



US DOE Education and Training Initiatives

“Nonproliferation Education in Russia and the NIS”

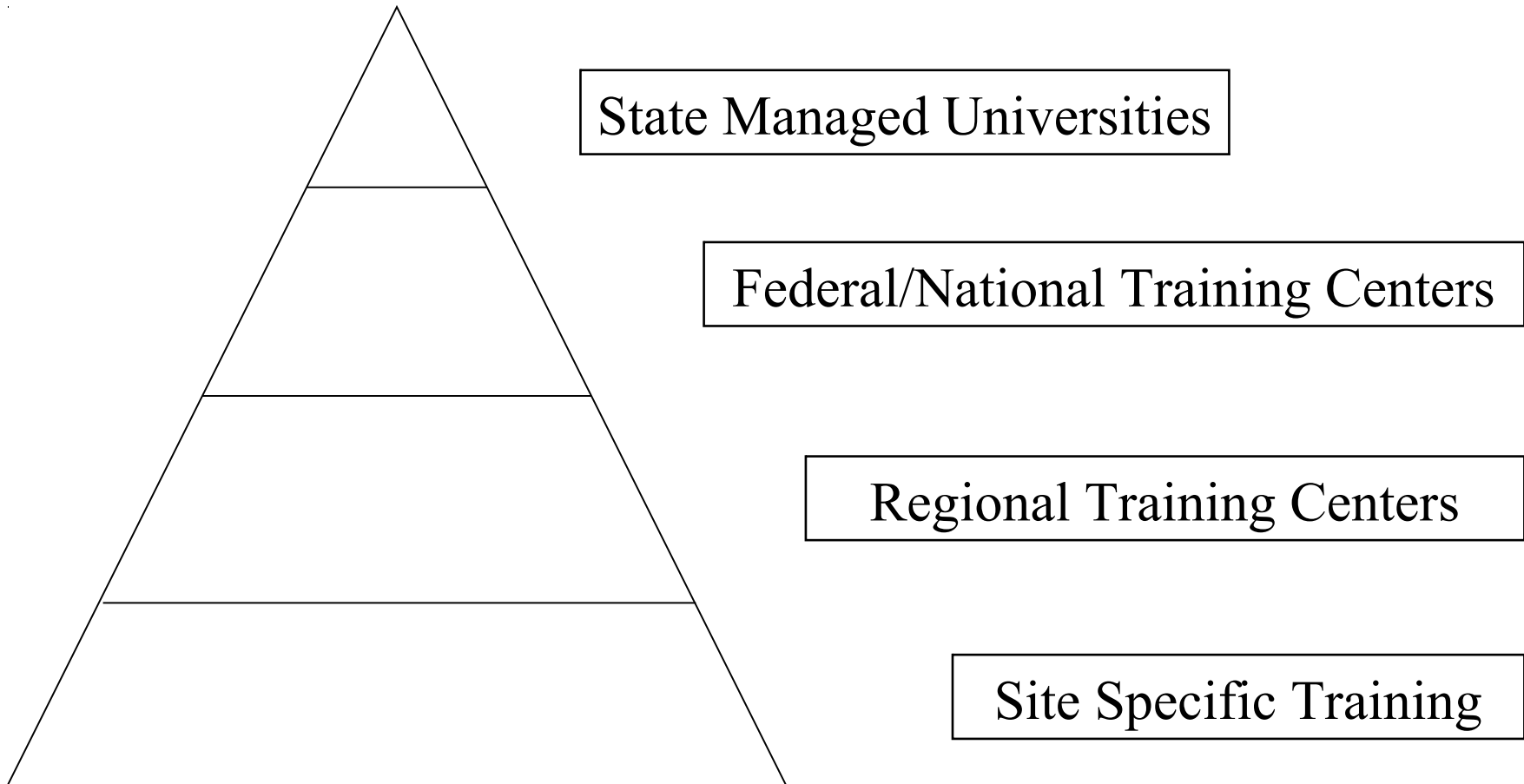
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September 18, 2003

