

Regulatory Support - Russian regulators meet their British counterparts

The Norwegian Radiation Protection Authority (NRPA) and NATO recently funded a tour for ten Russian experts from the Federal Medical-Biological Agency (FMBA) and the Russian State Research Center – Institute of Biophysics (SRC-IBPh) to meet up with regulators at nuclear related sites in the United Kingdom. The purpose of this regulatory support project is to help develop standards and procedures that clarify licensing requirements for activities involving radioactive waste (RW) and spent fuel (SNF), as well as the remediation of nuclear sites in Russia. The aims include providing guidance about radiation and environmental protection objectives, as well as the contents of safety assessments and different approaches to demonstrating regulatory compliance. The existing regulatory framework has been examined for Andreyev Bay and Gremikha and additional necessary regulatory documents have been identified that will now be developed. Co-operation with international experts is helping promote an approach to international standards where regulatory development is considered desirable and necessary.



Russian experts together with NRPA and UK representatives at Dounreay site

(Photo: UKAEA Dounreay)

16
06



Russian and NRPA experts visiting HPA in Chilton, UK.

Photo: NRPA

Three collaborative NRPA–FMBA projects are being carried out within the Regulatory Support Project (RPS) concerning the Federal Enterprise SevRAO shore technical bases (STB) at Andreyev Bay and Gremikha, close to the Norwegian border. One of the aims is to provide the opportunity for staff of Russian regulatory bodies and their technical advisors to make working visits to their counterparts in other countries to allow exchange of experience in the development and implementation of regulatory processes for a variety of situations, particularly issues faced at Andreyev Bay and Gremikha, such as the safe management of decommissioning facilities and contaminated sites.

The following organizations were visited:

- **Radiation Safety Department of the Health Protection Agency (HPA)**, which is a UK governmental advisory organization developing regulatory documents and providing technical support to the industry on a contractual basis;
- **Nuclear Installation Inspectorate (NII) of Health & Safety Executive**, which is the body surveying nuclear and radiation

safety in the UK atomic industry and nuclear power facilities including the licensing of sites;

- **Environment Agency (EA)**, which is the regulator in England and Wales for radioactive materials and waste management;
- **Scottish Environment Protection Agency (SEPA)**, which is the Scottish national regulator for radioactive materials and waste management;
- **British Nuclear Group (BNG) and UK Atomic Energy Authority (UKAEA)** at Sellafield, Windscale and the research site at Dounreay, which are now at different stages of fuel cycle operations, decommissioning and site rehabilitation.

The visits were all very successful with lively discussion and a clear interest from all parties to find out about each others practices and share information. Similarities in the Russian and UK regulative systems were found.

- In both countries, the governmental policy regarding the disposal of solid radioactive waste is not yet fully elaborated.

- Both in Russia and in the UK, a single radiation protection, nuclear waste, nuclear security and nuclear safety regulator does not exist. This creates a requirement for good coordination of activities within the different areas of responsibility.
- Standards for the impact of radiation in the environment are under development in both the UK and Russia.

There were also several differences in the regulatory systems, as expected. These included:

- Regulatory documents are based on international recommendations in both countries. However, Russia tends to follow IAEA recommendations and the UK follows EC directives based on IAEA. Detailed interpretation at the national level may vary, according to local conditions.
- The environment agencies in the UK are responsible for establishing permissible radioactive discharges on a similar basis to that in Russia. There are separate agencies for Scotland, and for England and Wales, which means that an operator who works in Scotland and England may have to deal with two regulators concerning one issue.
- Control of doses to radiation workers is also managed on the same radiation protection basis, but in the UK there is a significant emphasis on optimization and flexibility in operation rather than prescriptive control at the design stage. In Russia, the regulators also have responsibility for epidemiological studies.

Medical assistance for radiation workers is provided by the general healthcare system in the UK, excluding annual medical examinations; these functions are the responsibility of the specialized authority (FMBA) in Russia.



Meeting at SEPA

Photo: NRPA

Regulatory requirements in the UK are defined generally; the development of specific documents and measures to show compliance with regulations is the responsibility of the operator for each activity.

The regulators then issue licenses and authorizations if they agree that compliance has been demonstrated. There will normally be conditions to these permits, and continuing regulatory inspection and observation are important parts of the interaction between operator and regulator.

In Russia, the surveillance functions are based upon the concept of revealing incompatibilities between chosen safety measures and the regulatory documents in force.

- In the UK, a lot of attention is given to interaction with different stakeholders who may have an interest in decisions made regarding the nuclear industry enterprises.

Conclusions

- The NATO funding of this aspect of the NRPA Regulatory Support Project has provided the opportunity for Russian specialists to gain knowledge and experience of radiation safety regulation in the UK and has helped reveal possible directions for the improvement of radiation safety at SevRAO enterprises.



The last bus stop, after 14 days of travelling Photo: NRPA

- When developing regulatory documents for SevRAO, experience from the UK about decommissioning regulations of facilities accounting for changes in design technology should be taken into account. The subdivision of the decommissioning process into specific stages is very important.

Each new stage should be initiated after analysis of the previous stage measures and results and after a review of regulatory documents for the next stage.

According to UK specialists' experience, it is convenient to address very low level radioactive waste (VLLW) separate from other LLW to increase the efficiency of radioactive waste management at SevRAO enterprises; a separate manual should be prepared for its disposal, monitoring and assessment of the upper limit on VLLW inventory.

This is the first time that representatives from Russian and British nuclear regulatory authorities have met to informally share experience and discuss their respective approaches to regulating activities involving RW, SNF and remediation of nuclear sites. The response from British staff at all involved parties was that the visit offered a unique opportunity for Russian regulators to visit colleagues at nuclear regulatory, research and industrial establishments in the UK and to openly discuss the challenges for nuclear regulators faced in both countries.



At the entrance to Dounreay site Photo: NRPA