SPECIAL NUCLEAR SAFETY PROJECT FICHE

1. Basic information

1.1 Désirée Number: HU 01.11.01

1.2 Title: TSO support in assessment of level 2 PSA for VVER 440/213

1.3 Sector: IN & EN

1.4 Location: Hungary

2. Objectives:

2.1 Overall objective:

A thorough level 2 PSA analysis programme for the Paks NPP has been launched by the utility. The PSA is effected by carrying out analyses that are state-of-the-art, to an extent that internal resources of the HEA/NSD are not sufficient for the task of assessing the quality of work being done. In the course of this work it is proposed to establish the methodology for reviewing level 2 PSA for HAEA/NSD and to implement it by review of reports submitted to HAEA/NSD.

2.2 Project purpose:

The purpose of the project is to build on the results of earlier PHARE projects to provide regulatory support in the review and assessment of level 2 PSA studies and the related plant modifications proposed by the licensees.

2.3 Accession Partnership and NPAA priority:

The Council Report on Nuclear Safety in the Context of Enlargement of June 2001 contained a type I recommendation that all candidate countries with nuclear power plants should, as a short term priority, ensure that their nuclear safety programmes include the following measures considered as good practice within the EU:

- **Regarding full safety analysis reports and related safety improvement measures:** Completion, including regulatory reviews and approval, of plant-specific, in-depth safety analysis reports to Western standards that cover:
  - all relevant operating modes
  - all relevant internal and external hazards (e.g. seismic) using up to date plant and site data;
  - plant-specific severe accident vulnerability analyses including all levels of defence in depth
  
  taking the results of all analyses made into due account in the development and implementation of plant-specific safety improvement measures.

- **Regarding resources of the regulator:** Adequate human and financial resources for the regulatory authority, including in particular access to independent technical support.
3. Description of the Project:

This Project shall comprise the following activities:

1. Review of the methodology followed for level 2 PSA studies available for Paks NPP;
2. Preliminary assessment of the available segments of the level 2 PSA and identification of missing information;
3. Establishing the methodology to be followed by HAEA/NSD in a review of the level 2 PSA;
4. Review of all level 2 PSA studies submitted to HAEA/NSD within the Project period, including, wherever feasible and available, comparison with results for to similar NPPs (e.g. Czech, Slovak and Finnish).

4. Institutional framework:

This project would be in response to the general type I recommendations for Hungary in that the development of additional Hungarian TSO capabilities (the PSA to be reviewed is being carried out by the sole TSO in Hungary, at present capable of doing this work) would enhance in-house capabilities of the national nuclear regulator.

5. Detailed budget (in M €)

<table>
<thead>
<tr>
<th>Project Components</th>
<th>Investment Support</th>
<th>Institution Building</th>
<th>Total Phare (= I + IB)</th>
<th>National Co-financing</th>
<th>IFI</th>
<th>TOTAL</th>
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<tbody>
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</table>

6. Implementation arrangements

The decentralised implementation scheme (DIS) with ex-ante Commission control will be followed for the Project. The CFCU will be the Implementing Agency responsible for tendering, contracting, and accounting:

6.1 Implementation Agency: Hungarian State Treasury
Central Finance and Contracts Unit (CFCU)
Judith Rosza, Director
Deak Ferenc u. 5.
H-1052 Budapest
Tel: +36 (1) 327-3652
Fax: +36 (1) 327-3572
e-mail: jrosza.cfcu@allamkincstar.hu

6.1.1. Beneficiary: The main beneficiary of the project is the Hungarian Energy Authority - HAEA/NSD.

6.2 Twinning: not applicable

6.3 Non-standard aspects: Due to the specific character of the project, a significant part of the work under this project will have to be contracted to Technical Safety Organisations. Non standard aspects, in line with the "new rules for contracts in the field of nuclear safety" COM(2000)493 final, might arise.

6.4 Contract: One PHARE contract
7. **Conditionality and sequencing**

Results of this project are to be made available to the VVER 440/213 user “family”. Furthermore, available results from any other PHARE and TACIS funded projects in this area are to be taken into account with regard to the definition of the terms of reference to implement the project.

