

The repository for the radioactive wastes class 3 and 4 basic design. JOI.

Thursday, 26 May 2016 15:00 (3 hours)

Nuclear cycle facilities in Russian Federation by now has accumulated (and continue accumulating) a large amount of radioactive wastes, which contains different subjects with the complex morphology and various nuclide set [1, 2]. The only way to solve the problem of the long-term radioactive wastes storage and complying all the up-to-date safety requirements is to create the modern repository as a capital construction. There are no repositories of the sufficient capacity and environmental stability created by ROSATOM being operated yet. In fact, it means that all the design work and engineering surveys have still to be executed.

The article discusses the basic design of the repository for the radioactive wastes class 3 and 4 in terms of justification of investments (JOI) is going to be realized at the Production Association «MAYAK».

The variants of this basic design project providing the economic efficiency of the radioactive wastes management, based on the repository plant geological and ecological features [3-5] are considered.

Such a repository concept is proposed to perform two main functions:

- 1) safe storage of the solid radioactive wastes of low and medium volume activity with industrial quantities provided by the utility systems (passive or active);
- 2) exception of the radionuclide migration through the protecting barriers provided by the localization constructions of the repository building.

List of references

1. Guidance on radioactive waste management legislation for application to users of radioactive materials in medicine, research and industry. IAEA-TECDOC-644, Vienna, 1992.
2. Radioactive Waste Management: Status and Trends –Issue #3. IAEA/WMDB/ST/3. August 2003.
3. Technical, institutional and Economic Factors Important for Developing a Multinational Radioactive Waste Repository. IAEA-TECDOC-1021. Vienna. 1998.
4. Regional and International Solutions for Long-Lived Radioactive Waste Disposal: the ARIUS initiative // Proceedings of the 10th International IHLRWM conference in Las Vegas, Nevada, March 30 - April 3, 2003.
5. ElBaradei, M. Geological Repositories: The Last Nuclear Frontier. // International Conference on Geological Repositories. 8-10.12.2003, Stockholm, Sweden. www.iaea.org.

**Type "YES" to confirm submission of required
 Forms A and B via the official channels**

YES

Primary author: Mr GORDEEV, Andrei (JSC "CPTI")

Co-authors: Mr MELNIKOV, Denis (JSC "CPTI"); Mr TARASOV, Mihail (JSC "CPTI")

Presenter: Mr GORDEEV, Andrei (JSC "CPTI")

Session Classification: Young Professional Session - Poster

Track Classification: Young Generation