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PLANT E.I. HATCH CHEMICAL DECON 1991

Keywords: CONTAMINATION REMOVAL; SUBSYSTEM DECONTAMINATION; DECONTAMINATION; RECIRCULATION SYSTEM

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Objectives: Outline the results of the 1991 Hatch Unit 1 Reactor Recirculation System (RRS) decontamination using AP/LOMI. Share the lessons learned from this decon operation.

Comments:

- The decon operation consisted of a two-step LOMI/LOMI application to the entire RRS, with an additional AP/LOMI application to the RRS discharge piping.
- Project duration from start of cavity drain to cavity refilled was 10 days.
- The process removed 28 kg of oxide and 72 curies of activity from the RRS. Dose rates in the immediate vicinity of the RRS were reduced by an average factor of 8.9.
- The average dose rates on recirc piping was reduced from >350 mr/hr to <40 mr/hr. Drywell dose rate went from 20.46 mr/hr previously to 12 mr/hr.
- The estimated man-rem savings for two outages post decon is >700 man-rem.
- The dose rate in 1993 was approximately 4 times the immediate post decon rate.

Remarks/Potential for dose limitation: Lessons learned from this decon:

- 1) Choose equipment that is easy to assemble
- 2) Maximum temperatures, flows and flow reversals will increase decon factors (DF)
- 3) Location of decon taps is important - injection points and flow paths directly effect the DF
- 4) Use pressure gauges for level indication as opposed to tygon tubing
- 5) Run recirculation as soon as possible after decon.
- 6) Tear down of decon equipment was slowed due to low spots containing water. More low point drains were needed.
- 7) Include procedure steps that allow repeat of steps
- 8) Hang shielding as normally done.
- 9) Use dedicated health physics technicians.

References: Warren, W. Glenn, "Plant E.I. Hatch Chemical Decon 1991," *Fifth Workshop on Chemical Decontamination*, pp. 9.1-9.14, Electric Power Research Institute, Charlotte, North Carolina, 1993.

Duration: from: 1991 to: 1991

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Status: Completed

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