

RECORD OF THE CEG WORKSHOP
Nuclear Legacy Problems in the Far East of Russia
23-25 May 2007, Vladivostok, Russian Federation

The workshop of the IAEA Contact Expert Group (CEG), organised according to the decision of the 20th CEG meeting (October 2006, Munich, Germany), was prepared by Zvezda shipyard in cooperation with Rosatom and the CEG Secretariat. Financial support was provided by Japan.

The CEG workshop was attended by representatives from seven countries: Canada, France, Italy, Russian Federation, United Kingdom, United States of America, Japan, and European Commission.

The workshop covered the following major areas:

- Dismantlement of nuclear powered submarines (NPS), retired from the Russian Navy,
- Construction of the long-term storage facility for reactor compartments (RC) of dismantled submarines and the RC transportation,
- Dismantlement of nuclear powered surface vessels and nuclear service ships (NSS),
- Management of spent nuclear fuel (SNF) and radioactive waste (RW), and remediation of regional SNF and RW storage facilities,
- Decommissioning of radioisotope thermoelectric generators (RTG) and their replacement by alternative power sources,
- other regional nuclear legacy problems.

A number of presentations on each of the major areas have been given by the Russian side and by foreign Donors. It is agreed that this open sharing of information has contributed towards planning environment necessary to contribute the resolution of the nuclear legacy problems in the Russian Far East.

After detailed discussion the CEG workshop made the following observations and recommendations.

1. Dismantlement of nuclear submarines

Dismantlement of NPS retired from the Navy still a major problem in the Region, especially NPS located at Kamchatka. Some of these submarines will have to be transferred to Primorsky Territory for de-fuelling and dismantlement; a complex and expensive task. Efforts and plans of Governments of USA, Japan, Australia, Republic of Korea and Canada to assist solution of the NPS dismantlement problem are highly appreciated. Lessons learned from the projects in progress in North West Russia are of great interest for increasing the efficiency and conduct of Far East projects although this region presents numerous specific constrains.

Another complicated task is handling of three submarines that experienced severe accidents more than 20 years ago. The CEG workshop noted resolution of NPS 541 is in hand and good progress is evident on the development of approach to safe isolation of NPS 175 and 670. Since these submarines pose serious environmental hazard to the whole Far Eastern Region, it is necessary to speed up resolution of this problem. International assistance to this work is still required. It could be realised in participation in engineering studies and design

activities, in funding of NPS preparation to long-term storage and construction of the shelter facility, and also in supply of required equipment, including radiation monitoring and physical protection.

The conference noted that the main objective of G8 global partnership is to increase the world's global security and safety and these objectives must always be present in project proposals for international Global Partnership funding.

2. Dismantlement of nuclear powered surface vessels and nuclear service ships

Dismantlement of nuclear service ships poses significant environmental threat. Many of them are seriously contaminated with radio-nuclides, radioactive waste is stored on board and their technical state in many cases requires urgent measures for isolation and storage. For the final NSS dismantlement it is necessary to establish a regional centre for RW management and long-term storage. Activities of the Russian side on construction of such a centre are highly supported by the workshop. International assistance for establishment of the regional centre could greatly speed up resolution of the NSS remediation problem.

3. SNF and RW management

The workshop noted that accumulation of SNF takes place at Zvezda shipyard, and this SNF is not possible to remove until upgrading of the section of the rail road is done. Upgrading of the rail road section will allow transporting SNF out of the Region and reducing the level of nuclear and radiation hazard. In this respect the project on reconstruction of the rail road is considered vital to NPS and SNF remediation in the region. Foreign Donors are requested to consider the possibility to participate in funding this project.

Russian activities on remediation of SNF and RW storage sites have been recognised as timely and important for improvement of security and safety of radioactive and nuclear materials. International assistance on enhancement of physical protection of sites and SNF and RW management could substantially improve the current situation.

Exchange of experience on the similar works conducted in the North West Region of Russia was found to be highly valuable and useful. In this regard the construction of the regional storage for reactor compartment units by Russia is to be applauded and it is hoped that a regional centre for RW management and storage will also be taken. Establishment of such centre is recognised as one of the most important works for the Pacific region. International assistance to this project would speed its implementation leading to the resolution of many regional RW problems.

4. RTG decommissioning

CEG workshop supports activities of the Russian Federation and foreign Donors (USA, Norway, France and Canada) on RTG dismantlement and replacement on alternative power sources. The workshop also recognised that this work is especially important in the Far East Region. The Russian approach on consolidation of RTGs in the temporary storage facilities is fully supported because this actions lead to a relatively rapid reduction of the security risk caused by the RTG operations. Construction of the centre for RTG handling and conditioning of radioactive sources was also supported and it was noted that the PA Mayak option was the preferred Russian approach. Taking into consideration the importance of these activities in terms of security enhancement of the radioactive materials the workshop asked the CEG members to allocate additional resources in order to speed up the RTG dismantlement. Canadian support to development of the Master Plan for RTG management was recognised as

timely and efficient. In order to coordinate activities of all Donors on the RTG dismantlement in the Russian Federation it is expedient to facilitate the work of a RTG international coordination group.

5. Regional issues

Russian proposals on establishment of the regional radiation monitoring and accident response system are supported by the workshop but there may also be some benefit to looking at an international element or extension to such a system in the Pacific region.

The workshop supports proposal of the Russian side on development of the Strategic Master Plan for the whole Far East Region using some facets of the NDEP generated SMP. This Far East SMP plan should identify the highest priority projects based on the potential hazard and risk of radiation impact on the environment, take into consideration the work that already has been done and that is being implemented both under the Russian funding and under the international assistance, give specific recommendations to the Russian authorities and to the Donors' decision makers on the implementation schedules and the scope of the funding required.

In conclusion the CEG workshop noted the intended and actual support of the Donor countries to the substantial Russian effort to manage its nuclear legacy problems in the Far East Region of Russia. The workshop recognised that it is important that the international community pay more attention to the problems of the Far East Region and to expand all kinds of cooperation with Russia in the new security environment of 2007.

The CEG extends its gratitude to the Japan-Russia Committee on Cooperation in Elimination of the Disarmed Nuclear Weapons in the Russian Federation for financial support of the workshop. In closing on behalf of all attendees we pass our sincere thanks to Zvezda shipyard and other Russian organisations for preparation of an excellent CEG workshop that we believe marks a turning point in remediation activity in the region.