

Study on Potential Effects of Natural Phenomena -An Approach to Bridging the Gap between Neotectonics and Performance Assessment

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The purpose of this research is quantitative evaluation of the influence on a HLW disposal system condition and performance, and change of geological environmental conditions caused by natural phenomena.

Japan Atomic Energy Agency (JAEA) presented the importance of considering the relationship between a natural phenomena and Thermal - Hydrological - Mechanical - Geochemical (hereafter, T-H-M-C), and the relationship between change of T-H-M-C and change of the Nuclide Transport Parameters concerning the performance of a HLW disposal system through the last year's examination.

It was developed that an arranging method for the relationship between natural phenomena and T-H-M-C condition intelligibly. On the other hand, an arranging method for the relationship between T-H-M-C condition and Nuclide Transport Parameters was developed by using of 2-dimensional matrix.

It came to be able to perform efficiently information arrangement about the Nuclide Transport Parameters which is needed in order to evaluate quantitatively the influence of the performance on the disposal system resulting from arrangement of data and knowledge which are already acquired, and change of the geology environmental conditions by the natural phenomenon by such technique in the field of the earth science from a viewpoint of the reflection to performance assessment of HLW disposal system, and the excess and deficiency of the information which is needed for evaluation etc. were able to be clarified.