

DECOMMISSIONING HAMAOKA NPS UNITS 1 & 2 WITH ASPECT OF RADIOACTIVE PROPERTIES

Wednesday, 25 May 2016 09:00 (9 hours)

1. The subject to realize decommissioning plan
 - ☒The most essential subject to realize decommissioning plan is to grasp the radioactive properties (Radioactive inventory) of the target installation. Based on the radioactive properties, Decommissioning Plan (including dismantling method, reduction of radiation exposure, safety evaluation, waste disposal plan, etc.) shall be realized, optimized and carried out. And radioactive waste shall be disposed with safety manner.
 - ☒Especially, reactor and inside core internals are difficult to handle them by direct handling for radioactive characterization by radiochemical measurement etc.
 - ☒Theoretical calculation is a typical evaluation technique especially for difficult-to-measure nuclides which are contained in activated wastes such as core internal metal.
 - ☒It is essential to improve evaluation method as close to the real value for the scientific rational waste disposal.
 - ☒In order to such that, the project below was established in order to improve calculation precision by comparison between calculation method of neutron induced activation and radiochemical measurement method, and by verification of evaluation method.
2. Radioactive Characterization for Hamaoka Unit-1&2
 - ☒Hamaoka in Unit 1, core sampling and radiochemical analysis is carried out to verify the theoretical accuracy targeting "Reactor Vessel", "Inside Core internals" and "Containment Vessel Concrete Structures" since 2009.
 - ☒Sampling of "Reactor Vessel" and "Inside Core internals" has already been completed. Radiochemical analysis of radionuclide and chemical analysis of precursor element are conducted at the Hot Laboratory set in Hamaoka NPS.
 - ☒Verification and Adjustment of Calculation Method is planned to be completed by 2018.
 - ☒The same project is also planned targeting at Hamaoka Unit 2.
 - Radioactive characterization of neutron induced activated structure is carried out by Chubu EPC jointly collaborated with EPRI which has a wide range of knowledge about decommissioning and activation calculation.
3. The objective
 - ☒Dismantling method, waste treatment and disposal method to be optimized by improving activation calculation accuracy.
 - ☒Development of sampling equipments and Hot Laboratory to be set up to survey radioactivity characteristics of actual material.
 - ☒It seems that the above Chubu Project will be internationally beneficial because there is few such a study example.

Country or International Organization

JAPAN

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YES

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