

# **Status of spent fuel disposal in Finland**

***Kirsti-Liisa Sjöblom***  
***Radiation and Nuclear  
Safety Authority***

**Regulator's Workshop,  
11.-13.9.2001, Stockholm**

# **Hierarchy of Regulations**

**Nuclear Energy Act  
Nuclear Energy Decree**

**Government decision**

**On the safety of spent fuel disposal (1999)**

**YVL Guides**

**Guide YVL 8.4, On long term safety of  
disposal of spent fuel (2000)**

**Guide YVL 8.5, On operational safety of  
disposal of spent fuel (2002)**

# **Decision in Principle - Process**

## **Applies to**

**Nuclear reactors larger than 50 MW<sub>th</sub>**

**Nuclear waste disposal facilities**

**Some other major nuclear facilities**

- **Application to the Government**

- **Environmental Impact Assessment**
- **Safety Assessment**

- **Public hearings in the potential host municipality**

- **Statements; STUK's statement on radiation and nuclear safety most decisive**

- **Consent/rejection by the proposed host municipality**

- **Decision by the Government**

- **Ratification/rejection by the Parliament**

## **MILESTONES FOR DiP**

- **Government's general  
safety regulations** **3/1999**
- **Posiva's EIA-report  
and DiP-application** **5/1999**
- **EIA-statements** **8/1999**
- **Ministry's EIA decision** **11/1999**
- **STUK's preliminary  
safety appraisal** **1/2000**
- **Eurajoki Municipal  
Council's decision** **1/2000**
- **Government's decision** **12/2000**
- **Parliament's ratification** **5/2001**

# **STUK's REGULATORY INVOLVEMENT BEYOND THE DiP**

## **RULEMAKING**

- General safety regulations issued
- Guide for long-term safety finished
- Guide for operational safety under preparation

## **REPORTING OBLIGATIONS/REVIEWS**

- Annual R&D&D reports
- R&D&D program for the preconstruction phase
- Outline of the repository layout
- Feasibility of the Medium Long Hole concept
- Baseline report for the disposal site
- General plans for the rock characterisation facility
- Program for at-depth investigations
- Status report on copper corrosion
- Status report on performance of bentonite
- Olkiluoto specific design for the encapsulation and disposal facility
- Progress reporting of 2005

## **FOLLOW-UP MEETINGS**

- Site investigations: ~four times per year
- Whole program: twice a year

## Spent fuel disposal programme

### IMPLEMENTATION

### REGULATORY ACTION

Site characterisation  
Safety evaluation  
Technical design  
R&D

1983

**Policy decision by the Government**

**Three main reviews:**

- technical and safety related feasibility of the disposal concept
- feedback to the siting process

1997

**EIA process:**

- public participation

1999

**General safety regulations**

**DiP process:**

- local and political acceptance
- preliminary judgement of safety

Site selection

Underground  
research  
facilities

2010

**Construction licence process**

- definitive judgement of safety

Construction

2020

**Operating licence process**

Operation