

REGULATION OF DECOMMISSIONING ACTIVITIES IN THE SLOVAK REPUBLIC

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The paper describes the situation and activities in the field of decommissioning in the Slovak Republic. Systematic approach of decommissioning in Slovakia can be dated back to the 1990's when the Project of "Putting the NPP A-1 into radiation safe status" without spent fuel and without uncontrollable release of radioactivity into environment was commissioned. At the end of 1990's the update of obsolete "atomic act" came into force when previous act dates back to 1984. On the basis of "atomic act" there were specified conditions for approval of decommissioning and the licence for 1st decommissioning stage was issued by regulatory body.

The paper summarizes the lessons learned from the regulation of decommissioning activities over this period. The actual decommissioning program consists of three ongoing decommissioning projects. Decommissioning of a HWGCR type of reactor KS-150 (NPP A-1) shutdown in 1977 after primary coolant system integrity accident with local melting of the fuel, decommissioning of two VVER 440 reactors of V-230 (NPP V-1) shut down in accordance with the Governmental resolution in 2006 and 2008 respectively and decommissioning of two experimental nuclear facilities – a bituminisation line and an incinerator for RAW owned by VUJE Plc installed in the premises of NPP A1 in Jaslovské Bohunice. Meanwhile the incineration facility was released from nuclear regulatory control last year.

Decommissioning of NPPs is operated by JAVYS, Plc. Currently 2nd stage of the A1 NPP decommissioning project is in progress. The activities concentrate on decommissioning of external structures of the A1 NPP, on the problems related to the management of contaminated soil and on the management of RAW from the main production compound of the A1 NPP. The completion of 2nd stage of the decommissioning is planned for the end of 2016. Actually there is in preparation 3rd and 4th decommissioning stages that is going to be licensed together.

The most challenging for the project preparation will be the last decommissioning stage that ends in 2033. The objective of this fifth stage will be mainly focused on dismantling of reactor, steam generators and main transport technological part of primary circuit. During this phase, the cardinal part of RAW which will not be accepted for near surface disposal will be originated.

The object of the 2nd (last) stage of the V1 NPP (2015–2025) is the decommissioning of structures in the main production compound, the buildings of auxiliary operations and the remaining auxiliary buildings, which will not have been decommissioned during the 1st stage of decommissioning, or which will have been only partially decommissioned, and the final site management.

The most important activities during the 2nd stage of decommissioning will be the dismantling of the reactors and of the primary circuit equipment. Other activities, such as the dismantling of other general equipment in the controlled zone and outside the controlled zone, the decontamination and radiation inspection of structure surfaces, the demolition and the management of the site are standard activities, for which there is enough experience to go on, from other decommissioning projects.

Decommissioning activities are regulated by Nuclear Regulatory Authority of SR (UJD SR) as the central state authority for nuclear safety supervision. The legal basis for decommissioning is included in the actual Act No 541/2004 Coll on peaceful use of nuclear energy (atomic act). The act was prepared by UJD SR and it is based on internationally agreed principles.

One of the basic roles of UJD SR is creation of the legislative environment. This area has been recently dominated by works on several amendments of the atomic act due to consistent transpositions of individual Council Directives among others the Council Directive 2011/70/Euratom establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste.

The effectiveness of the Slovak regulatory framework for nuclear safety that is under the competency of UJD SR was subject of the IAEA mission focusing on strengthening and increasing the effectiveness of national regulators (IRRS). Particular attention was paid to review of decommissioning and radioactive waste management framework against the safety standards of the IAEA, as well as against the international criterion for safety.

The paper presents challenges in the field of planned updating of decommissioning framework that can be summarised as follows: Phase out of stage approach, intention is to issue one overarching decommissioning

licence supported by individually licensed decommissioning projects; State responsibility for decommissioning by establishing of a legal entity which has been founded, or authorised by the Ministry of the Economy, Updating of atomic act, new version that comprises a transposition of Council Directive 2014/87/Euratom and 2013/59/Euratom, implementation of IRRS finding, establishing conditions for transmitting of the NPP to the legal entity for the decommissioning purpose.

Country or International Organization

Slovakia

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