

Preliminary evaluation of decommission waste inventory and quantity for nuclear power plants

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ABSTRACT

Due to the Taiwan national policy “nuclear-free homeland by 2025”. As a result, Taiwan nation’s three operating Nuclear Power Plants (NPPs) are being decommissioned.

Decommissioning is a representative stage in back-end cycle of NPP. There has been several NPP decommissioning indicated Global Warming Potential (GWP) could also be reduced by reducing the volume of waste and increasing recycling of material and steel. The Taiwan nation’s three operating nuclear NPPs are to be decommissioned and has progressed the strategy determination and Research and Design (R&D) for the decommissioning.

Decommissioning waste, components, system and structure is one of the most important elements. Decommissioning waste quantity is calculated based on Piping and Instrumentation Diagram Piping (P&ID) and completion report with activation and contamination data. Due to the largest portion of waste management and disposal in decommissioning, it is necessary to exactly evaluate waste quantity (applying the regulation, guideline, and site-specific characterization) for economic viability.

The purposes of this paper are to provide an overview of useful as an important information in establishing the waste inventory and quantity for Boiling Water Reactors (BWR) are mainly described.

Keywords:

Nuclear power plant, Decommissioning, Waste quantity.