As far as applicable, measures taken should be in line with obligations under the Waste Framework Directorate (Directive 75/442/EEC as amended by Directive 91/156/EEC) as well as with the Directives on water quality, in particular, the Groundwater Directive 80/68/EEC, as well as the EIA Directive (Directive 85/337/EEC, 97/11/EC).

The project will be sequenced as follows:

- **2 Q. 2002**  
  letting of contract and final negotiation of Technical Annex. (with ex-ante control by the Commission). Start of work.

- **3 Q. 2003**  
  submission of the draft final report with the final report to be submitted in the last quarter of 2003.
1. Basic information

1.1 Désirée Number: HU 01.11.02

1.2 Title: Evaluation of waste retrieval and disposal options at the Püspökszilágy radioactive waste treatment and disposal facility

1.3 Sector: IN & EN

1.4 Location: Hungary

2. Objectives:

2.1 Overall objective:

There is at present only one storage/disposal facility for radioactive waste that is operational in Hungary. This facility, that is situated at Püspökszilágy, is nearly full (available storage/disposal capacity in the order of 100 m$^3$). In order to increase the storage/disposal capacity of the facility, radioactive waste packages have to be retrieved from the vaults for subsequent volume reduction using a variety of treatment processes. The retrieval operations should comply with the Hungarian and EU basic safety standards. For a subsequent relocation of the retrieved waste within the site, characterisation of the radioactive waste packages will have to be performed.

2.2 Project purpose:

The main aim of the project is to assess a series of options for the retrieval, treatment/conditioning, interim storage and disposal of various types of radioactive waste currently in store at the Püspökszilágy facility so that additional space for further storage/disposal operations of radioactive waste can be freed.

2.3 Accession Partnership and NPAA priority:

This project will create conditions for accomplishment of the medium-term priorities of the NPAA in sectorial policies and in the Accession Partnership. It is part of a comprehensive nuclear safety policy being implemented at the national level. The Council Report on Nuclear Safety in the Context of Enlargement of June 2001 issued recommendations concerning the safety of other types of nuclear installations than nuclear reactors. It notably stated that "all candidate states should continue to develop and implement their national programmes regarding the safe management of spent fuel and radioactive waste" (recommendations of type II). In this context the retrieval, volume reduction, characterisation and re-packaging of radioactive waste currently in store at the Püspökszilágy facility could constitute an important safety improvement.

3. Description of the Project:

The assessment study should focus on the following topics:

- Options for waste retrieval;
- Options for treatment and conditioning;
- Options for interim storage;
- Options for disposal.
The assessment will take into account radiological, environmental, economic, technological, and volume reduction criteria. A software tool based on Multi-Attribute Utility Analysis (MAUA) will be used for scoring the different options.

4. Institutional framework:

The project will support the work of the State organisation PURAM (Public Agency for Radioactive Waste Management).

5. Detailed budget (in M €)

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   Judith Rosza, Director
   Deak Ferenc u. 5.
   H-1052 Budapest
   Tel: +36 (1) 327-3652
   Fax: +36 (1) 327-3572
   e-mail: jrosza.cfcu@allamkincstar.hu

6.1.1 Beneficiary details: PURAM
   Dr. Peter Ormai
   H-2040 Budaörs, Puskas Tivadar u. 11,
   Telephone: + 36 23 423 180 (or 184)
   Fax: + 36 23 423 181
   E-mail: peter.ormai@rhk.hu

6.2 Twinning: not applicable

6.3 Non-standard aspects: not applicable

6.4 Contract: One PHARE contract

7. Implementation schedule

7.1 Start of tendering/call for tender: 2 Q. 2002
7.2 Start of project activity: 3 Q. 2002
7.3 Project completion: 3 Q. 2003
8. Conditionality and sequencing

As far as applicable, measures taken should be in line with obligations under the Waste Framework Directorate (Directive 75/442/EEC as amended by Directive 91/156/EEC) as well as with the Directives on water quality, in particular, the Groundwater Directive 80/68/EEC, as well as the EIA Directive (Directive 85/337/EEC, 97/11/EC).

The project will be sequenced as follows:

1 Q. 2002: start of implementation procedures, choice of contract letting procedure, completion of a detailed Technical Project Description Sheet, also the ToR.
2 Q. 2003 Assessment of waste retrieval, treatment/conditioning, storage/disposal options
3 Q. 2003 Selection of the best series of options