

Palisades Information Request (Inspector M. Holmberg (630) 829-9748)
Date of Request - October 2, 2009

To support an NRC baseline inspection in accordance with IP 71152 "IDENTIFICATION AND RESOLUTION OF PROBLEMS," please have the following information provided to the Site Resident Inspectors Office on Monday October 5th. This information is needed to complete the detailed review of the corrective actions associated with the recent 7C service water pump (SWP) coupling failure. This inspection will be conducted in accordance with Section 02.02 "Selected Issue Follow-up Inspection" of IP 71152. If any records are not available, please identify a date when this information will be available.

- 1) All site and vendor corrective action records related to the failure of the P-7C SWP.
- 2) Metallurgical investigations and reports associated with the P-7C SWP couplings.
- 3) Vendor assessment of cause for improper heat treatment of the failed P-7C coupling.
- 4) Vendor assessment of cause for inaccurate hardness testing completed on the failed P-7C coupling.
- 5) Identify the locations (e.g. surface) on the coupling of hardness tests completed by vendor on failed coupling.
- 6) Identify the locations (e.g. surface on the coupling of hardness tests completed by Jackson testing lab on failed coupling.
- 7) If the Jackson lab did not hardness test of the failed coupling at the same locations as the Vendor, identify the basis for not performing hardness testing at the same locations.
- 8) Identify the vendor heat treatment step/process and temperature ranges (and times at these ranges) which caused the precipitates to form at the grain boundaries of the failed P-7C coupling.
- 9) Vendor basis for confirming that improper heat treatment has not occurred on the inservice P-7A pump couplings (e.g. what differences existed in heat treating equipment (e.g. different ovens), procedures or quality assurance measures that were applied to the heat treating of the P-7A pump couplings vice the P-7C pump couplings).
- 10) Vendor Material Certification Records for the shaft couplings on each SWP. (P-7A, B and C-couplings on shaft at time of coupling failure).
- 11) Copy of the ASTM Standards and Vendor Specifications applicable to the fabrication and heat treatment of the SWP couplings.
- 12) Vendor shop fabrication records (e.g. fabrication travelers) and general information on the specific steps and sequence of steps used to fabricate and heat treat the P-7A and P-7C pump couplings including dates and locations for each manufacturing step. Please provide the required time and temperature bands for heat treating the couplings.
- 13) Vendor records/traces of heat treatment time and temperature traces applicable to the P-7A and P-7C pump couplings.

14) Type & size of vendor heat treating oven used (e.g. gas fired, induction etc) and location (e.g. drawings) and type of sensors used to measure heat treatment oven temperatures and required period of calibration checks for these instruments.

15) Vendor procedures and calibration records (for before and after the time periods used to heat treat P-7A and P-7C pump couplings) for the temperature instruments (e.g. thermocouples) used to measure the heat treatment oven.

16) Vendor procedures used for heat treatment of the P-7C and P-7A pump couplings. Please provide the revisions to these procedures in affect at time of fabrication of the couplings used in the P-7A pump and P-7C (those installed at time of failure).

17) Vendor procedures for hardness testing used on SWP couplings for P-7C and P-7A.

18) Vendor and site staff names, titles and educational backgrounds assigned to perform root cause investigation of the failed P-7C coupling. Also provide site and vendor procedures for performing root cause investigations.

19) Vendor and Site root cause analysis reports for failed P-7C SWP coupling or dates when these documents will be available for NRC review.

20) Dates of service for P-7C couplings, pump run time and No of pump start & stops up to point of failure.

21) Dates of service for P-7A couplings, pump run time and No of pump start & stops as of October 1, 2009.

22) Vendor and Site staff names and phone numbers supporting this inspection.