



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

May 22, 2013

MEMORANDUM TO: Cecil A. Fletcher, Team Leader
Senior Reactor Inspector, Engineering Branch 3
Division of Reactor Safety

FROM: Victor M. McCree */RA/*
Regional Administrator

SUBJECT: SPECIAL INSPECTION CHARTER TO EVALUATE HARRIS
REACTOR VESSEL HEAD NOZZLE 49 FLAW ISSUE

You have been selected to lead a Special Inspection (SI) to assess the circumstances concerning the integrity of the Harris Unit 1 nuclear plant reactor coolant system pressure boundary due to a flaw identified on May 13, 2013. During a secondary review of ultrasonic data for the reactor vessel head penetrations, a flaw was discovered in the nozzle 49 penetration. Further evaluation of the flaw was completed on May 15, 2013. After consideration of the additional information from that evaluation, the licensee began shutting down the unit in accordance with technical specifications. Your onsite inspection should begin on May 22, 2013. You should continue to coordinate your inspection plan and insights with the appropriate staff in NRR.

A. Basis

On May 13, 2013, during a secondary review of ultrasonic data of the reactor vessel head penetrations performed during the Harris Nuclear Plant spring 2012 refueling outage, it was determined that the results for one of the penetrations (nozzle 49) appeared to not meet the applicable acceptance criteria. Further evaluation completed on May 15, 2013, characterized the indication as a 0.26 inch flaw on nozzle 49 that overlaps the J-grove weld and exhibits characteristics of Primary Water Stress Corrosion Cracking (PWSCC). The original examinations were performed per NRC requirements.

Initial evaluation indicates that the flaw is not through wall and there was no evidence of leakage based on inspections performed on the top of the reactor vessel head during the spring 2012 refueling outage. The plant was shut down on May 15, 2013 to make the necessary repairs.

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In accordance with MD 8.3, "NRC Incident Investigation Program," deterministic and conditional risk criteria were used to evaluate the level of NRC response for this operational event. One deterministic criteria was met. The issue involved a significant loss of integrity of the primary coolant pressure boundary. The updated Conditional Core Damage Probability (CCDP) for the event was in the overlap region of no inspection and a Special Inspection Team. A Special Inspection was deemed appropriate in this case.

Accordingly, the objectives of the inspection are to: (1) determine the facts surrounding the degraded condition of the Harris reactor vessel head; (2) evaluate the licensee's response to this condition; and, (3) assess the licensee's corrective actions.

B. Scope

To accomplish these objectives, the following major activities will be performed:

1. Develop a timeline associated with the non-destructive examinations (NDE), subsequent review and evaluation of the data, and other licensee activities in response to the condition.
2. Assess the ability of the reactor pressure vessel to meet its design basis functions in the as-found condition and the licensee's compliance with regulatory requirements following identification of the flaw.
3. For previous non-destructive examinations of the upper head penetration nozzles, assess the examination technique(s), data evaluation methods, examination results, the training provided to NDE personnel, and quality control measures associated with these activities.
4. Assess licensee actions to confirm that the indication did not extend through wall, including actions to confirm that no operational reactor coolant system leakage occurred in the last operating cycle.
5. Review licensee's activities related to the problem investigation performed to date (e.g., root cause analysis, extent of condition, etc.) to assess the probable cause(s) of the issue.
6. Assess the licensee's actions for site specific and industry operating experience to determine if lessons learned could have prevented the issue.
7. Assess whether the issue involves generic safety concerns with the qualification process for both the NDE technique and NDE personnel.

C. Guidance

Inspection Procedure (IP)93812, "Special Inspection," provides additional guidance to be used during the conduct of the inspection. Your duties will be as described in IP 93812 and should emphasize fact-finding in its review of the circumstances surrounding the

degraded condition. Safety or security concerns identified that are not directly related to the event should be reported to the Region II office for appropriate action.

You will report to the site, conduct an entrance, and begin inspection no later than May 22, 2013. It is anticipated that the on-site portion of the inspection will be completed during the period of May 22-31. An initial briefing of Region II management will be provided the second day on-site at approximately 4:00 p.m. In accordance with IP 93812, you should promptly recommend a change in inspection scope or escalation if information indicates that the assumptions utilized in the MD 8.3 risk analysis were not accurate. A report documenting the results of the inspection should be issued within 45 days of the completion of the inspection. The report should address all applicable areas specified in section 3.02 of IP 93812. At the completion of the inspection you should provide recommendations for improving the Reactor Oversight Process baseline inspection procedures and the Special Inspection process based on any lessons learned.

This charter may be modified should you develop significant new information that warrants review. Should you have any questions concerning this charter, contact George Hopper at (404) 997-4645.

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FOR PREVIOUS CONCURRENCE SEE ATTACHED SHEET

X PUBLICLY AVAILABLE

NON-PUBLICLY AVAILABLE

SENSITIVE

X NON-SENSITIVE

ADAMS: Yes

ACCESSION NUMBER _____

x SUNSI REVIEW COMPLETE

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NAME	*JDodson	*GHopper	*RCroteau	*LWert	*VMcCree	*SVias	*RReis
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