

JCN-N6783

Office of Nuclear Regulatory Research

Properties of CRDM Welds

Brady Hanson
(509) 375-5051

Period of Performance: May 3, 2010–February 28, 2012
Reporting Period: January 2012

OBJECTIVE

The objective of this project is to conduct nondestructive ultrasonic testing (UT), and an assessment of the leak path on Nozzle 63 from the North Anna Unit-2 reactor pressure vessel head. The assessment of the leak path will be conducted using instrumentation equivalent to or better than that used by industry. The results of the nondestructive examination will be compared to a previous assessment. A destructive analysis will be conducted to allow a visual assessment of the leak path. To the extent possible, the destructive analysis will be conducted such that materials from the nozzle and the J-groove weld that will be retained for later testing.

TECHNICAL PROGRESS

Task 1: Decontaminate the Nozzle and Prepare Laboratory for NDE

Task 1 is complete.

Task 2: Perform Ultrasonic Measurements of the Leakage Path

Task 2 is complete.

Task 3: Perform Destructive Evaluation of Leakage Path

Task 3 is complete.

Nozzle 63 Cutting.

Cutting activity is complete.

Nozzle 63 Optional Work.

All optional work has been completed and the final report was received from B&W.

Nozzle 63 Data Analysis.

Data Analysis is complete.

C/3

Task 4: Write NUREG/CR

The NUREG/CR was finalized and submitted to the NRC for comments. The document includes data from an in-service-inspection vendor. Jack Lareau at WesDyne is seeking formal approval to include this data in the report.

Task 5: Waste Disposal and Cleanup

The J-groove weld was received at PNNL.

Task 6: Project Management and Meetings

None.

MEETINGS AND TRIPS

None.

PROBLEM AREAS

None.

SCHEDULE OF MILESTONES AND DELIVERABLES

Draft NUREG report submitted to NRC	January 16
NRC submit comments to PNNL	February 3
PNNL address comments	February 6–February 24
Submit final NUREG report	February 27
Project closeout	February 28

PLANS FOR THE NEXT REPORTING PERIOD

Task 1: Decontaminate the Nozzle and Prepare Laboratory for NDE

Complete.

Task 2: Perform Ultrasonic Measurements of the Leakage Path

Complete.

JCN-N6783

Task 3: Perform Destructive Evaluation of Leakage Path Nozzle 63 Optional Work

Complete.

Task 4: Write NUREG/CR

Receive and address comments from the NRC on the draft NUREG/CR. Issue the finalized version of the NUREG/CR to the NRC.

Task 5: Waste Disposal and Cleanup

The waste has been submitted, but has not been billed yet, but will be before the project is closed out in February.

Task 6: Project Management and Meetings

The cost for the subcontract to B&W has been accrued, but they have not issued the billing for all of the work. We will work with B&W to get that closed out prior to project closeout in February.

(b)(4)

VARIANCE EXPLANATION

None.

EQUIPMENT

None.

QUALITY ASSURANCE

The Quality Assurance requirements for this project are provided in the Laboratory's Standards Based Management System (SBMS). The SBMS allows for a graded QA approach to meet the requirements of individual projects. No specific Quality Assurance requirements have been specified by the NRC for this project.

(b)(4)

(b)(4)