

**IP2 SG TUBE LEAK EVENT (2/15/00)
EQUIPMENT PROBLEMS**

- | <u>Item</u> | <u>CR Number</u> | <u>Equipment Problem</u> |
|-------------|------------------------|--|
| 1. | 2000-1137 | Pressurizer pressure master controller did not control (close) in automatic. This required operators to take manual control. |
| 2. | None | Chemical and volume control system letdown backpressure regulator slammed shut vice throttling. |
| 3. | 2000-0984 | Condenser vacuum was lost several times, which required operators to use the #21-23 SG ASDVs for RCS cooldown. Two longstanding degraded equipment problems caused the loss of vacuum. [(1) the SJAE steam supply pressure regulator was inoperable and required operators to manually throttle steam flow using a bypass valve. (2) The condenser mechanical vacuum pump tripped on thermal overload, which was a repeat problem.] |
| 4. | 2000-1025 | RCS overpressure protection system (OPS) was inoperable due to an inadequate N2 supply to the PORV accumulators. This delayed OPS operability during the RCS cooldown until a temporary modification could be implemented. A permanent design change is scheduled to correct this design deficiency during the next refueling outage. |
| 5. | 2000-1026/1033 | Isolation Valve Seal Water System (IVSWS) lost tank level during the event. Operators refilled the tank, but it unexpectedly emptied again soon after operators refilled it. Engineers believe the IVSWS system water transferred into a low pressure portion of the component cooling water (CCW) system. This appeared to be a repeat problem from 1997 and a potential longstanding design deficiency. The inoperable IVSWS system required operators attention during the event. |
| 6. | 2000-0997 through 1007 | Ten safeguards and containment isolation valve position indication lights, located in control room, failed to illuminate. |
| 7. | 2000-1008 | The SJAE discharge isolation valve was slow to close following the containment isolation phase "A" signal. |
| 8. | 2000-1023 | Excess letdown CCW isolation valve 793 position indication light repeatedly blew fuses. No valve position indication for this valve was available. |
| 9. | 2000-1051 | The auxiliary feedwater (AFW) pump room heated up (to approximately 80 F) with motor driven pumps running in response to the event. Station personnel had inadvertently placed wood planks over the AFW pump room fresh air inlet ventilation dampers when implementing the station Winterization Plan. The AFW pumps did not fail, but this unexpected. |

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A130

(2)

room heatup had the potential to affect pump operability during periods of prolonged AFW operation.

10. 2000-1065/1286 The RHR heat exchanger temperature indication used to monitor RCS temperature with RHR in service may not accurately represent RCS temperature. System alignment permits relatively cool RHR bypass flow to mix with the water exiting the RCS upstream of the temperature detector. This causes the RHR heat exchanger inlet temperature to be lower than the actual RCS exit temperature when RHR is in service. As a result, RCS temperature may have exceeded the cold shutdown TS temperature limit of 200 F (both historically and following the 2/15/00 event).
11. 2000-1094 Emergency Data Display System (EDDS) and Emergency Response Data System (ERDS) were inoperable for several hours at the beginning of the event. The problem appeared to be communications related. The delay initially inhibited the NRC's ability to remotely monitor and assess the event.
12. 2000-1095/1218 Reurter-Stokes off-site telemeter radiation monitor system didn't provide normal display output during the event. This appeared to be repeat, longstanding degraded material condition which reduced off-site dose assessment capabilities.