Country presentation

Kazakhstan

A.Kim – Atomic Energy Committee,
Republic of Kazakhstan
Main factors of nuclear activities influent to RW creation in Kazakhstan

- Uranium mining and milling industry, including geological exploration of uranium;
- Activity of the enterprises of mining and milling of commercial minerals containing radioactive elements;
- Nuclear explosions (about 500 atmospheric and underground explosions for military and peaceful purposes);
- Power and research reactors;
- Enterprises of nuclear fuel cycle;
- Use of radioisotopes in medicine, industry and scientific research.
Uranium mining and milling industry
Non-Uranium mining and milling industry
Fast breeder reactor  BN-350
Research Reactors

Reactor View from Reloading Machine Side

Reactor Control Room

11/30/2011
Nuclear explosions
Using of radioisotopes
Fuel fabrication plant
Storage facility “Baikal -1”
Kazakhstan Nuclear Installations

- BN-350 reactor
- Ulba metallurgical plant
- Impuls graphite reactor
- VVR-K research reactor
- Baikal-1” research reactors complex

Locations:
- Astana
- Almaty
- Kurchatov
- Ust-Kamenogorsk
- Aktau
• Legislation
• Regulatory body
• State system for regulation
Legislation

- Law on Atomic Energy Use (April 14, 1997)
- Law on licensing (January 11, 2007)
- Ecology code (January 9, 2007)
International Convention and agreements

Republic of Kazakhstan joined such international treaties and conventions:

• Treaty on the Non-Proliferation of Nuclear Weapons,
• Convention on Nuclear Safety,
• Convention on Physical Protection

Thus, Republic of Kazakhstan took obligation to execute the International requirements of safe atomic energy use.
Regulations

• **Norms of Radiation Safety (NRB-99)** developed in Russian Federation was accepted in 1999

• **Regulation for Safe Transport of Radioactive Materials** was elaborated on the base of IAEA Transport Regulation, 1996 Edition No. TS-R-1 (1 March 1999)

• **Basic Sanitary Rules on Radiation Safety Assurance** (2003)

• About 100 regulatory documents, including acts of the former Soviet Union and developed in Kazakhstan
Regulatory body

Kazakhstan Atomic Energy Committee (KAEC)

KAEC was established in September 1992 and is responsible for:

• Realization of State Policy in the field of safely atomic energy use.
• State control of nuclear, radioactive and special non-nuclear materials, dual-use goods. Providing Regime of Non Proliferation of Nuclear Weapons, nuclear and radiation safety during peaceful use of atomic energy
• Export and import control of nuclear materials, technologies, equipment, special non-nuclear materials, dual-use goods and equipment, radioactive sources and isotope goods.
• Development of acts, regulations, standards, rules in the field of atomic energy use.
• Licensing all types of activities in the field of atomic energy use.
• Providing and coordination of co-operation of Kazakhstan institutions with IAEA and other international organizations in the field of atomic energy use.
• Emergency preparedness.
KAEC Structure

Chairman

Deputy Chairman

Deputy Chairman

Licensing division

Supervision and analysis division

Nuclear security division
State Structure for Atomic Energy Use Regulations

• **The Ministry of Health** with its sanitary-epidemiological stations provides medical services necessary for protection of public and employees at risk. It is responsible in context of its competence for regulating and inspecting manufacture, use, storage, transport of nuclear materials and radioactive sources. It also carries out accounting for all radioactive sources and gives the permission to work with sources, renders the medical help to personal, which works with nuclear materials.

• **The Ministry of Environmental Protection** is responsible for protection of the environment against radioactive contamination. It co-ordinates a work on study of the radiation situation in Kazakhstan and executes the State ecological examination of projects.
Others Ministries and Departments of the Republic of Kazakhstan with their responsibility are following:

– **The Ministry of Industry and new technologies** is responsible for coordination of all activity in the field of atomic energy use.

– **The Ministry of Internal Affairs** verifies and physical protection standards of all facilities which use atomic energy or in which radioactive wastes are managed.

– **The Ministry of Emergency Situations** is responsible for monitoring of compliance with measures on prevention of emergency situation and sets out measures to protect public against radiation exposure in the event of such situation. Industrial Safety Committee is responsible for regulation of industrial equipment in Industry and Mines.
State Structure for Atomic Energy Use Regulations

- PRESIDENT
  - PARLIAMENT
  - GOVERNMENT
    - Ministry of Environmental Protection
    - Ministry of Health
    - Ministry of industry and new technologies
    - Ministry of Emergency Situation
    - Other ...

- Atomic Energy Committee
  - Sanitary Epidemiology Service
  - Industrial Safety Committee

- Other Organizations:
  - Hydromet
  - National Nuclear Centre
  - National Atomic Company Kazatomprom
  - JSC Volkovgeology
  - Branch Laboratories
Authorization.

KAEC provides authorization by means of licensing.

- There is a list of basic requirements for different types of activity.
- The licenses are issuing without time limit, but conditions for validity are limited.
- License is valid for detailed types of activity. Each license has some juridical limits and conditions, which should be fulfilled by the company. (emergency procedures, changes in staff, annual reports and etc).
- All data on types of activity, date and number of a license issue, full address and contact details, some other records, reports are kept in computerized database of the KAEC, and as hard copies.
During the period 1998-2009 more 2000 licenses were issued.
Inspections

- KAEC provides inspections for all types of nuclear activity. Inspections plan includes number of inspections, list of organizations and list of inspectors. As results of inspection a report on observations should be prepared. This document should include status of radiation safety, some measurements, list of remarks and violations, etc. Report on inspection implementation and main conclusions is sent for approval to Deputy Chairman.

- **Enforcement.** In accordance with the Law of Licensing KAEC has power to stop or cancel any license, if company violates conditions of license, rules, or if a company hides some data or gives incorrect data. During last 4 years there were stopped 10 licenses. Duration of stopping is maximum 6 months. If a company does not eliminate, license will be cancelled through special legal procedures in a court.
Activity on modernization of legal documents

During 2009-2010 were elaborated drafts of:

• New version of Law on atomic energy use
• New version of Regulation for licensing in the field of atomic energy use
• Regulation for Nuclear and radiation Safety
• Regulation for NPP safety
• Regulation for Research reactors safety
Cont.

• New version of Regulation for Safe Transport of Radioactive Materials
• Regulation on Physical protection of nuclear materials and installations
• Regulation on preparation of QA program for PP nuclear entities
• Regulation on preparation of QA program for A&C of nuclear materials and radiation sources
• Regulation on emergency response during transportation of NM
Cont.

Now above mentioned drafts are under procedures of implementation.

We plan to elaborate and implement 25 new regulatory documents in atomic sphere for period of 2010-2013.
Nearly plan in the field of RW Management

To elaborate:
– Criteria and hygiene standards for rehabilitation of territories contaminated with radionuclides
– Regulations for radiation safety of personnel and population who will use rehabilitated territories, buildings etc.
To prepare:

– proposals for elaboration of National strategy on Radioactive waste management which should include appropriate technologies, RW categorization and criteria for RW disposal.

– Proposals for new classification of RW in accordance with international practice.

– Draft of RW disposal regulation for each category.
Thank you for your attention!