

Geological disposal for high-level radioactive waste-Environmental requirement for the first stage of pre-operational period-

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Geological disposal, meaning the disposal of high level radioactive waste in a facility located deep underground (a geological repository) terrain dispose was conceived as a method to dispise of the longer lived, more hazardous radioactive waste. There are JNC-2nd report on the studies for geological disposal of the high level radioactive waste and a report of Japan Society of Civil Engineers on the management of environmental requirement for geological disposal of high level radio-active waste.

We have a law on the obligation to control and to manage on a final setting of high-level radioactive waste.

There are three main periods associated with the life cycle of a geological repository: pre-operational, operational and post-closure. The pre-operational period includes the sitting and design studies, and the safety and environmental impact assessments required to obtain the authorization to proceed with repository development and initial construction on the facility. By the law, it has three steps on the pre-operation.

On the first stage of pre-operation, It must be discussed and assessed, inside and surrounding of the site, [1] on the effects of earthquakes, volcanic eruptions, upheavals, erosion and environmental evidences, [2] of active faults, [3] of occurrence of loose Quaternary Period sediments and [4] of occurrence of mineral deposits.

The guidelines quoted the reports of JNC and of Japan Society of Civil Engineers are omnibus ones. It must be discussed on the maintain of the safety area of a few km² and on each evidences and physical constants in each terrain, in this report.