N190. Decontamination Update

The qualification programs for both PWR and BWR full-system decontamination have been completed. Several reports published recently will be useful for utilities considering part-system decontamination, as well as for the longer-term goal of full-system decontamination.

NP-7514 summarizes the PWR qualification program funded by several utilities and performed by Westinghouse. The EPRI funded work is presented in NP-7512 and NP-7513. NP-7512 describes the three-cycle corrosion tests performed with alkaline permanganate/LOMI. (The tier-1 report is an executive summary and tier-2 presents the detailed results). NP-7513 describes the 1-cycle test performed under faulted conditions, representing the extremes of temperature and reagent concentrations that could occur in the event of operational problems.

The BWR work is described in TR-100049, under a new report numbering system. This work was jointly funded by Commonwealth Edison and EPRI, with GE Nuclear Energy as prime contractor. The tier-1 report is a summary of the entire program, as NP-7514 was for PWRs. The six volumes of TR-100049 Tier-2 cover the following: a description of the LOMI process and its application to BWRs, corrosion and long-term materials compatibility, decontamination equipment and system interaction, cost-benefit analysis and recontamination, shielding, and radiation exposure, and waste management for full-system decontamination.

A BWR full-system decontamination safety report will also be published following review by the NRC. This report will provide the technical basis for plant-specific 10 CFR 50.59 reports for full-system decontamination.

Taken from "Decontamination Update," Chris Wood, Radiation Control News, No. 13, March 1992 (EPRI, 3412 Hillview Avenue, Palo Alto, CA 94303).