

# National Progress Report: Kazakhstan

March 31, 2016

Since the 2014 Nuclear Security Summit, Kazakhstan has taken a set of practical steps in the strengthening of nuclear security, non-proliferation of nuclear weapons and peaceful use of atomic energy. Kazakhstan has undertaken all possible efforts on national, regional and international levels for the effective implementation of decisions made at the Nuclear Security Summits in Washington, Seoul and The Hague.

## **Strengthening Nuclear and Other Radioactive Material Security**

- The new edition of the Law on the Use of Atomic Energy was enforced in January 2016. The basic law of Kazakhstan in the sphere of peaceful use of atomic energy, in which principles of regulation of nuclear safety and security, protection of the environment and population are established. The Law prescribes further enhancement of the state system for control of radioactive materials and other sources of ionizing radiation. The definition of nuclear security is also provided in Law, together with basic requirements for a state system of nuclear security.
- Physical protection systems in the Institute of Nuclear Physics and Ulba Metallurgical Plant were upgraded. Radiation monitors were mounted on two customs control points with corresponding personnel training for these points.
- Several training courses in safeguards and nuclear forensics were conducted with support of the National Nuclear Security Administration of US DOE for Kazakhstan experts.
- In August 2015 in Astana, table-top exercises (TTE) were conducted on the security of rail-road transportation of nuclear and radioactive materials. In December 2015 Kazakhstan experts presented the TTE results and developed recommendations in the Tokyo seminar on security of air, maritime, road and rail-road transportation of nuclear and radioactive materials.
- In December 2015, construction of the Nuclear Security Training Center began in the Institute of Nuclear Physics in Almaty. The conceptual design of the Training Center was developed in collaboration with the Los Alamos National Laboratory, USA, in 2010-2011. The Center construction will be completed in October 2016.
- Kazakhstan together with IAEA, USA and Russia is developing training materials, course programmes, presentations, brochures and other necessary materials for courses on nuclear

security, physical protection, non-proliferation, control and accountancy of nuclear materials, etc.

- Further work is being done on the elimination of the legacy of nuclear tests on the territory of the former Semipalatinsk test site. In the frame of the programme “Global Nuclear Security” of the Defense Threat Reduction Agency of the US Defense Department, physical barriers and physical protection of some sensitive areas of the former test site were enhanced.
- *New regulations in the field of nuclear security will be developed and enforced reflecting provisions of the new Law on the Use of Atomic Energy and recommendations of the IAEA documents on nuclear security.*
- *IPPAS missions for peer evaluation of physical protection of nuclear facilities will be invited and recommendations of the missions will be implemented for nuclear facilities in Kazakhstan.*

### **Minimizing Nuclear and other Radioactive Materials**

- Atomic research reactor VVR-K and critical stand (zero power reactor) of the Institute of Nuclear Physics in Almaty are converted to low enriched uranium (LEU) fuel.
- All highly enriched uranium (HEU) from the Institute of Nuclear Physics in Almaty was downblended into LEU on the Ulba Metallurgical Plant.
- In support of the HEU-LEU conversion programme training seminars were conducted on technologies for the active core design of nuclear reactors. Workers of the National Nuclear Center of Kazakhstan took part in technical workshops in Idaho National Laboratory for consideration of further cooperation fields. In September 2015 in Kazakhstan, a Memorandum of Understanding was signed in which, inter alia, exchange of information on research reactors is defined as one possible cooperation field.
- With support of US DOE, spent fuel of BN-350 reactor of Mangistau Nuclear Power Combine, Aktau, was transferred for safe and secure storage in Kurchatov.
- Facility for sodium coolant processing was designed for BN-350 decommissioning programme, the facility will be commissioned in June 2016.
- Round Table on problems of minimization of use of HEU in civil cycle was conducted in Almaty in December 2015.
- *Kazakhstan will continue projects on transfer of research reactors IWGI.M and IGR from HEU fuel to LEU in National Nuclear Center in Kurchatov, Eastern Kazakhstan, and*

*implement the transition were it will be technically possible. Remove remaining HEU and HEU spent fuel from the research centers.*

- *Kazakhstan will facilitate the exploration of possible ways of minimizing use of HEU in the civil cycle, including production of radio-isotopes, where it will be technically possible. One of the main and important possibilities for encouraging the industry to use non-HEU technologies is the development and introduction of economic incentives.*

