

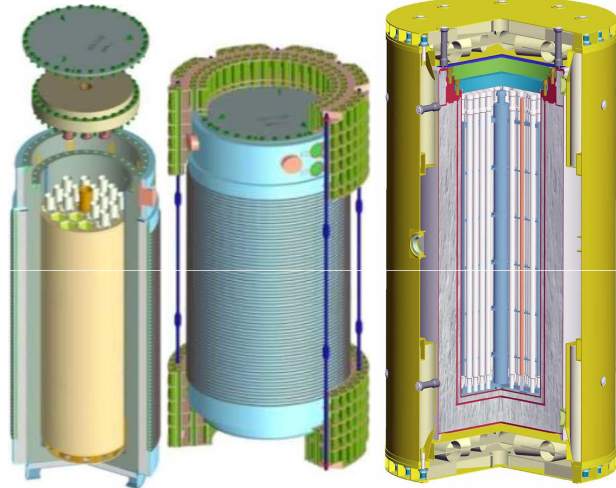
## Implementation of Guidance for an Integrated Transport and Storage Safety Case for Dual Purpose Casks for Spent Nuclear Fuel in Russian regulatory document

### 1. Background and Goal of the present work

Spent nuclear fuel (SNF) management in Russia includes possibility of SNF storage in cask type on-site dry interim storage facilities (ISF). Those storage facilities are already in operation at Kursk and Leningrad NPPs and its construction is already finished at Smolensk NPP. The dual purpose casks (DPC) TUK-109 uses for listed above SNF storages. Additionally there are new one DPCs TUK-140 and TUK-146 for transport and storage of VVER-440 and VVER-1000 SNF under certification process now. Increase the amount and type of DPCs led to necessity of develop the standard approach related to DPC safety case. For this purpose the Federal Environmental, Industrial and Nuclear Supervision Service of Russia initiate development of safety guide in the field of nuclear energy "Recommendations to structure and content of DPC safety case reports".

TUK-146

TUK-109



### 2. Structure of Russian regulatory documents

Federal Laws and International Conventions

Government and President Decrees

Federal Requirements

Safety Guides

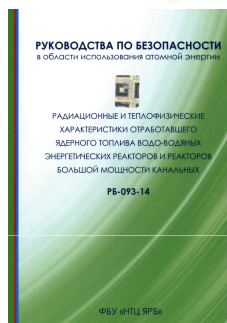
Other Documents

Cask type interim storage facility



### 3. Safety Guide status

Safety Guides provide recommendations and guidance on how to comply with the federal requirements



### 4. Scope

Developing Safety Guide:

- based on IAEA Guidance for an Integrated Transport and Storage Safety Case for Dual Purpose Casks for Spent Nuclear Fuel;
- contains recommendations of the Federal Environmental, Industrial and Nuclear Supervision Service of Russia to structure and content of DPC safety case reports;
- applicable by constructional, design, research and operating organizations during DPC safety case preparation;
- applicable by regulator during safety case assessment;
- allows the possibility of using other methods, if it's using are justified.

### 5. Structure of developing safety guide

Developing Safety Guide has the following structure:

- General Provisions;
- Recommendations to structure and content of DPC safety case reports

(with links to Annexes);

- Annex I. Recommended list of DPC safety case report sections;
- Annex II. Recommendations on the content of "Introduction";
- Annex III. Recommendations on the content of "General Description of the DPC";
- Annex IV. Recommendations on the content of "Radiation Safety Analysis"
- Annex V. Recommendations on the content of "Activity Release Analysis"
- Annex VI. Recommendations on the content of "Nuclear Safety Analysis"
- Annex VII. Recommendations on the content of "Thermal Analysis"
- Annex VIII. Recommendations on the content of "Structural Analysis"
- Annex IX. Recommendations on the content of "Conclusions"
- Annex X. Recommendations on the content of "Definitions"

Annexes IV – VII has the similar structure and contains following:

- Recommendations on the justification of initial data;
- Recommendations on the justification of using methods and computer codes;
- Recommendations on calculation models developing;
- Recommendations for the presentation of the results of calculations and estimates.

### 6. Conclusions and Acknowledgements

Safety Guides "Recommendations to structure and content of DPC safety case reports" is awaiting approval