1. BASIC INFORMATION

1.1. CRIS Number: 2004/016-815.02.04

1.2. Title: DESIGN AND SAFETY ASSESSMENT OF CERNAVODA SURFACE LOW- AND INTERMEDIATE-LEVEL SHORT LIVED RADIOACTIVE WASTE REPOSITORY IN ROMANIA

1.3. Sector: 23064

1.4. Location: Romania

2. OBJECTIVES

2.1. Overall objective

Improvement of radioactive waste disposal in Romania

2.2. Project purpose

To finalize the concept of a near-surface disposal facility for short-lived radioactive waste generated mostly during Cernavoda NPP Operation.

To draw-up the Preliminary Safety Analysis Report and all relevant documentation for licensing the construction work of such a repository.

2.3. Accession Partnership and NPAA priority

The Accession Partnership 2001, states that is "necessary to implement the recommendations contained in the European Council report on Nuclear Safety in the Context of Enlargement, with due regards to priorities assigned in the report". These recommendations underline that Candidate Countries should pay particular attention to the "development of national strategies for the long term management of spent nuclear fuel and radioactive waste" that is typically considered as good practices within EU, when developing and implementing their national program for the safe management of spent fuel and radioactive waste.

2.4. Contribution to National Development Plan

The construction of Cernavoda low- and intermediate level and short-lived waste repository is requested by the National Nuclear Plan, approved by the Government of Romania, under the act HG No.1259 / 7 November 2002, as a part of the National Strategy for Development of Energy Resources, approved by the Government of Romania, under the act HG No.647 / 12 July 2001 and of National Strategy for Durable Development.
2.5. Cross Border Impact

NA

3. DESCRIPTION

3.1. Background and justification

ANDRAD was founded in February 2003, as a consequence of the implementation of provisions of Ordinance of Government of Romania No.11 / 30 January 2003. ANDRAD is a State enterprise, its activity is under co-ordination of the Ministry of Economy and Commerce. ANDRAD co-ordinates of waste management activities in Romania and is directly responsible for siting, construction, operation and closure of the national radioactive waste disposal facilities.

According to the national plan mentioned above, a repository for short-lived radioactive waste generated during NPP Cernavoda operation should be available by 2010. Actually, a quite extensive characterization program of several potential sites for accommodating the disposal facility has already been undertaken, primarily at Saligny and at a lesser extent at the Turk Hill; both sites are close to Cernavoda NPP.

A decision concerning the most appropriate site should be taken by the Romanian regulatory authority (CNCAN) in the short-term.

The selected design of the disposal facility is based on the vault concept, which is in operation in France, Spain and Slovak Republic. The repository shall be designed to accommodate at least 30,000 m$^3$ of waste packages, corresponding to operation and dismantling of three CANDU 6 NPP units.

Both, the preliminary design and related safety assessment have been assessed by international expert missions organized by IAEA.

The basic objective of the project is to finalize the disposal concept, to perform a preliminary safety assessment report (PSAR) and to provide nuclear safety and environmental protection authorities with all relevant documentation (e.g. Environmental Impact Assessment) in order to obtain the necessary licenses for the future construction.

The prerequisite for carrying out the project is that a decision is taken by the Romanian authorities concerning the selection of disposal site (as mentioned above).

3.2. Linked activities

The design and safety analysis of the national low-and intermediate-level and short-lived radioactive waste repository to be constructed near NPP Cernavoda, must take into account the reports drawn up by SITON (SITON-ST-1990/01) and all technical documentation available in Romania (e.g. SCN Pitesti).

Particular attention should be paid to the safety reports prepared within the framework of the bilateral agreement between Romania and the USA, in this domain.

In addition, the results of the investigations being performed within the framework of a bilateral agreement between Romania and Netherlands, in order to improve the ANDRAD
expertise (MAT03/RM/9/2) and to define priorities for the most urgent actions to be undertaken in the field of radioactive waste management, must be also taken into account.

Finally, the results of the 2003 Phare project "Technical assistance to Romania to establishing the activity of National Agency for Radioactive Waste (ANDRAD)" should start in early 2005, should also be taken into account.

3.3. Results

The expected results produced by project implementation are:

- Readiness of the disposal concept for low- and intermediate-level and short-lived radioactive waste disposal in Romania
- Romanian authorities authorization for construction of the given repository
- Quality Management Manual for all the activities to be performed within this project, drafted and approved.

