

Spent Nuclear Fuel Management in Spain

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Abstract. The radioactive waste management policy is established by the Spanish Government through the Ministry of Industry, Tourism and Commerce (MITC). This policy is described in the Cabinet-approved General Radioactive Waste Plan. Currently, it is on its 6th Revision. The 7th is in preparation. ENRESA is the Spanish organization in charge of radioactive waste and nuclear spent fuel management and nuclear installations decommissioning. The priority goal in spent fuel management is the construction of a Centralized Interim Storage Installation (ATC), whose generic design was approved by the safety authority, Consejo de Seguridad Nuclear. This facility is planned for some 6.700 tones of heavy metal. The ATC site selection process, based on a volunteer community's scheme, has been launched by the Government in December 2009. A technical report has been recently published by MITC in which the candidates sites are described and pre-characterized according to certain criteria, such as meteorology, geology, communications, social issues, etc. After the selection of a site in a participative and transparent process, the site characterization and licensing activities will support the construction of the facility. Meanwhile, extension of the on site storage capacity has been implemented at the seven nuclear power plants sites, including past rerecking at all sites and two dry storage at-reactor installations (Trillo and Jose Cabrera NPPs). More recent activities are: rerecking performed at Cofrentes NPP; dual purpose casks re-licensing for higher burn-up at Trillo NPP; transfer of the spent fuel inventory at Jose Cabrera NPP to a dry-storage system, to allow decommissioning operations; and licence application of a dry-storage installation at Ascó NPP, to provide the needed capacity until the ATC facility operation. For financing planning purposes, the long-term management of spent fuel is based on direct disposal. A final decision about major fuel management options is not made yet. To assist the decision makers a number of activities are under way, including basic designs of a geological disposal facility for clay and granite host rocks, together with associated performance assessment, and supported by a R&D programme, which also includes research projects in other options like advanced separation and transmutation.