COMMISSION OF THE EUROPEAN COMMUNITIES
(5th Framework Programme)

Standardised Decommissioning Cost Estimating of WWER-440 Nuclear Power Plants (SCE)

Topical Information Meeting on Decommissioning of Nuclear Installations
(EURATOM FP-6 / NUCTECH-2003-3.4.3.1-4)
March 10, 2003
Brussels
PROJECT started on October 1, 2001

Partners

~ DECOM Slovakia (Slovak Republic)
~ Public Agency for Radioactive Waste Management (Hungary)
~ Belgoprocess (Belgium), co-ordination
MAIN OBJECTIVES OF THE PROJECT

- To organise, manage a Standardised Decommissioning Cost Estimate of WWER-440 Reactors based on the Proposed Standardised List of Items for Costing Purposes developed by the IAEA, the OECD/NEA and the EC.

- To present existing and valuable national cost studies for the decommissioning of WWER-440 reactors based on expert assessment, using one specific cost estimation model for plants in various countries.

- To facilitate the exchange of experience and to provide assistance to member states and candidate countries in nuclear power plant decommissioning and economic analyses.
ACTIVITIES WITHIN THE PROJECT

- **6 work packages** defined in order
  - To facilitate the implementation of the project
  - To be used as a practical guide to follow the progress of work
Description of the decommissioning studies and cost estimation methodologies for immediate dismantling after shutdown and safe storage of WWER-440 nuclear power plants in Slovak Republic and Hungary as reference countries

~ Information collected in individual documents and reviewed
WORK PACKAGE 2

- **Definition of the detail of the**
  - Required input data (technology and building material inventory, radiological data) relating to WWER-440 nuclear power plants
  - The technologies used for the decommissioning of the WWER-440 nuclear power plants

- The detail discussed and agreed
  - Draft report relating to the requirements has been prepared
  - The reference level is the level indicated in the Proposed Standardised List of Items for Costing Purposes (PSL)
WORK PACKAGE 2

- *Invitation letter prepared* in order to get data about building inventory, equipment and radiological characteristics of WWER-440 nuclear power plants.

- In all contacts, it is stressed that:
  - The data are treated in a fully confidential way.
  - In case of a positive and valuable co-operation:
    - A reimbursement for the required work may be granted.
    - A free copy of the resulting report with conclusions from the study will be provided as a net benefit for the co-operation.
WORK PACKAGE 3

- Development of a reference cost calculation model
- First version of a reference cost calculation model developed
- Based on characteristics of the model, it is considered that
  - Collecting available information and data on WWER-440 nuclear power plants can be made compatible with the PSL
  - Data collection requires time and a specific methodology
- A dedicated manual for supporting electronic data collection is prepared
  - Mainly to provide user friendly data collection (prepared file)
WORK PACKAGE 4

- Develop contacts with nuclear power plants and organisations from European and other countries to collect data and to encourage participation in the exchange of information and experience

- Data are available from the
  ~ Slovak nuclear power plants V-1 (type 230) and V-2 (type 213)
  ~ Hungarian Paks plant (type 213)

- The first calculation results for these power plants are investigated
WORK PACKAGE 4

- Contacts have been developed with other organisations to get additional data
- *Invitation* will be sent out
  - When the *manual for electronic data collection* is finalised
  - The *list of required input data and technologies* used for decommissioning is available *in an electronic format*
- A workshop will be held with the co-operating organisations in order to discuss the results of the data collection
WORK PACKAGE 5

- Co-ordination of model cost calculation with reference data, and discussion and comparison of the results with available cost estimates

- First calculation results for Slovak power plants V-1 and V-2, and for Hungarian Paks plant as references are available
  ~ Results have to be evaluated for consistency
  ~ Based on the discussions and when data from other organisations will be available, the additional cost calculations may be carried out

- A matrix is prepared for statistical analysis and comparison of the results of the calculations at the level indicated in the PSL
WORK PACKAGE 6

- **Specific report about the final results**
- Considerations about
  - Difficulties encountered in
    - Collecting information about methodologies
    - Providing coherent data/practical values (building inventories, equipment, radiological characteristics, cost figures, …)
  - Solutions adopted in order to cope with the related problems
  - Recommendations for the future
LESSONS FOR THE FUTURE

- Good progress could be made since start of the project thanks to
  - The *individual contacts* between the partners
  - The *intensive work* of the individual partners
- Results of extended evaluations will strongly depend on the *availability of data from third partners*
- Savings in meeting times and travel and subsistence costs that are the result of the current status of the progress of work
  - Invested in the project in order to improve quality of the end product
- The project is an example of an *extended benchmark exercise*, one of the possible tasks proposed within FP6