3.4. Activities

- Reviewing of the existing documentation concerning the disposal concept and the safety documentation associated with the disposal site that has been approved by the Romanian safety authorities.
- Preparation of the Quality Management Manual for all the activities performed within the project, according to ISO 9001 and ISO 14001.
- Drawing up the disposal concept for low-and intermediate-level and short-lived radioactive waste disposal in Romania, including engineering design and detailed technical specifications (for the preparation of the subsequent tendering documentation).
- Preparation of the Preliminary Safety Analysis Report and the Environmental Impact Assessment Report for the selected disposal facility, that should enable all the relevant Romanian safety authorities (e.g.CNCAN, Ministry of Water and Environment) to give authorization for the subsequent construction.
- Training of ANDRAD staff through organization of dedicated technical workshops in Romania and abroad and its involvement in all steps of the project.

4. INSTITUTIONAL FRAMEWORK

The general organizational structure in Romania regarding the waste management and disposal process comprises:

Policy/Legislation: Parliament - enacts laws; Government / Nuclear Agency (AN) - establishes waste management and disposal policies.

Safety and regulation: National Commission for Control of Nuclear Activities (CNCAN) - establishes the necessary safety and radiological
safety regulations. Ensures the control of nuclear activities. Grants licenses.


5. DETAILED BUDGET (IN MEuro)

<table>
<thead>
<tr>
<th>Project Components</th>
<th>Investment Support</th>
<th>Institution Building</th>
<th>Total Phare (= I + IB)</th>
<th>National Cofinancing</th>
<th>IFI</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service</td>
<td>1.00</td>
<td>1.00</td>
<td>0.10</td>
<td></td>
<td>1.10</td>
<td>1.10</td>
</tr>
<tr>
<td>Total</td>
<td>1.00</td>
<td>1.00</td>
<td>0.10</td>
<td></td>
<td></td>
<td>1.10</td>
</tr>
</tbody>
</table>

The Phare amount is binding as a maximum amount available for the project. The ratio between the Phare and the national co-finance amount is also binding and has to be applied to the final contract price. The national co-financing commitment is a tax excluded net amount.

6. IMPLEMENTATION ARRANGEMENTS

The CFCU is responsible for contracting and accounting of the project. Responsibility for technical preparation, control and management of service, works and supply will remain with the beneficiary.

The CFCU (the Central Finance and Contract Unit) is responsible for contracting and accounting of the project. Responsibility for technical preparation, control and management of service, works and supply will remain with the beneficiary.

Contact person: Ms.Jana Buzduga
Director CFCU

Address: 6-8, Magheru Blvd., Sector 1, Bucharest, Romania
Tel: +40 21 3019302; Fax: +40 21 2106456

6.1. Implementing Agency

The implementing authority in Romania is the Ministry of Economy and Trade, which retains the overall responsibility for the operational management of the project.

Contact person: Steluta Goanta
General Director

Address: Ministry of Economy and Commerce
Division of Programmes with International Organizations
152, Calea Victoriei, Sector 1 Bucharest, Romania
Tel/Fax: +40 21 2111360; Tel: +40 21 2125023

The Beneficiary of the project of technical assistance will be the National Agency for Radioactive Waste.
6.2. Twinning

Twinning arrangements are not envisaged.

6.3. Non-standard aspects

There are no „non-standard aspects”. The Practical Guide to Phare contract procedures will be strictly followed.

6.4. Contracts
i. Service - total value of 1.10 MEuro
ii. Works - NA
iii. Supply - NA

7. IMPLEMENTATION SCHEDULE

<table>
<thead>
<tr>
<th>Component</th>
<th>Start of Tendering</th>
<th>Start of Project</th>
<th>Project Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service</td>
<td>2Q, 2005</td>
<td>3Q, 2005</td>
<td>1Q, 2007</td>
</tr>
<tr>
<td>Works</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Supply</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

8. EQUAL OPPORTUNITY

Equal opportunity principles and practices in ensuring equal gender participation in the Project are guaranteed.

9. ENVIRONMENT

NA

10. INVESTMENT CRITERIA

10.1. Catalytic effect

The Phare contribution will act as a catalyst for priority Accession driven action in the field of nuclear safety

10.2. Co-financing

The Romanian Government will contribute to 10 % of the service contract.
10.3. Additionality

The Phare intervention does not displace other financiers

10.4. Project readiness and size

The Beneficiary will prepare the ToR.

10.5. Sustainability

Activities will be sustained by ANDRAD as is foreseen in the project.

10.6. Compliance with state aids provisions

The investment part of the project will respect the state aids provision of the Europe Agreement, should they be applicable.

