



ROSATOM

STATE ATOMIC ENERGY CORPORATION "ROSATOM"

Environmental aspects of the SNF management

Moscow,
2016

Legal framework for SFAs import into the Russian Federation

Nuclear Power Uses Federal Law
No. 170-FZ dated 21/11/1995

Environmental Protection Federal
Law No. 7-FZ dated 10/01/2002

Special Environmental
Programmes for Radioactive Areas
Remediation Federal Law No. 92-
FZ dated 10/07/2001

RF Government's Resolution No.
587 dated 22/09/2003 for the Rules
of Approval of Costs of the
Management of Irradiated Nuclear
Fuel Assemblies and the
Associated Reprocessing Products



Government's Resolution No. 588
dated
22/09/2003 for the Endorsement of
the Regulation on Funding Special
Environmental Programmes for
Radioactive Areas Remediation

Government's Resolution No. 418
dated
11/07/2003 for the Procedure of
Import of Spent Nuclear Fuel
Assemblies from Nuclear Reactors
into the Russian Federation

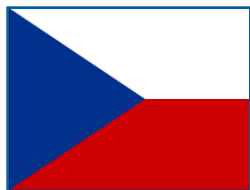
State Nuclear Energy Corporation
Rosatom Federal Law No. 317-FZ
dated
01/12/2007

Regulation on the Development of
Special Environmental
Programmes for Radioactive Areas
Remediation, ratified by the RF
Government's Resolution No.421
dated 14/06/2002

RRRFR Programme Implementation between 2006 and 2015



Uzbekistan



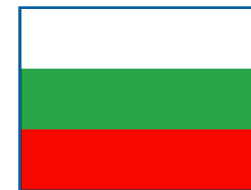
Czech
Rep.



