

# Regulatory Supervision of Legacy Sites in Central Asia

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# Norwegian Policy and Role of NRPA

- A global issue being addressed through international cooperation – experience from NW Russia
- Legacy management requires a responsible approach to environmental and human health protection, avoiding short term measures which create new legacies
- Significant part of legacy management is radiation protection and nuclear safety
- Strong independent regulatory supervision is crucial to delivery of safety and confidence in the whole process
- Western support needs to include a proportionate level of support to regulators, not just operators



# Role of International Guidance and Recommendations

- IAEA Safety Fundamentals and Basic Safety Standards provides the over-arching basis for safety and radiation protection supervision
- More specific IAEA documents provide guidance on how to address particular topics
- These documents need interpretation at the national level, so as to take account of national regulatory frameworks, details of technology application, geographic factors and other matters

# Central Asian challenges

- Significant nuclear operations and activities during the Soviet Union period in the republics of Kazakhstan, Kyrgyzstan and Tajikistan
- Nuclear weapons test site in Semipalatinsk, Kazakhstan (more than 450 explosions)
- Large areas contaminated with mill tailings after mining of uranium
  - Tajikistan, 3 km<sup>2</sup>
  - Kyrgyzstan, 6.5 km<sup>2</sup>
  - Kazakhstan, 2.5 km<sup>2</sup>
- Peaceful use of atomic energy and radioactive materials



# Regulatory Challenges

- The regulatory authorities in all Central Asian countries were established comparatively recently and need extensive training and support in maintaining the problems with radioactive waste management and safety standards especially related to the remediation of the contaminated areas.
- All the countries are facing a deficiency in specialists in the field of radiation protection, radiation monitoring of environment, radiation and nuclear safety assessment of remediation sites.
- Interactions at the technical level between relevant organizations do take place, but the structures under which they occur are not very modern and flexible.
- The process for local, regional and federal coordination could be more effective.







5000 мкр/час

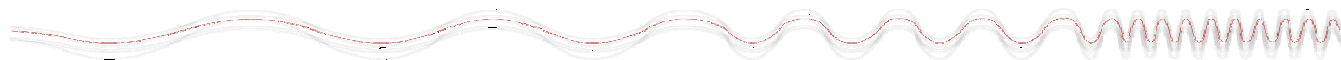
# NRPA Regulatory Cooperation Experience

- The NRPA has enjoyed a very positive experience developing regulatory cooperation with Russian Federation authorities
- Institutional and geographical similarities with Central Asian countries
- Logistically convenient to apply the good experience Russia to neighbouring countries
- *But* - the technical legacies are not exactly the same!



# More than Just Meeting Dose Limits

- Dose constraints and radiological optimisation are dependent on local situations
- Radiation and radioactive materials are important, but there are other pernicious pollutants and environmental issues to consider
- Limited financial and other resources to manage the legacy, influence of social, cultural and other factors
- Strong and clear system of norms, standards and related regulatory process provides basis for environmental, health and safety management *BUT* must be flexible enough
  - to allow for local and regional factors
  - effective interface with wider decision making process







# General Objectives

- Efficient and effective regulatory supervision of nuclear legacy projects, to protect western investments in nuclear legacy management
- Integrated coverage of nuclear and radiation safety, comprising:
  - worker and public safety;
  - environmental and human health protection and monitoring;
  - normal and accident conditions;
  - emergency preparedness and response;
  - addressing high risk issues arising from nuclear legacies, *but, at the same time,*
  - addressing longer term management, site remediation and waste storage and disposal, so as not to prejudice safety in the future, thereby avoiding the creation of new legacies



# What will be Achieved?

- NRPA intends to support the regulatory authorities develop the tools which they need to carry out their responsibilities:
  - updated Norms and Regulations and regulatory guidance which account for international requirements and recommendations, as well as other relevant national good practice
  - development of effective and efficient regulatory procedures for licensing and compliance monitoring
- Specific deliverables have to contribute to effective and timely regulatory supervision of industrial projects, which now proceed in conformance with the national legal frameworks, taking into account international recommendations and other good practice and experience

# How will it be Achieved?

The NRPA strategy is to start with addressing:

- real regulatory problems related to specific industrial projects, which need to be addressed in order for legacy management projects to proceed under relevant and effective supervision
- hard work, patience, tenacity and perseverance from all concerned are necessary,
- but the most important factor is effective communication, particularly:
  - listening to the real needs of Central Asian colleagues
  - responding robustly within the limits on resources and other practical factors



# International Working Forum for Regulatory Supervision of Legacy Sites

- To promote high standards of regulatory supervision for the management of legacy sites, in line with the IAEA Safety Standards and good international practices
- To be achieved through:
  - collection and collation of information on nuclear legacy sites, the historical experience of legacy supervision;
  - exchange of information on nuclear legacy site restoration plans, the role of regulatory supervision in planning activities;
  - the generation of mutual support through presentation and discussion on how regulatory supervision can be made effective and efficient
- The IAEA is providing the secretariat for the forum and I encourage relevant regulatory authorities to participate.