Russian Federation Training System





U.S.-Russian Cooperative Education and Training Projects



- **Education and Awareness**
 - Graduate Degree Programs
- **Russian Methodological and Training Center (RMTC)**
 - National Center for Material Control and Accounting Technologies
- **Interdepartmental Special Training Center (ISTC)**
 - National Center for Physical Protection/Protective Force Technologies
- **MinAtom Regional Training and Technical Support**
 - Regional infrastructure for MinAtom Training and Technical Support Programs
- **RF Navy (MOD) Kola Technical Center (KTC)**
 - Regional Infrastructure for Ministry of Defense Training and Technical Support Programs

- **Goals**

- Create an environment in which risk reduction achieved by MPC&A Upgrades is acknowledged and maintained
- Educate and train Russian MPC&A experts in nonproliferation and MPC&A methodology, reinforcing the necessary human factors (attitudes and beliefs) required to instill a strong MPC&A Culture

- **Milestones**

- Initial MPC&A Master's Degree curriculum complete in FY 1997
- Graduated 5 classes of 8 students each with Master's degree in MPC&A through FY 2003
- MPC&A Engineering Degree curriculum developed in FY02
- MPC&A Culture Training Module implemented at ISTC, Kurchatov Institute, MEPHI, and Atomenergoproekt in FY 2002
- MinAtom signed Culture Coordinator Program protocol in FY 2003



RMTC Project



- **Goals**

- To establish, maintain, and control a standardized set of Material Control and Accounting (MC&A) training materials and methodology, consistent with Russian regulatory requirements
- Creation of a cadre of trained and experienced MPC&A specialists to ensure achievement of a sustainable nuclear safeguards culture

- **Milestones**

- First MPC&A Training Courses Taught at RMTC in FY 1996
- Designated as a Joint (MinAtom-GAN) Central Training Facility in FY 1996
- RMTC Course Curriculum Completed (25 courses) in FY 2000
- RMTC courses 100% taught by Russian instructors in FY 2003
- Mobile Training Teams for site specific training established in FY 2004

ISTC Project



- **Goals**

- To establish, maintain, and control a standardized set of PP and PF training materials and methodology that is consistent with Russian regulatory requirements
- To evaluate PP/PF equipment and provide expert assessments to designers of PP systems at Russian nuclear sites
- Ensure availability of adequate training facilities to accommodate training of protective force personnel

- **Milestones**

- Presentation of First U.S. Funded PP Course in FY 1996
- Initial 'PP Inspection Practices' Course Presented to GAN in FY 1999
- Six (6) Physical Protection Courses Available in FY 2003
- First CD-Rom Course (PP Fundamentals) Distributed to Sites in FY 2003
- Accreditation as PP/PF Equipment Certification Testing Lab in FY 2004
- Two (2) Protective Force Courses Available in FY 2004



MinAtom Regional Training and Technical Support Project



- **Goals**

- Develop cost effective, self sustaining regional infrastructure to support MPC&A training and equipment technical support for nuclear material facilities that ensures sustainability of risk reduction activities
- Develop appropriate infrastructure to accommodate training and local technical support in the fields of MC&A, PP, and Protective Forces that is fully coordinated with the existing National Centers

- **Milestones**

- Completed assessment of GAN's training and technical support needs in the Urals and Siberian Regions
- Initiated assessments of training and technical support needs across the MinAtom nuclear material facility complex
- Implemented independent review of needs assessments prepared by GAN and MinAtom



Russian Federation (MOD) Kola Technical Center Project



- **Goals**

- Construct and furnish a comprehensive Russian Federation (MOD) technical center in the Kola Region
- Facilitate the establishment of technical support infrastructure in the Kola Region to ensure continuing effective system operability.
- Ensure a base establishment of infrastructure support for MPC&A systems that includes Warranties, Spare parts, Technical support, Maintenance (preventative and corrective), Performance Testing, Training Milestones

- **Milestones**

- Completed U.S./RFN training (functions) needs analysis and throughput to determine KTC facility needs in FY2001.
- Received Final KTC Design in FY2002.
- Commenced construction of KTC in FY 2003
- Initiated training program development in FY 2003
- Complete KTC construction and training program development in FY 2005



Summary



- Education and Training is the cornerstone of the critical infrastructure necessary for sustainability
- Cooperative U.S.-Russian projects ensure the availability of trained Russian personnel to sustain the MPC&A Upgrades.
- Optimal results achievable through enhancements to existing facilities and integration of training programs into existing training systems