Latvia



Hungary



Bulgaria



Libya



Kazakhstan

Belarus



Poland



Romania



Ukraine



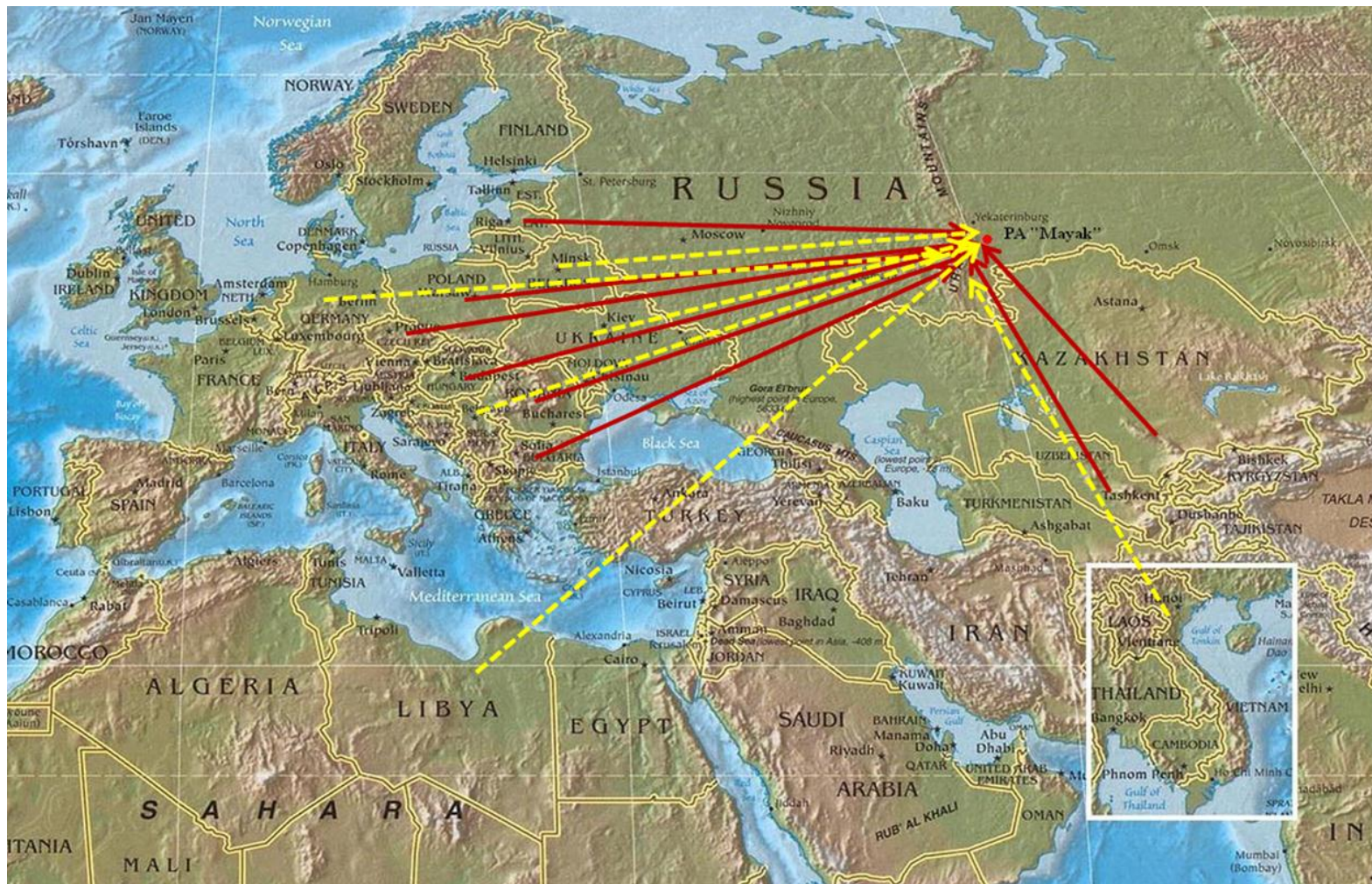
Serbia



Vietnam

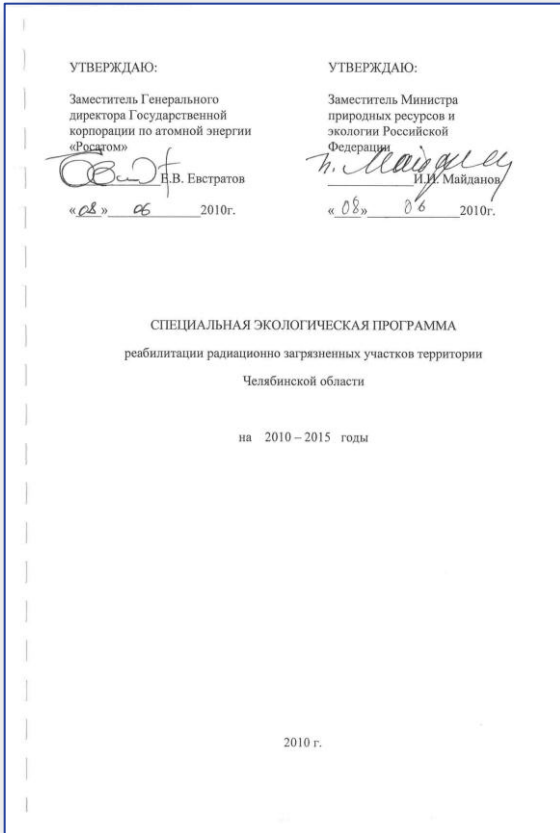


RRRFR Programme Implementation between 2006 and 2015



1. Environmental and Public Impact Assessment (EIA) resulting from SFAs import into the Russian Federation.
2. Special environmental programme (SEP).
3. Decision on selecting SEP actions.
4. Public hearing protocol including attached publications in the mass-media.
5. Justification of the overall reduction of radiation exposure risk and enhancement of the environmental protection level as a result of the implementation of the Unified Project for SFAs import.

Russian Law requirements for SEP development



The Special Environmental Programme for the Remediation of Radioactively Contaminated Areas in the Chelyabinsk Region between 2010 and 2015 has been developed to ensure implementation of the Government-to-Government Agreement between the Russian Federation and the USA concerning cooperation to return the Russian produced research reactor nuclear fuel to the Russian Federation dated 27 May 2004, and in compliance with the Special Environmental Programmes for Radioactive Areas Remediation Federal Law No. 92-FZ dated 10/07/2001.

The period of SEP implementation has been extended until 2018.

SEP principal objectives and focus



Principal objectives:

- To reduce risks of negative effects of radiation on the environment and public health in the Chelyabinsk Region;
- To improve environmental and socio-economic situation in radioactively contaminated areas in the Chelyabinsk Region.

Focus:

- Remediation of radioactively contaminated areas in the Techa River floodplain in Musliumovo station, Kunashak District, and villages of Brodokalmak, Russkaya Techa and Nizhnepetropavlovskoye, Krasnoarmeiskiy District, Chelyabinsk Region;
- Measures to reduce radiation exposure levels to the inhabitants of the Chelyabinsk Region municipal entities affected by radioactive contamination;
- Recultivation of land in the areas of Musliumovo village and, partially, Musliumovo station;
- Remediation activities in the East-Ural Radioactive Trace aiming at preventing spread of radioactive contamination.

