

The NEA International FEP Database and its Use in Support of Regulatory Review

A working group of the Nuclear Energy Agency has developed a database of features, events and processes (FEPs) relevant to the assessment of the long-term safety of radioactive waste disposal facilities. The Environment Agency participated in this work as described in a previous report, R&D Technical Report P97.

This report describes work done in order to:

- provide an electronic version of the NEA International FEP Database in a convenient form suited to the Agency's needs;
- determine procedures for use of the Database in support of the Agency's review of an applicant's safety case for solid radioactive disposal, and in other appropriate Agency activities.

Section 1 of the report outlines the objectives and work done. Section 2 gives an overview of the current status, development and international use of the NEA FEP Database. Alternative uses of the Database by the Agency, and procedures for use, are discussed in Section 3. Two alternative procedures for use of the Database in scientific and technical review of an applicant's safety case are outlined and compared; these provide a framework for orderly identification and discussion of technical issues within the review.

It is concluded that the way in which the Database is used will depend on the circumstances and also the aims and preferences of the Agency. Detailed procedures for the use of the Database are best defined for the specific circumstances, taking account of the level of information available from the applicant, and the time and resources which the Agency may wish to devote to a given phase of review.

The NEA FEP Database has been developed as a tool to assist in performing or reviewing safety assessments of radioactive waste disposal facilities. The principle of the Database, and also the software framework, may be equally applicable to other technical or scientific assessments, e.g. of landfill facilities or river catchment pollution studies. Since the Database is now available to the Agency in an easily useable software on CD_ROM, it will be possible for Agency staff to examine the database and assess its potential in these other areas.

Agency Staff interested in the software should contact the Environment Agency's National Centre for Risk Analysis and Options Appraisal (NCRAOA) based in London.

This R&D Technical Summary relates to information from project P3-048 contained in the following output:

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