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H-188

STEAM GENERATOR REPLACEMENT PROJECT AT NORTH ANNA POWER STATION

Keywords: OPERATIONAL AND MAINTENANCE TECHNIQUES; STEAM GENERATOR REPLACEMENT; NORTH ANNA

Principal Investigator: Project Manager:

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Objectives: Summarize the steam generator replacement project at North Anna Power Station.

Comments: Some of the problems that led to the S/G replacement were:

- intergranular and primary water stress corrosion cracking
- circumferential cracking
- tubesheet dose rates of 25 to 35 Rem/Hr
- extensive S/G inspection and maintenance scope expending from 80 to 200 man-rem per outage
- outage duration of 55 to 77 days due to S/G activity

Some of the practices contributing to the success of the project:

- effective pre-planning
- successful mock up training program
- aggressive radiological protection measures
- extremely low respirator usage through effective HEPA
- ventilation and other engineering controls
- major use of remote tooling and robotics
- good engineering

Remarks/Potential for dose limitation: The dosage data for the project are:

Projections: (1) 540 Rem for all work, (2) 482 Rem for SGR work only, (3) goal of 110 personnel contamination events for all work, (4) goal of 11,000 cubic ft of radwaste or less

Actual results: (1) 313 Rem for all work, (2) 240 Rem for SGR work only, (3) 67 personnel contamination events for all work, (4) 3,600 cubic ft of radwaste generated

References: Banks, T., "Steam Generator Replacement Project at North Anna Power Station," 1993 *Radiation Exposure Management Seminar*, Westinghouse, Pittsburgh, Pennsylvania, 1993.

Duration: from: 1993 to: 1993

Funding: N/A

Status: Completed

Last Update: November 30, 1993