

MINUTES OF THE IAEA CONTACT EXPERT GROUP WORKSHOP Problems of Decommissioning Radioisotope Thermoelectric Generators

23-25 April 2008, Moscow, Russian Federation

The workshop of the IAEA Contact Expert Group (CEG) was held by the decision of the 21st CEG plenary meeting (September 2007, Bruges, Belgium). The Russian Research Centre "Kurchatov Institute" and the CEG Secretariat organized the meeting with the financial support provided by the US Department of Energy.

The CEG workshop was attended by representatives from eight countries: Canada, Finland, France, Germany, Norway, the Russian Federation, United Kingdom, and United States of America.

This was the second CEG workshop on RTGs (the first was held in 2005 in Oslo). Since then international cooperation in implementing specific projects for decommissioning RTGs has gained momentum. In 2007 a comprehensive Master Plan for RTG decommissioning in Russia was developed by Russian experts under Canadian funding and presented at the 21-st CEG Meeting. Using this Master Plan Russian experts together with the US and Canadian colleagues produced an Action Plan in order to support the development and coordination of future projects in the Russian Federation. This Action Plan is offered to the CEG members for their comments before its adoption.

Objective and tasks

The objective of this CEG workshop was to analyse all aspects of RTG decommissioning, discuss in detail first priority tasks required for implementation of the Master Plan, evaluate possible solutions and future plans in order to develop international cooperation to eliminate the potential threat of proliferation of radioactive materials and danger to the environment posed by RTGs.

The tasks of the workshop were to:

- present information on the current state of operation and decommissioning RTGs in Russia, as well as present the Master Plan for decommissioning RTGs;
- present the Russian approaches for RTG dismantlement and discuss the Russian position on disposal of Radiation Sources from RTGs;
- share lessons learned from already implemented international projects on RTG decommissioning and share experience in application of different alternative technologies for RTG replacement;
- report on IAEA activities on securing RTGs and other sealed high-activity sources in the republics of the former Soviet Union;
- overview the Russian regulatory practices as applied to RTG operation and decommissioning;
- discuss further plans of international donors to assist Russia and specific proposals for future cooperation projects for RTG decommissioning;
- discuss specific proposals for future joint projects based on the presented information.

The workshop made the following assessments and recommendations:

The participants noted:

- Importance and significance of the work on decommissioning RTGs of the Russian Federation in order to reduce potential radiation hazard induced by the sources of ionizing radiation.
- Expediency of urgent completion of decommissioning and disposal of all RTGs in the Russian Federation, and more active participation of foreign donors in solving this problem.
- Necessity to prepare a new draft Action Plan to implement the Master Plan which will allow defining the ways and terms of completion of work on decommissioning and disposal of all RTGs in the Russian Federation.

The Russian side appreciated the significant contribution of the USA and Norway to RTG decommissioning, as well as of Canada and France working in the framework of the US and Norwegian programmes. It is due to financial support of these countries that about three hundred Russian RTGs have been decommissioned to date, and hundreds are planned for decommissioning.

However the progress of RTG decommissioning in Russia is very uneven geographically. The North European region is leading due to the extensive Norwegian assistance programme; significant progress has been achieved in the Far East where the US assistance is rendered. The Baltic Sea region and Northern Sea Route are lagging behind which is explained by the insufficient Russian funding and limited international assistance in the regions. Therefore, it is expedient to draw attention of the Baltic states, Scandinavia, CEG members, as well as the Russian side to the need of jointly solving problems in these regions. It was noted that to insure safe operation of the Baltic region RTGs the US had provided funding to alarm all of them.

The CEG members will further discuss the issue of rendering international technical assistance to Russia in order to create the infrastructure for RTG dismantlement and disposition. Several options are possible and the Russian side should confirm its priorities concerning the place of dismantlement of RTGs, especially from the Far East.

The US side stated their willingness to accept into their programme international contributions for RTG recoveries. In this respect the US is committed to provide all project management costs free of charge to the donor country. This will allow for donors to immediately begin RTG recovery efforts using existing US-Russia relations. This proposal is fully compatible with the development of bilateral cooperation.

The workshop participants paid attention to the importance of urgently solving the problem of the Antarctica RTG removal and disposal, as well as the necessity of international assistance. There is a need of an exact inventory of RTGs located there and selection of the optimal solution to remove them. A representative of IAEA expressed his willingness to advise on

solutions of international problems related to transportation of these RTGs. The US side also expressed interest to further consider the above work.

RTG Coordination Group

CEG made a proposal to establish an international coordination group for exchange of information and steering activities on RTG decommissioning and replacement in the Russian Federation. This group should be headed by Rosatom and include Russian organizations involved in the process of RTGs decommissioning, as well as representatives of donor countries.

This group could:

- help to coordinate long term plans for RTG decommissioning and disposal, ensuring that there are no gaps or overlaps between the ongoing and planned activities;
- review proposals of new drafts of the Action Plan to implement the Master Plan that was developed earlier taking into consideration the latest works carried out on RTG decommissioning, including possible new approaches;
- issue recommendations for work optimization at different stages of RTG decommissioning, as well as agree new technical solutions.

CEG executive secretary will assist in creation of the group.

The CD with all the papers and presentations of the workshop will be forwarded to the CEG members. Its proceedings will be placed on the CEG web-site. The workshop recommendations will be reported at the next plenary meeting of CEG.

The participants expressed their gratitude to the speakers for the high quality of their presentations which led to useful discussions and adoption of recommendations. The participants were grateful to the organizers – RRC “Kurchatov Institute”, CEG Secretary, as well as to the US DOE as the sponsor of the workshop.