



Regulatory Support Program in Central Asia. Progress and new bilateral project with the State Inspectorate on Safety in Industry and Mining of Republic of Uzbekistan.

A meeting of the regional regulatory support program in Central Asia (CA) was held in May 25-26th, 2011 in Tashkent, Uzbekistan, where parties discussed ongoing bilateral cooperation between the NRPA and the regulatory bodies of Kazakhstan, Kirgizstan and Tajikistan.

The Regulatory Authority of Uzbekistan (SISIM) joined this ongoing regional program in September 2010. NRPA will assist SISIM in development of standards and regulations on radioactive waste management from uranium mining and milling industry in Uzbekistan.



A sign welcomes visitors upon arrival in Yangiobod, Uzbekistan with the message: "Be Glorious, Tribe of Miners"
(Source –Google)

Introduction

The program was started with technical input contributed by the Norwegian University of Life Sciences (UMB) and was further developed by the NRPA as a regional regulatory support program to Kazakhstan, Kirgizstan and Tajikistan in 2008 with the support of the Norwegian Ministry of Foreign Affairs.

The overall objective of the program is to assist the relevant regulatory authorities in the above mentioned countries to develop national effective and efficient regulations and procedures, taking account of international guidance and other good practice and experience with initial focus on regulatory supervision of uranium mining and ore processing facilities. The main activities within the program include: identification of priority areas for regulatory development, based on the status of

current regulatory documents, international recommendations and guidance, and the hazard presented by the different sites and facilities; assistance in development of national radioactive waste management strategies in each country; development of an enhanced regulatory framework for supervision of protection of workers, the public and the environment in relation to nuclear matters; establishment of technical requirements for systematic radiation monitoring around the radioactive waste management facilities; and promotion of an enhanced safety culture.

Progress

An analysis of the existing regulatory documents in Kazakhstan, Kirgizstan and Tajikistan which was completed by the end of 2010 revealed more

problems in addition to those described within the framework of our ongoing project.

In regard to the legal and regulatory framework, it should be noted that in some CA countries there is no proper National Policy and Strategy for Radioactive Waste Management developed and approved by their Governments. The current documents do not address the issues regarding safety assessments and safety cases or the implementation of long-term institutional control and monitoring of the abandoned dumps with radioactive wastes (RW) or future RW disposal sites, neither during operation nor after their closure. There is also a need to develop safety criteria (reference levels) and determine measures to be taken for existing exposure situations (past practices). In addition, there is a lack of safety requirements for different types of disposal facilities in accordance with the different categories of radioactive waste. Safety criteria and clearance levels are also not established. The main challenges, as seen from the NRPA perspective, include:

- Insufficient information on radioactive waste inventories
- Complexity of range of uses of radioactive material and extent of mining and ore processing activities
- Multiple hazards: radiological, chemical and physical
- Facilities and sites that have been left abandoned or not maintained properly
- Relevant national institutional arrangements for supervision are lacking, or have only just begun implementation
- Lack of technical and financial resources
- Internal support is not fully coordinated within the national strategies in each country
- Cross-border regional problems related to the former uranium facilities in CA
- Varied public and social attitude towards the legacy sites
- Shortage of state-of-the-art equipment and machines.

To date, within the NRPA regulatory support program the following regulatory documents have been or are being developed by the regulatory authorities in each country:

- Proposal for new radioactive waste classification in Kazakhstan (developed)
- Proposal to establish the new major criteria for RW disposal in Kazakhstan (developed)
- Draft Regulatory Document “Rules for Radioactive Waste Disposal in the Republic of Kazakhstan” (developed)
- New regulatory guidance document on management of radioactive sources in Kirgizstan (in process)
- Establishment of the technical requirements for a systematic radiation monitoring scheme around the radioactive waste tailings dumps in Kirgizstan (in process)
- Development of regulatory criteria in the field of radiation safety of personnel, population and environment for radioactive waste management in relation to the uranium industry, in accordance with international recommendations in Kirgizstan (developed)
- Law on Radioactive Management in Tajikistan (developed)
- Rules on Radioactive Waste Management in Tajikistan (developed)
- Establishment of the technical requirements for a systematic radiation monitoring scheme around the radioactive waste tailings dumps in Tajikistan (in process)

For more details we refer to the NRPA report “Threat Assessment Report. Regulatory Aspects of the Remediation and Rehabilitation of Nuclear Legacy in Kazakhstan, Kyrgyzstan and Tajikistan” (StrålevernRapport 2011:5)” which gives an extensive overview of the regulatory situation in each CA country. Procedures and other factors are described that could affect the regulatory body to be more efficient.



During the progress meeting in Tashkent, Uzbekistan (Source –Institute of Nuclear Physics, Uzbekistan)

New project with a regulatory authority of Uzbekistan

In September 2010, NRPA signed a new contract with SISIM regulatory body of Uzbekistan on the "Support in Development of Standards and Regulations on Radioactive Waste Management and Long-Term Monitoring in Uzbekistan". The regulatory authorities of CA countries and their technical support organizations (TSO), UMB and NRPA also participated in the meeting. Uzbekistan is CA country and shares not only the borders with Kazakhstan, Kirgizstan and Tajikistan but also common problems in radioactive waste management at legacy sites in former Soviet Union countries.

For more than 40 years the Republic of Uzbekistan was one of the major ore bases for the uranium industry in the territory of the former USSR. Many large uranium deposits with a relatively high uranium content which, sometimes reaching 12.8-18.3%, were discovered in the region of junction of the Syr-Darya and the Amu-Darya rivers. On the whole, the main explored uranium deposits in the republic are located in the vicinity of towns like Uchkuduk, Zarafshan, Zafarabad, Nurabad, Angren, Charkesar, and Krasnogorsk.

