International Target Programme of the Eurasian Economic Community

«Remediation of the Uranium Mining Areas of the EurAsEC Member States»

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International Workshop on Regulatory Control of Nuclear Legacy Sites and Radioactive Waste Management
(Russia, Moscow, November 2014)
Intergovernmental target programme “Remediation of Territories of EurAsEC Member States Affected by Uranium Mining Industries”

2007 - the Council for Atomic Energy of The Eurasian Economic Community (EurAsEC) was established

Member states: Belarus, Kazakhstan, Kyrgyzstan, Russia and Tajikistan

2008 - the EurAsEC Council for Atomic Energy adopted the initiative to design the Concept of Intergovernmental target programme "Remediation of territories of EurAsEC member states affected by uranium mining industries"
2008 - State Atomic Energy Corporation “Rosatom” in collaboration with MS competent authorities started developing the Concept of the Remediation programme

Planning and project management of the EurAsEC programme are consistent with the recommendations of the IAEA document “Integrated Approach to Planning the Remediation of Sites Undergoing Decommissioning” issued in 2009
Initial Hazards Description was done by collecting and evaluating advance data of all uranium legacy sites in Central Asia
(2008 Rosatom program, contractor OJSC "VNIPIPROMTECHNOLOGII")

Step 1 — Define the overall situation
1. National remediation activities
2. Defining the overall situation (i.e. describing the conditions of the site) by obtaining data to undertake site investigation work.

Step 2 — Define objectives of the programme concept
1. Making inventory of all uranium liabilities in MS
2. Ranking these liabilities according to their urgency
3. Definition of the site end-use in consultation with stakeholders and on the assumption of political and socioeconomic factors
Programme management problems

• Historic ownership had disappeared
• State governments became responsible
• Lack remediation plans and strategy;
• Unclear legal framework of most sites
• No financing provisions made in advance
• Estimated costs for remediation needs to be updated
The scope of the Programme

To reduce risk of emergencies with radio-ecological impact to the EurAsEc territories affected by uranium-mining and processing productions, develop remediation equipment and technology and provide safe and secure living in these areas.

The following areas were selected as a pilot target

Kadji-Sai and Min-Kush (Tailing dump Tujuk–Su) in Kyrgyzstan
Taboshar in Tajikistan
2009 - the EurAsEC Council for Atomic Energy approved the Concept of the programme

The Concept of Intergovernmental target programme "Remediation of territories of EurAsEC member states affected by uranium mining industries" was approved by the decision of the EurAsEC Interstate Council at the level of Heads of Government. ROSATOM, as competent authority, was authorized to develop a draft of the Programme.
April 5, 2012 - the Programme was approved by the decision of the EurAsEC Interstate Council at the level of Heads of Government
Intergovernmental target programme “Remediation of Territories of EurAsEC Member States Affected by Uranium Mining Industries”
Main counterparts

- Participants:
  - Governments of Belarus, Kazakhstan, Kyrgyzstan, the Russian Federation, Tajikistan

- Coordinator
  - State Atomic Energy Corporation “Rosatom” (ROSATOM)

- National Counterparts
  - Ministry of Industry and Trade of the Republic of Kazakhstan
  - Ministry of Emergency Situations of the Republic of Kyrgyzstan
  - Federal Medical-Biological Agency of Russian Federation
  - Ministry of Energy and Industry of the Republic of Tajikistan
## Shared funding of the Programme

<table>
<thead>
<tr>
<th>Country</th>
<th>Share (%)</th>
<th>Share (RUR, mln. / m. US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russia</td>
<td>75%</td>
<td>866,978 / 28,89</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>15%</td>
<td>173,395 / 5,77</td>
</tr>
<tr>
<td>Tajikistan</td>
<td>5%</td>
<td>57,798 / 1,9</td>
</tr>
<tr>
<td>Kyrgyzstan</td>
<td>5%</td>
<td>57,798 / 1,9</td>
</tr>
<tr>
<td><strong>total</strong></td>
<td><strong>100%</strong></td>
<td><strong>1155,971 / 38,53</strong></td>
</tr>
</tbody>
</table>

- **Russian Federation (75%)**
- **Republic of Kazakhstan (15%)**
- **Republic of Kyrgyzstan (5%)**
- **Republic of Tajikistan (5%)**

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Scheduled funding of the Programme

<table>
<thead>
<tr>
<th>Year</th>
<th>Funding mln. RUR</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>2013</td>
<td>33 526,5</td>
<td>2,9%</td>
</tr>
<tr>
<td>2014</td>
<td>33 526,5</td>
<td>2,9%</td>
</tr>
<tr>
<td>2015</td>
<td>40 473,9</td>
<td>3,5%</td>
</tr>
<tr>
<td>2016</td>
<td>252 668,4</td>
<td>21,9%</td>
</tr>
<tr>
<td>2017</td>
<td>399 228,8</td>
<td>34,5%</td>
</tr>
<tr>
<td>2018</td>
<td>396 546,9</td>
<td>34,3%</td>
</tr>
</tbody>
</table>

**Stage 1**
360, 195 mln. RUR

**Stage 2**
795, 775 mln. RUR

**Total**
1 155, 971 mln. RUR

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1. Decrease contamination level in the areas affected by uranium industry
2. Decrease morbidity rate for residents living in or near to the areas affected by uranium industry
3. Prevent economic damage caused by an emergency with radi-ecology contamination
4. Harmonize the legislative and regulatory base
5. Lower remediation expenses
6. Increase employment rate in the areas affected by uranium industry