SEP essential target indicators and criteria



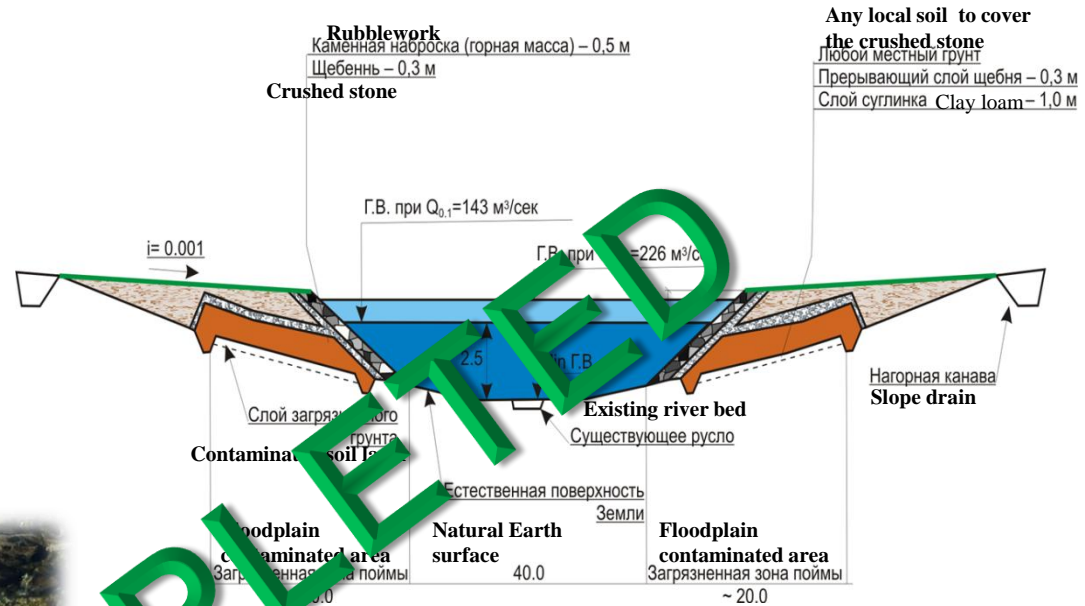
SEP efficiency indicators:

- ✓ Decreased radioactive contamination of the environment and lower radiation exposure to the people in the Chelyabinsk Region;
- ✓ Current effective dose to people has been maintained within 1mSv/ year on average for a settlement;
- ✓ Gamma exposure dose rates in remediated Techa floodplain areas have been reduced to the background values elsewhere in the Chelyabinsk Region.

SEP activities criteria:

- Area of recultivated lands;
- Area of contained floodplain contamination in the remediated areas;
- Scope of socially-oriented activities;
- Scope of works in radioactively contaminated areas in the Chelyabinsk Region (East-Ural Radioactive Trace).

Remediation of radioactively contaminated areas in the Techa River floodplain within Musliumovo station, Kunashak District, Chelyabinsk Region



Results:

- ✓ Gamma exposure dose rates reduced to the background values elsewhere in the Chelyabinsk Region;
- ✓ Lower availability of the Techa River floodplain for economic use by the local people.
- ✓ Remediated area being 12.5 ha.

Remediation of radioactively contaminated areas in the Techa River floodplain within the villages of Brodokalmak, Russkaya Techa and Nizhnepetropavlovskoye in Krasnoarmeiskiy District, Chelyabinsk Region



Intention:

- Remediate radioactively contaminated areas within the villages of Brodokalmak, Russkaya Techa and Nizhnepetropavlovskoye
- Overall remediated area: approximately 15 ha.

Results:

- ✓ Remediation measures have been completely implemented in radioactively contaminated areas in the Techa River floodplain within the villages of Russkaya Techa and Nizhnepetropavlovskoye;
- ✓ The activities have been implemented since 2014 and will be in progress until 2018 (completion of works within the settlement of Brodokalmak).



Measures to reduce radiation exposure levels to the inhabitants of the Chelyabinsk Region municipal entities affected by radioactive contamination



Intentions:

- Construct new roads in the villages, repair existing roads;
- Build gas networks;
- Provide the people in the settlements with water, construct artesian wells;
- Establish a sanitary protection area;
- Build a sewage pumping station.

Results:

- ✓ New roads in the villages constructed (complete);
- ✓ Water networks built (complete);
- ✓ Artesian wells constructed (complete);
- ✓ The sewage pumping station in place (complete);
- ✓ Gas networks scheduled for completion in 2018.

Works have been in progress since 2010 and will continue until the end of 2018.

Measures to reduce radiation exposure levels to the inhabitants of the Chelyabinsk Region municipal entities affected by radioactive contamination



Recultivation of land in the areas of Musliumovo village and, partially, Musliumovo station

Intention:

- Resettle the inhabitants from the Musliumovo village and, partially, from the Musliumovo station and pull down their homesteads

Results:

- ✓ People resettled to the newly built village of Novomusliumovo;
- ✓ Radiation exposure to people reduced



New housing area (Novomusliumovo)



Remediation activities in the East-Ural Radioactive Trace aiming at preventing spread of radioactive contamination

Intentions:

- Monitor the fire situation;
- Establish and maintain fire barriers;
- Remove dead vegetation.



Results:

Forest recreation measures implemented, fire situation in the main part of the EURT area monitored, fire barriers established and maintained, and dead vegetation removed.

- ✓ Implementation of these measures was ceased in 2015.

SEP efficiency

Activities undertaken under the SEP aim at resolving social and environmental issues in the Chelyabinsk Region related to the location of a nuclear facility in the region.

Implementation of relevant activities enables reducing radiation exposure to the people and environment in the Chelyabinsk Region and thus helps reduce social tensions in the region.



Thank you for attention!



Elizaveta Chubukova

Lead Specialist

Federal Centre for Nuclear and Radiation Safety

Tel.: +7 495 780 74 83

Fax: +7 495 324 02 05

E-mail: info@fcnrs.ru