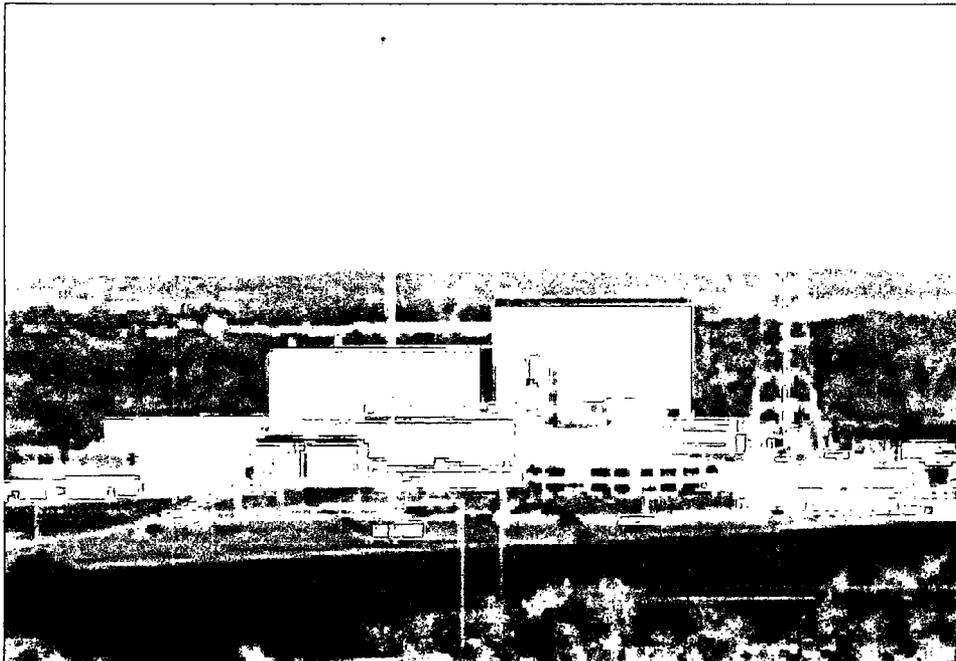


# **Significance Determination Process Refresher Training**

**DRS Inspector Counterpart Meeting  
October, 2006**



Cooper Nuclear Station, Brownville, NE

*AL3S*

# Significance Determination Process Refresher Training

## DRS Inspector Counterpart Meeting October, 2006

**Objective:** Improve Inspector Knowledge on the Significance Determination Process Including the Use of the Plant-Specific Risk-Informed Notebooks

**Method:** The Inspectors will be asked to perform a risk estimate for an example inspection issue. These results will be reviewed and discussed with the Senior Reactor Analysts during an open session in the counterpart meeting.

**Activities:** Prior to the session to be held on October 11, 2006 at \*\*\*\*\*, inspectors should read the following documented inspection issue, review the appropriate portions of Inspection Manual Chapters 0609 and 0612, and conduct the following:

- 1) Identify and document the performance deficiency to be evaluated;
- 2) Make and document the minor determination including appropriate references;
- 3) Complete a Phase 1 screening of the issue and document by completely filling out the attached form; and
- 4) Conduct a Phase 2 estimate using the Cooper Nuclear Station Site-Specific Risk-Informed Notebook and completing the appropriate worksheets (attached).

**Issue:** The following was an inspection issue modified to better exercise various portions of the significance determination process:

On December 29, 2004, at 7:28 pm, control room operators at the Cooper Nuclear Station attempted to start Service Water Pump A from the main control room. During the attempt, the circuit breaker closed and then immediately tripped open. As a result, Service Water Pump A was declared inoperable in accordance with Technical Specification 3.7.2. Operators were dispatched to the switchgear and were able to start the pump successfully via local operation of the breaker. The breaker was removed from service and replaced with a spare on December 30, at 1:37 am. The inspectors determined that the pump had last been successfully started at 8:34 am on December 25 for routine pump rotation.

The circuit breaker for Pump A is a 4160 V General Electric Magne-Blast

breaker. Troubleshooting on the breaker by the licensee and by the original equipment manufacturer indicated that a critical clearance between the prop pin and the breaker frame was inadequate. There was also evidence that the prop pin had come in contact with the frame which would have prevented the breaker from latching in the closed position during operation. The breaker had been overhauled by a vendor in January 2000 and, during receipt inspection by the licensee, the prop pin clearance was verified to be adequate. The licensee determined that, although the clearance was adequate in 2000, insufficient spacers between the prop pin and frame allowed the prop pin to travel along its shaft during breaker operation until it contacted the frame. Travel of the prop pin was determined by the manufacturer to occur only during cycling of the breaker.

In December 2000, Resolve Condition Report 2000-1165 documented a similar failure of Service Water Booster Pump B caused by inadequate clearances between the prop pin and frame. This breaker had also been overhauled by the same vendor and the licensee was able to verify that the prop pin clearance was adequate following overhaul but inadequate spacers had allowed the pin to travel along the shaft and become misaligned during successive breaker operations. As a result, the licensee's breaker engineer recommended the addition of washers between the pin and frame to ensure the critical clearance was maintained. In addition, the entire population of safety-related breakers were inspected, including the breaker for Service Water Pump A, to ensure that adequate clearance existed between the pin and frame; however, the work request to perform this inspection did not require the verification or addition of adequate spacers. The breaker for Service Water Pump A had been verified to have adequate clearances during this inspection, but no spacers were added to ensure this clearance was maintained.

<b>Minor Determination</b>	
<input type="checkbox"/> Minor	<input type="checkbox"/> More than Minor
<b>Specific Reference:</b>	
<b>Reason:</b>	