During intensive mining the ore was extracted, sorted and then sent for processing to the shops of the Navoi Mining-and-Metallurgical Combine in the town of Navoi (the Republic of Uzbekistan) and the Leninabad Mining-and-Chemical Combine (at present – SE "Vostokredmet") in the town of Khudjand, the Republic of Tajikistan. The

significant part of wastes generated as a result of extraction and sorting was stored on the sites of the mines, particularly, on the slopes of the river valley from Yangiabad to Angren.

In Uzbekistan former uranium production facilities were often simply abandoned, without taking any security measures or left unattended after the insufficient measures for their closure and currently, there are no national regulations for the protection of personnel, population and environment during the work with radioactive waste from uranium production in Uzbekistan.

The current normative documentation on radioactive waste management at the uranium tailing dumps in the Republic of Uzbekistan is supposed to be brought to the compliance with the international rules and requirements having in mind its own National strategy and local conditions. So the regulatory documents can be used by the government of the republic to provide safety of personnel, the public and the environment.

Project objectives

The SISIM is the Uzbek regulatory body in the field of radiation and nuclear safety.

The purpose of the project is to provide assistance to the SISIM for the safety in industry, mining and public utility sector of the Republic of Uzbekistan in the following way:

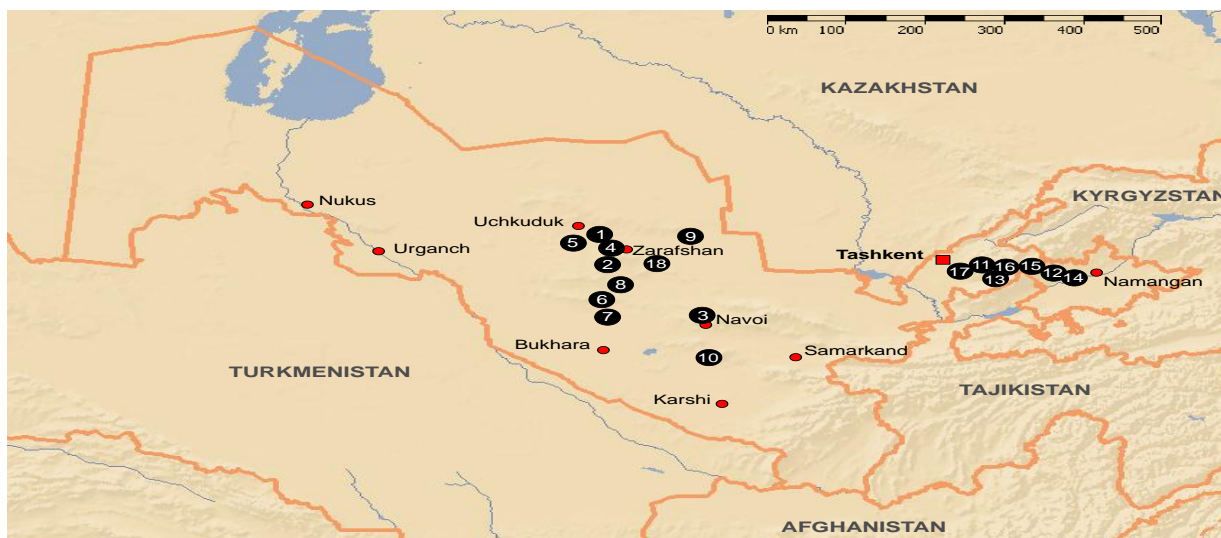
- Development of regulatory requirements and rules on protection of personnel, the public and the environment in planning and

performance of operations with radioactive wastes;

- consolidation of the infrastructure of the regulatory body of the Republic of Uzbekistan for radiological protection of personnel, the public and the environment

in radioactive waste management at the tailing dumps of the uranium industry.

The work within the Project framework will cover both the contaminated territories of the Republic of Uzbekistan and the boundary regions, which plays an important role in safety of radioactive waste, radiological material and equipment of high risk in all the regions of Central Asia.



The uranium industrial facilities in the Republic of Uzbekistan. (Source-Institute of Nuclear Physics, Uzbekistan)

Future developments

The current phase of the bilateral projects with Kazakhstan, Kirgizstan and Tajikistan is due to be completed in 2011 and in 2013 for Uzbekistan. Many countries in other parts of the world have nuclear legacy issues, and the IAEA has set up an International Working Forum on Regulatory Supervision of Legacy Sites (RSLs) where NRPA was not only the initiator and active participant but is also the RSLs chair. The overall objective of the RSLs is to promote effective and efficient regulatory supervision of legacy sites, consistent with the IAEA Fundamental Principles, Safety Standards and good international practices. The RSLs will assist Member States in deriving practical applications of generic radiation protection guidance to legacy sites. This will help identify the needs for further development of international guidance specific to legacy sites. The scope of RSLs activities covers support in development of effective and efficient regulatory processes, such as: regulatory requirements and guidance development, licensing and authorisation,

inspection, compliance monitoring and enforcement. The RSLs will compile lessons learned from past experience with legacy site remediation and provide recommendations as to what constitutes good practice for regulatory supervision of legacy sites.

A number of regulatory problems and gaps being revealed during the threat assessment process in each CA country need to be addressed in fulfilling the overall aims of the regional regulatory support program. It is hoped that regulatory cooperation with CA countries will continue also making use of regionally relevant technical support from Russian experts which are part of wider NRPA regulatory cooperation that can provide useful input to RSLs activities.