

**J23. Nine Mile Point 1: BWR-2 Mk1**

U.S.A.

**Insulation Replacement on Recirculation Piping and Valves**

**Description:** Replace insulation on recirc piping and valves, Inspect and supervise, Install/modify/remove scaffolding, install/modify/remove shielding, and clean up. The pre-job estimates of ManSv and ManHours were 0.18252 and 863, respectively. The post-job actual readings were 0.25589 and 774.25.

The primary reason for the difference between estimated dose and actual dose is that the mirror insulation was poorly numbered and caused confusion and delays when reinsulating in the high dose rate area. This was particularly true of insulation adjacent to other drywell sources.

**Comments:**

**Effective Job Planning:** Insulators, construction services, and outage planning were required to verify, to the ALARA Group, that all open items (i.e. WRs, mods, etc.) were closed out prior to reinsulating any piece of equipment or piping.

**Corrective Action:** A renumbering system started by the insulators and the modifications to individual pieces of insulation (for a custom) fit will greatly reduce dose for any future insulation or in-service inspection (ISI) work on this system.

**Key Radiological Controls:** Prior to each entry, RP technicians informed the workers of radiological conditions and low dose waiting areas, and instructed them to minimize time adjacent to localized sources of high radiation. The insulators also sprayed a light demin water mist onto the insulation prior to removal. This eliminated the spread of contamination, reduced airborne radioactivity, and optimized the use of respirators.

Earlier in the outage, shadow shielding had been installed on 13,15 recirc suction and discharge risers and 12,14 recirc suction risers. The shielding reduced the dose fields of the high-radiation area.

**Additional Comment:** Sandpaper gloves were extremely effective for the safety of personnel when handling mirror insulation and during subsequent decontamination and modifications.

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