10.7. Contribution to the National Development Plan

NA

11. CONDITIONALITY AND SEQUENCING

The launching of the tendering process for the project is subordinated to a formal decision from the Romanian authorities concerning the selected site for the construction of the repository for low- and intermediate-level and short-lived radioactive waste arising mainly from Cernavoda NPP

ANNEXES TO PROJECT FICHE

1. Logical framework matrix in standard format
2. Detailed implementation chart
3. Contracting and disbursement schedule
4. Reference to pre-feasibility / feasibility studies
**LOGFRAME PLANNING MATRIX**

For the project:
**DESIGN AND SAFETY ASSESSMENT OF CERNAVODA SURFACE LOW- AND INTERMEDIATE LEVEL, SHORT-LIVED, RADIOACTIVE WASTE REPOSITORY IN ROMANIA**

<table>
<thead>
<tr>
<th>0.</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OVERALL OBJECTIVE:</strong> To improve safety of radioactive waste disposal in Romania</td>
<td>Objectively verifiable indicators: Management of radioactive waste in Romania according to international safety standards and practices</td>
<td>Source of verification: Government records</td>
<td>Assumptions: Creation and operation of ANDRAD Continual funding of activity of ANDRAD</td>
</tr>
<tr>
<td><strong>PROJECT PURPOSE:</strong> To finalise the concept of near-surface disposal facility for short lived radioactive waste, almost generated during Cernavoda NPP operation and decommissioning To draw-up the Preliminary Safety Analysis Report and all relevant documentation for licensing the construction works of such a repository</td>
<td>Objectively verifiable indicators: ANDRAD operates at the same level of efficiency as its Member State partners</td>
<td>Source of verification: Regular reports; Performance reports of ANDRAD</td>
<td></td>
</tr>
</tbody>
</table>

Programme Name and Number: 2004/016-815.02.04

Contracting Period Expires: 30.11.2006

Execution of contract Period Expires: 30.11.2007

Total Budget: 1.10 ME

Phare Budget: 1.0 ME
<table>
<thead>
<tr>
<th>ACTIVITIES:</th>
<th>Means:</th>
<th>Assumptions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reviewing of the existing documentation concerning the disposal concept and the safety documentation associated with the disposal site that has been approved by the Romanian safety authorities</td>
<td>Service contract</td>
<td>Successful start of the project</td>
</tr>
<tr>
<td>Drawing-up of the disposal concept for low- and intermediate-level, short lived, radioactive waste disposal in Romania including engineering design and detailed technical specifications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preparation of the Preliminary Safety Analysis Report and the Environmental Impact Assessment Report for the selected disposal facility that should enable CNCAN and all other relevant Romanian regulatory authorities to give their authorization for the subsequent construction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preparation of the Quality Management Manual for all activities performed within the project according to ISO 9001 and ISO 14000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PRECONDITIONS:** The extension of role of ANDRAD from co-ordinator of waste management activities in Romania to direct responsible organization for the final disposal of radioactive waste. ANDRAD will become a similar agency to those existing in the EU Member States; *otherwise the project cannot be implemented.*
## Detailed Implementation Chart for the Project

<table>
<thead>
<tr>
<th>Year</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>12</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>12</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>12</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

*Project time*

- **Design**
- **Tendering**
- **Implementation**
## CUMULATIVE CONTRACTING AND DISBURSEMENT SCHEDULE

<table>
<thead>
<tr>
<th></th>
<th>DATE</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>30/09</td>
<td>31/12</td>
<td>31/03</td>
<td>30/06</td>
</tr>
<tr>
<td>CONTRACTING</td>
<td>Service</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total contracting</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DISBURSEMENT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.3</td>
<td>0.2</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td></td>
<td>Total disbursement (cumulative)</td>
<td>0.3</td>
<td>0.5</td>
<td>0.6</td>
<td>0.7</td>
</tr>
</tbody>
</table>

| Project time     |            |      |      |      |      |      |      |      |      |      |      |      |      |
Feasibility / Prefeasibility Study

NA
Annex 5

Justification

This Project File represents a real technical support for the National Agency for Radioactive Waste (ANDRAD) for the period 3Q/2005-1q/2007.

National program on the adoption of *Aquis communitaire* based on National Energy Strategy that provides for guidelines in the energy sector, refers to the improvement of the process related to the safety of management of spent nuclear fuel and the safety of management of radioactive waste, in accordance with the international requirements. The continuation of the implementation of the National Energy Strategy is expressed in the AP.

The implementation of the measures provided by this project will be in accordance with the Yearly Activity Program of ANDRAD for the period 2005-2007, approved each year by the Ministry of Economy and Commerce.