Initial SDP Determinations Downgraded in Significance

ANO-2 Fire Barrier (EA-00-202)

A preliminary WHITE SDP finding was identified in NRC Inspection Report NO. 50-313/00-16; 50-368/00-16 involving a double-leaf fire door, separating the ANO-2 vital switchgear rooms, that was found with the stationary leaf unlatched. The inspectors considered the door to be inoperable. The licensee responded to the preliminary SDP finding by providing a letter Region IV dated October 24, 2000, which stated that qualified roving fire watches traversed the ANO-2 north and south vital switchgear rooms on an hourly basis during the time that Fire Door 269 was unlatched, although these fire watches were established as a compensatory measure for an unrelated issue.

The NRC reviewed the fire watch qualifications and security records to confirm the licensee's statement. Based on the new information, the NRC agreed that the use of a roving fire watch as a compensatory measures for a degraded fire barrier was in compliance with the ANO-2 Fire Barrier licensing basis document and that the risk significance could be reduced to GREEN. However, because of the licensee's failure to identify the degraded fire barrier and establish specific controls to ensure continued compliance with requirements, the NRC determined that there was a credible impact on safety due to the high risk significance of this fire barrier. The issue therefore warranted final characterization as more than minor and was documented in the inspection report as a GREEN finding.

Summer TDAFW Operability (EA-00–238)

A preliminary YELLOW SDP finding was identified after the discharge isolation valve for the turbine-driven auxiliary feedwater pump was found closed for 48 days, rendering the TDAFW pump inoperable. The staff used the Accident Sequence Precursor human performance model to estimate the human error probability (HEP) associated with identification and recovery of the TDAFW pump, for the initial risk determination. The HEP value determined using this method was 0.5 (i.e., a 50% recovery probability).

During a regulatory conference to discuss the preliminary finding, the licensee introduced different methods of determining the risk due to human error. The staff evaluated the licensee's information and determined that the use of the THERP human performance model was more appropriate since it was the model integrated with the Summer plant risk analysis, which was used for determining the change in CDF as a result of the closed valve. Consequently, the NRC staff determined that the THERP HEP of 0.27 was appropriate for this issue and this was sufficient to change the significance of the finding to WHITE.

Quad Cities OSRE Drill (EA-00-153)

A preliminary RED SDP finding was identified after the licensee failed to protect two of four complete target sets during an OSRE drill. The SDP used for this determination was developed by integrating the Physical Protection SDP (PPSDP) with the Reactor Safety SDP(RSSDP). Given that this was the first OSRE finding processed using the SDP, several issues arose which indicated that the integration of the PPSDP with the RSSDP did not yield appropriate results. The NRC responded by developing an interim PPSDP and divorcing it from the RSSDP. This approach has received Commission approval. The finding was reevaluated using this interim PPSDP and determined to be WHITE.

Quad Cities Makeup Pump Valve Failure (EA-00-128)

A preliminary WHITE finding was identified following a surveillance test failure of the safe shutdown makeup pump (SSMP) injection valve which was initially attributed to an improper post-maintenance verification of staking the yoke bushing. The test failure occurred only after several valve strokes were completed satisfactorily. The WHITE characterization was the result of a Reactor Safety Phase 3 SDP performed by using the licensee's PRA model to calculate the risk impact (delta CDF) of an inoperable SSMP for a period of 30 days. Based on additional information provided by the licensee at a regulatory conference to discuss this significance determination, the NRC staff determined that the valve would actually have operated properly if it had been demanded during the 30 day period. Since the equipment remained available during this period, the issue was determined to be minor.

Praire Island Design Control Inadequate (EA-00-282)

The Filter Water system at Prairie Island provides bearing water flow to the safety-grade vertical cooling water (CL) pumps. The Filter Water system was installed QA Type 1, but was downgraded to QA Type III in 1977 when the licensee erroneously determined that bearing cooling was not needed for pump operability. During a Safety System Design Inspection it was determined that the bearing cooling is needed for CL pump operability. A loss of offsite power (LOOP) event would result in the loss of the well water pump and therefore the automatic backwash function for the Filtered Water filters. At some point following the event (not immediately) the Filtered Water filters will completely plug, such that loss of bearing cooling occurs. This would cause a loss of CL cooling water and consequent failure of the Unit 1 emergency diesel generators (EDGs). It was assumed that the filters would plug in 3 hours for the greater part of any year in which the above described condition existed. The staff's preliminary SDP phase 3 analysis result was YELLOW. However, subsequent to this determination but prior to any formal interaction with the licensee (i.e., prior to a Regulatory Conference), the staff discovered a logic error in the computer model they had used. Upon correction of this error, the result changed to WHITE.