

N286. Chemical Decontamination Workshop

An EPRI workshop on chemical decontamination was held in Charlotte, North Carolina, on June 8-9, 1993.

Utilities face the triple challenges of increasing requirements for repair and inspection work, the need to control operations and maintenance, costs and more restrictive radiation exposure limits. The theme of the workshop was the role of decontamination technology in meeting these challenges.

Decontamination vendors reported on utility decontamination carried out since the last workshop in 1991. U.S. vendors reported the result of 30 decontamination applications worldwide, with a similar number being reported by European and Canadian organizations. This indicates a significant increase in decontamination activities in the past 24 months.

Utility experience and lessons learned were discussed in the next session. Generally high decontamination factors were reported, but the importance of thorough preplanning and flexibility in procedures to respond to unanticipated results were stressed, as at previous workshops. With increasing complexity in water chemistry, particularly in BWRs, the desirability of artifact testing before the decontamination of high hydrogen injection rates coupled with zinc injection in BWRs might produce the effectiveness of subsequent decontamination was discussed. The need to accommodate decontamination within shorter refueling outages was a growing challenge to the operators, as was leakage caused by access hole covers. Noteworthy by its absence from this session was any mention of corrosion problem resulting from decontamination; clearly the guidelines on reagent selection for susceptible systems have proved effective.

Recent technical developments have been primarily aimed at increasing the efficiency of decontamination reagents, reducing ion exchange resin requirements and improving analytical technique. New work showed no adverse corrosion effects and up to \$30,000 savings in reagent and waste disposal costs for a typical recirculation piping decontamination.

Waste management issues are becoming a major impediment to increasing use of decontamination technology, and major progress has been made in PWR full-system decontamination technology.

A new topic for this series of workshops concerned harsh decontamination techniques for free release of replaced items and decommissioned components.

Workshop proceedings can be obtained from Christopher Wood at (415) 855-2379

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