

Considerations of Approaches to the Geological Disposal of High-Level Radioactive Waste

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Atomic Energy Commission

1. The Atomic Energy Commission (AEC) pointed out in the Framework for Nuclear Energy Policy (decided by the AEC on October 11, 2005) that it is necessary for the Government to establish an institutional framework for safety regulations concerning geological disposal of radioactive waste and to consider the measures needed for the implementation of joint disposal of radioactive waste containing transuranium elements (TRU waste) and high-level radioactive waste. Accordingly the AEC has judged that a bill to partially amend the Specified Radioactive Waste Final Disposal Act and other acts concerned that the cabinet meeting recently decided to submit to the Diet is appropriate as it seeks to implement necessary measures in line with the basic principles set forth in the Framework for Nuclear Energy Policy in such ways to make TRU waste eligible for geological disposal, assign the Nuclear Waste Management Organization of Japan (hereinafter referred to as "NUMO") with the responsibility for carrying out the disposal thereof and rearrange the institutional framework necessary for securing funds to cover the disposal costs and establish the one for enforcing safety regulations concerning geological disposal.

2. Geological disposal of high-level radioactive waste has already been assessed as the safe disposal method that can be used in Japan (according to a report issued by the AEC's Advisory Committee on Nuclear Fuel Cycle Back-end Policy on October 11, 2000). Also, laws and regulations for the implementation of geological disposal have been put into effect and the NUMO has been established as an entity responsible for the implementation thereof, with a three-step selection process for a site for disposal facilities now underway. In light of the recent status of the selection process, the AEC believes that it is important for the Government, the NUMO and electric utilities to give due consideration to the following points in particular in the continuous promotion of the selection process in line with the basic principles set forth in the Framework for Nuclear Energy Policy.

(1) Active Explanations to the Public on the System to Select a Disposal Facility Site

The geological disposal of high-level radioactive waste is an issue that our generation is responsible for as we now enjoy the benefits of nuclear power generation which generates the waste. The parties concerned must therefore ensure the steady progress of the three-step selection process mentioned above, as it will take some 30 years before said disposal actually commences. Accordingly, it is important to enhance efforts, contriving the way to explain, to gain public understanding concerning the safety of the disposal, the measures to ensure the equity of the benefits concerning the construction of such disposal facilities between the general public and the local

community that accepts the facilities, and the process to select a construction site and ways to support the development of regions involved in the selection process.

(2) Creation of a Learning Environment to Deepen Mutual Understanding

In order to ensure progress in the process of selecting a construction site for the disposal facility, it is important to provide an environment, in the neighborhood of the people interested, wherein the people can learn the safety and public benefits of disposal and the various advantages and disadvantages represented by the allocation of a disposal facility site, including the impact on the host region. To this end, it is important for the Government, the NUMO and electric utilities not only to engage in direct dialogue with the interested people continuously but also to deepen mutual understanding with the municipalities where the people live and the relevant prefectures concerning the process to select the site and their support to provide such an environment. .

The construction of the disposal facility for high-level radioactive waste will be beneficial to the general public. Therefore, from the viewpoint of equity of benefits, the construction of the disposal facility should be accompanied by sustainable development of the host local community, and the costs for the development should be covered by the Government in its role as the representative of the general public, and the operator of the disposal facility.

The AEC sincerely hopes that a number of municipalities and prefectures that deliberate ways to promote sustainable development of the community in the future are willing to consider the possibility of accepting the construction of the disposal facility as a way for the promotion, and that deliberations and discussions on the possibility of their hosting said construction will be conducted with full knowledge of the safety and public benefits of said disposal facility as well as of the information concerning the impacts of the location of such a facility on the community .

(3) Coordination and Collaboration Based on the Allotted Roles among the National Government, Research and Development Institutions and the NUMO

It is important for the NUMO, while engaging in the activities to select a site for the disposal facility in question, to develop technology in a conscientious manner for the purpose of securing safe disposal and making disposal more economical and efficient. Meanwhile, the Japan Atomic Energy Agency and other research and development institutions should, with the use of deep underground research facilities, conduct continuous scientific research into deep underground conditions, basic research with a view to improving the reliability of the geological disposal technologies and advancing of safety evaluation methods and research and development related to safety regulations.

In addition, as it will be necessary in the future to continually establish new geological disposal facilities at intervals of dozens of years in order to promote the use of nuclear energy over the long term, the AEC expects that research and development institutions steadily advance research and

development into the methods for reducing the amount of waste per unit of electricity generated as mentioned in the "Basic Policy on Research and Development of FBR Cycle technologies over the Next Decade" (dated December 26, 2006 and decided by the AEC), while exploring the possibility of international joint research.

In order to facilitate the effective use of the results of the above-mentioned activities by various parties, it is important for the Government, research and development institutions and the NUMO to endeavor to implement the above-mentioned activities in an integrated, planned and efficient manner by enhancing their coordination and collaboration and maintaining a broad viewpoint on the issue of disposal.