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BWR/5 FULL-SYSTEM DECONTAMINATION FEASIBILITY STUDY

Keywords: CONTAMINATION REMOVAL; FULL SYSTEM DECONTAMINATION; DECONTAMINATION; RADIATION FIELD CONTROL; BWR

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Objectives: To determine the engineering feasibility and cost-effectiveness of complete reactor system decontamination of a BWR/5 plant using the LOMI process.

Comments: The EPRI report TR-100049 concluded that BWR full-system decontamination was technically and economically feasible on a BWR/3 plant design. EPRI conducted another FSD study on a BWR/5 plant because of several design differences compared with the BWR/3. The approach was to determine the applicability of decontamination studies at Commonwealth Edison Company's Quad Cities BWR/3 to its LaSalle County BWR/5.

Remarks/Potential for dose limitation: The conclusions are:

1) Full System Decontamination of the BWR/5 at LaSalle would require approximately 30% less reagent and ion-exchange resins compared with the BWR/3.
2) No new, untested materials would be exposed to the decontamination solvent.
3) Only minor changes would occur in the proposed operation of BWR systems during the decontamination, with less decontamination equipment required.
4) Estimated costs and benefits would be similar to the BWR/3 ($7.8 million cost, $12.6 million benefit).
5) Exposures during the decontaminations would increase slightly (54 vs 42 rem).

References: "BWR/5 Full-System Decontamination Feasibility Study", EPRI TR-102332 Final Report, May 31, 1993.

Duration: from: 1991 to: 1993

Funding:

Status: Completed

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