Use experience gained in remediation of the most radiation hazardous sites in Kyrgyzstan and Tajikistan for remediation of other areas in EurAsEc member states
Programme Implementation Algorithm

- Programme activities will be carried out in two stages

**Stage 1**
- Evaluation of selected radiation hazardous objects
- Analysis and preparation of input data
- Project documentation development
- Design expertise in state bodies of Kirghiz and Tajikistan
- Assessment of the project effectiveness, amendments making

**Stage 2**
- Approval of the second Stage by the EurAsEC Interstate Council decision
- Making amendments in the design documentation
- Remediation of selected sites
- Evaluating the effectiveness of work performed
- Commissioning of the site
- Environmental and social health monitoring
Programme Implementation

- **Stage 1** (2013-2016): *Project design*

1. Analysis of the existing material on selected sites
2. Assessment of current state of tailings and neighboring areas
3. Development of the main elements of the safety assuring system for EurAsEC member States, according to international standards
4. Development of intergovernmental regulatory documents for radiological safety
5. Harmonization of radiation safety legislative and regulatory base.
6. Develop an information system of radioactive sites of EurAsEC member States
7. Research and development works
8. Seeking and pooling non-govermental resources for the project
9. **Develop remediation projects for selected sites in Kyrgyzstan and Tajikistan**
10. Projects review by state authorities in Kyrgyzstan, Tajikistan and Russia
11. Projects review by EurAsEC Interstate Council (before April 1 2016)
12. Development of the training course for remediation specialists “Development and implementation of integrated programs for remediation of the areas affected by uranium mining” for implementation on such platforms as the IAEA TC, CIS, EurAsEC (not covered by the Program expenditures)

Total expenses allocated for the first stage are 360,2 RUR, mln.
Stage 2 (2017-2018): Project Implementation

Construction works on selected sites in Kyrgyzstan and Tajikistan

1. Test basic elements of the safety assuring system for the selected radiation hazardous sites.
2. Develop an intergovernmental system to monitor radioactivity at territories of uranium-mining and processing productions and health of residents at neighboring areas.
3. Improve and develop new elements for the set of organizational and medical and sanitary measures assuring radiological safety for residents.
4. Develop a kind of transnational institute to perform remediation at contaminated areas affected by uranium-mimying and processing productions.
5. Train personnel for Kyrgyzstan and Tajikistan in environmental and health monitoring and uranium-mining/processing productions sites maintenance.
6. Commissioning of remediated sites to Kyrgyzstan and Tajikistan authorities

Estimated amount of finance 770,655, RUR, mln. to be justified on Stage 1 and reviewed by EurAsEC Interstate Council.
What has been done since the January 1, 2013:

Organizational steps:

- Establishing the Direction of Project management.
- The main contractor (winner of the tender) – FNRS «Federal nuclear and radiation safety center» - an enterprise authorized by the Government of the Russian Federation to operate radioactive materials abroad
- Main contracts of the first stage has been signed
Preparatory stage – protection works:

- Reconstruction of the Tuyuk – Suu river outlet;
- Water flow stop to the tailing.

Main stage – the tailing removal from Tuyuk – Suu to the Dalnee tailing.
Remediation of Taldy – Bulack tailing
• Improvement of the torrent inlet;
• Improvement drainage gutter;
• Surface flattening.

Remediation of Dalnee tailing
• Filler structure build-up;
• Fences reconstruction;
• Improvement of the torrent inlet;
• Improvement drainage gutter;
• Surface flattening;
• Cover layer improvement.

Remediation of Kak tailing
• Fences reconstruction;
• Improvement drainage gutter;
• Surface flattening;
• Cover layer improvement.
Programme Implementation: Stage One

- Environmental and social health monitoring.

Elements of the interstate system of radiological and environmental monitoring as the comprehensive task for monitoring of radiological, environmental and socio-hygienic indicators on the territories.

Medical and demographic data base of population living in the areas of remediation works based on the state statistics.
Programme Implementation: Stage One

Regulatory provisions

1. Development of the set of necessary documents on regulatory base harmonization:
   - the list of regulatory documents on nuclear energy used in EurAsEC member states was compiled
   - the list of the regulatory authorities in the field of the use of nuclear energy for peaceful uses in EurAsEC member states was compiled

2. Directorate adopted the following approach for the design of the project:
   • project design using the regulatory framework of the Russian Federation;
   • project adaptation to the requirements of Kyrgyzstan and Tajikistan;
   • Reviewing of the project documentation by Kyrgyzstan and Tajikistan supervision bodies.
“Recognizing the clear need for a coordinated approach, at the Regional Meeting on Safe Management of Uranium Production Legacy Sites (Vienna, IAEA, 12 – 15 June, 2012) the group known as the IAEA Coordination Group for Uranium Legacy Sites (CGULS) was agreed as a coordination mechanism.”

First Technical Meeting CGULS (IAEA, Vienna, 26 – 28 June 2013)
Second - 9-13 June 2014 Cholpon Ata, Kirgiz Republic
The IAEA in cooperation with the ROSATOM-CICET had conducted the regional training course on Environmental Remediation Project And Programme Management For Uranium Production Legacy Sites from 22 September to 03 October 2014.

Fourteen trainees from
• Kazakhstan,
• Kyrgyz Republic,
• Tajikistan,
• Ukraine,
• Russian Federation

Second course –
December 2014

Totally 4 courses
Thank You for Your Attention!