



THE PROJECT FOR A NATIONAL DISPOSAL FACILITY FOR LOW AND INTERMEDIATE LEVEL RADIOACTIVE WASTE IN BULGARIA

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The State Enterprise Radioactive Waste is the responsible organisation in Bulgaria for the radioactive waste management and in particular, for the establishment of the national disposal facility (NDF) for low and intermediate level short lived radioactive waste (LIL RAW SL). According to the national strategy for the safe management of spent fuel and radioactive waste the NDF should be commissioned in 2015. NDF will accept two main waste streams – for disposal and for storage if the waste is not disposable. The major part of disposable waste is generated by Kozloduy NPP. The disposal facility will be a near surface module type engineered facility. Consecutive erection of new modules will be available in order to increase the capacity of the facility. The corrective measures are previewed to be applied if needed – upgrading of engineered barriers and/or retrieval of the waste. The active control after the facility is closed should be not more than 300 years. The safety of the facility is supposed to be based on the passive measures based on defense in deep consisting of physical barriers and administrative measures. A multibarrier approach will be applied. Presently the NDF project is at the first stage of the facility life cycle – the site selection. The siting process itself consists of four stages – elaboration of a concept for waste disposal and site selection planning, data collection and region analyses, characterization of the preferred sites-candidates and site confirmation. Up till now the work on the first two stages of the siting process had been done by the SE RAW. Geological site investigations have been carried out for more than two decades all over the territory of the country. The results of the investigations have been summarized and analysed thoroughly. More than 40 potential sites have been considered, after the preselection 12 sites have been selected as favourable and among them 5 are pointed out as acceptable. The ultimate decision for a site should be taken after detailed sites investigation, safety and environmental impact assessments.

Keywords: management of low and intermediate level radioactive waste, site selection process, module type disposal facility, multibarrier approach