentijo

(Photos: D. Calma/IAEA)

Prospects of Development

Expanding the capabilities of training areas and laboratories in order to:

- meet the proposals of trainees regarding the practical development of technical means of countering threats that are not presented at the GNSSI today (protection of water areas, protection against small-sized aircraft, etc.);
- provide material and technical support for coming courses (Designing PPS of radioactive sources, Preventive and protective measures against insider threats, etc.);
- upgrade existing equipment of the information collection and processing system.

Perspective Directions for the Further Development of GNSSI's Training Facilities

1. Training ground for demonstration of water area protection
2. Training laboratory for training in the field of security of radioactive sources and radioactive material
3. Upgrade of the system for collecting and processing information
4. Training backup alarm station of PPS
5. Measures against the insider threat
6. Training ground for perimeter lighting system of a nuclear facility
7. Training laboratory of backup power supply for the physical protection equipment
8. Detection of small aircrafts and drones (prospective)

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«Rosatom Technical Academy»

Thank You!

Rosatom Technical Academy

21 Kurchatov St., Obninsk, Kaluga Region, 249031 Russia

Tel.: +7 (484) 39-29-100, +7 (484) 396-80-11

E-mail: info@rosatomtech.ru