### **Countering Nuclear Smuggling**

- Export control system is implemented including strengthened interactions and coordination of involved state authorities and introduction of internal compliance control for main nuclear exporters.
- National Response Plan is being enforced in the field of nuclear activities including issues related to illicit trafficking and other illegal actions with involvement of nuclear and other radioactive materials and radiation sources. The Plan is enforced under the provisions of the new Law on Use of Atomic Energy.
- In the National Nuclear Center of Kazakhstan, the establishment of the Identification Center for Nuclear and Radioactive Materials began. The Center will develop a database with passports for all nuclear and radioactive sources fabricated in or imported to Kazakhstan by which the sources will be identified including in cases of possible illicit use or trafficking. Also, radioactive wastes will be accounted in the Identification Center with the aim of developing a strategy for radioactive waste management.
- *Kazakhstan will continue to strengthen export control system including internal compliance in companies exporting nuclear items. Implementation measures will be taken and training will be conducted for the National Response Plan.*

### **Supporting Multilateral Instruments**

- Kazakhstan joined and ratified practically all basic international conventions and agreements in the field of peaceful use of atomic energy. Kazakhstan ratified CPPNM and its Amendments, and we hope that the Amendments will be ratified by some other countries that will allow to enforce the Amendments. Adoption of the Amendments will be an important step in strengthening of nuclear security on national as well as on international global levels.

- *Continue outreach efforts in a frame of Central Asia Nuclear Weapon Free Zone. Kazakhstan together with member states of the Agreement on Central Asia Nuclear Weapons Free Zone will develop and adopt a multilateral agreement on cooperation in prevention of illegal trafficking of nuclear materials and combating of nuclear terrorism in the region of Central Asia.*
- *Kazakhstan will continue discussions with the International Atomic Energy Agency (IAEA), UN Office on Drugs and Crime (UNODC), UN Institute for Disarmament Research (UNIDIR), and UN Regional Centre for Preventive Diplomacy for Central Asia (UNRCCA). Adoption of such agreement will give an important input into the strengthening of nuclear security in the Central Asia region.*

### **Collaborating with International Organizations**

- *In August 2015, the Agreement with the IAEA was signed on establishment of the IAEA low-enriched uranium bank (IAEA LEU Bank). Also, technical agreements were signed between the IAEA and Kazakhstan Ministry of Energy on specific measures in implementation of the LEU Bank Agreement, and between the IAEA and Ulba Metallurgical Plant in Ust-Kamenogors, Eastern Kazakhstan, on the Bank Operator services. Practical work on establishment of the Bank began.*
- *Kazakhstan will finalize the construction of the LEU Bank storage facility in 2017, meeting all applicable safety standards of the IAEA for storage of LEU and nuclear security recommendations of the IAEA corresponding documents. In 2017 the IAEA LEU will be shipped for storage in Ulba Metallurgical Plant.*
- *Kazakhstan will strengthen cooperation with Interpol in the field of prevention and countering nuclear terrorism, smuggling, illicit trafficking and other illegal actions related to nuclear activities. Kazakhstan will take part in implementation of Action Plan in support of Interpol that is adopted on Nuclear Security Summit 2016.*
- *Kazakhstan supports the IAEA and underlines its leading role in the strengthening of global nuclear security, Kazakhstan will fully support implementation of activities included into the Action Plan in support of the IAEA.*

### **Partnering with External Stakeholders**

- Kazakhstan took part in all initiatives of the Global Partnership against Spread of Weapons and Materials of Mass Destruction (GP), and *will take all efforts in implementation of the Action Plan in support of GP.*
- Kazakhstan took part in all activities of the Global Initiative to Combat Nuclear Terrorism (GICNT), and *will make every effort in the implementation of the Action Plan in support of GICNT.*

Kazakhstan highly regards the comprehensive and fruitful work that was done during the Nuclear Security Summits. Good momentum is generated at the highest political level for further work on the strengthening of nuclear security and non-proliferation regime. Action Plans are adopted that form the basis for support of the necessary level of activities of the Nuclear Security Summit member states in the mentioned areas.

Kazakhstan commits its full support for implementation of the Summit objectives, continuation of work and efforts in support for strengthening nuclear security and nuclear weapon non-proliferation regime.