

**RECORD OF THE CEG WORKSHOP
ON REMEDIATION OF THE GREMIKHA SITE
29-31 October 2003, Cadarache, France**

The workshop of the IAEA Contact Expert Group (CEG) was organised according to decision of the 16th CEG meeting (April 2003, The Hague). The workshop was organised by the Commissariat À L'Énergie Atomique (CEA), France and the CEG Secretariat in close cooperation with Minatom of Russia.

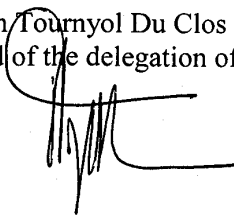
The CEG workshop was attended by representatives from 6 countries: France, Germany, Norway, Russian Federation, Sweden, United States of America, European Commission and European Bank for Reconstruction and Development. During the workshop the Russian side presented general concept for remediation of the Gremikha site, detailed information on status of different facilities at Gremikha, inventories of spent nuclear fuel (SNF) and radioactive waste (RW) stored on site, general radiation situation there, and major problems related to management of SNF and RW at the Gremikha site. Proposals for new cooperative projects to improve the nuclear and environmental safety at the site were presented by the Russian delegation and discussed by the workshop. French side presented available techniques and experience in tackling the similar problems, and its views on general approach on remediation of the Gremikha site and arranged technical visits to several nuclear facilities at the Cadarache Nuclear Center. Brief overview of experience of the SKB International and RWE NUKEM was given as well.

As a result of discussions of the presentations made the following conclusions were drawn by the CEG workshop:

1. Environmental remediation of the Gremikha facilities is one of the major tasks to be solved under the Comprehensive Programme on dismantling of nuclear submarines, nuclear powered surface vessels and remediation of radiation-hazardous sites.
2. General approach on remediation of the Gremikha site, presented by the French side in broad terms corresponds to the Russian plans for resolution of problems there, and the experience of Western companies and organisations in the area of decommissioning of nuclear facilities and management of SNF and RW could be applied during remediation of the Gremikha site.
3. The important distinguished feature of the Gremikha site is defined by the fact that this is the only place in Russia where defuelling of the Alfa-class submarines could be performed. Because of this the Russian side dedicates special attention to the SNF unloading from the reactors with liquid-metal coolant (LMC) and this fact should be taken into account while developing plans for remediation of the site.
4. The workshop participants identified the following first-priority tasks for remediation of the Gremikha site:
 - completion of the preparatory activities on the infrastructure systems and equipment, defuelling of the LMC reactors of the Alfa-class submarines and their further dismantling,
 - implementation of complex of measures aimed on provision of the safety of the personnel during activities at the site, including development of the radiation monitoring system and the mobile emergency response system,
 - development and implementation of plans for removal from the site of SNF discharged from both the LMC and the PWR reactors

- development and implementation of plans for management and further removal from the site of solid and liquid radioactive waste and also remediation of buildings and structures and the site territory.
5. In order to speed up resolution of the main tasks listed above it is necessary to conduct feasibility studies and identify optimal and safe options for the handling and transportation scheme for management of:
 - the SNF from the PWR reactors stored at the site territory,
 - the SNF from the LMC reactors which is stored in the site facilities and is planned for acceptance from the Alfa-class submarines,
 - solid and liquid radioactive waste which is stored at the site and will be generated within the course of the LMC reactors' defuelling, management of SNF and remediation of buildings and structures.
 6. A number of projects could be initiated already now independently from the results of the feasibility studies of the main problems mentioned above. These projects will improve working conditions for the personnel, environmental situation at the site and reduce the implementation time for tackling the main problems and remediation of the territory in the future. The following projects are defined in this category:
 - completion of the engineering infrastructure upgrading necessary for SNF unloading from the LMC reactors and the actual defuelling of the of the Alfa-class submarines,
 - development and implementation of the project on upgrading of the SNF storage facility for the LMC reactors in order to meet current Russian safety regulations and standards,
 - engineering and radiation surveys of buildings, structures and the site territory, the results of which are necessary for provision of safe working conditions for the personnel for remediation of the open SRW storage pad and for the Gremikha site in general,
 - completion of the R&D activities for development and certification of the transportation cask for the spent reactor cores of the Alfa-class submarines,
 - development and implementation of the radiation monitoring system and the local emergency response system at the site,
 7. The workshop recognized that at present time legal basis for initiation of cooperation on the Gremikha site and placing the contracts for specific activities has been already established both in the framework of the MNEPR Agreement and bilateral agreements with the Russian Federation.
 8. Russian side indicated that at the moment no institution has been defined from the French side for interaction with Minatom which was defined by the Russian Government as a leading body for NS dismantling within the Global Partnership Programme.
 9. The CEG workshop considered that international cooperation on remediation of the Gremikha site should be initiated without delays in order to improve radiation and environmental safety in the Arctic region.

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