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December 9, 1983

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Dresden Station Unit 3
Quad Cities Station Unit 2
Inspection and Repair Plan for
the Welds to be Examined for IGSCC
NRC Docket Nos. 50-249 and 50-265

- References (a): IGSCC Inspection Order Confirming
Shutdown for Dresden Station Unit 3
dated August 26, 1983.
- (b): IGSCC Inspection Order Confirming
Shutdown for Quad Cities Station
Unit 2 dated August 26, 1983.
- (c): B. Rybak letter to H. R. Denton
dated September 29, 1983.
- (d): B. Rybak letter to H. R. Denton
dated October 26, 1983.

Dear Mr. Denton:

Ultrasonic examinations are currently being conducted at Quad Cities Unit 2 and Dresden Unit 3 as required by the NRC IGSCC Inspection Orders. To the extent practicable, the ultrasonic examinations encompass 100% of the Type 304 piping welds of 4-inch and greater nominal size in the Recirculation System and the ASME Code Class 1 portions of the Residual Heat Removal, Core Spray (external to the RPV) and Reactor Water Cleanup Systems. Specific welds which will not be inspected have been identified to the NRC (see References (c) and (d)) and these are essentially the same welds for which relief requests have been made in the ISI Programs.

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The NDE contractor at both Quad Cities Unit 2 and Dresden Unit 3 is Lambert, McGill, and Thomas. The Level II and III UT personnel performing evaluations of indications were qualified at the EPRI NDE Center by successfully performing the practical examination. Level I and II UT personnel performing scanning duties were trained by the contractor on site.

Results of the contractor examinations are provided to CECO NDE personnel for review and ultimate resolution. These CECO personnel were qualified by the practical examination at the NDE Center. The review and resolution process may involve additional examination by the contractor, CECO, or other contractor personnel. Supplemental equipment and techniques are being used to some extent to assist in the final resolution of indications. These include the EPRI developed ALN 4000 processing system for characterization of indications and the KWU creeping wave technique for discrimination of indications. Where different crack depths are determined by the several UT examiners of a weld joint, the deepest crack depth is used for the fracture mechanics analysis. The final resolution of each weld is provided to the station ISI Coordinator for record keeping and disposition of weld joints with flaws.

The flaw descriptions are provided to the CECO Engineering Department for determination of the need for any repairs. NUTECH has been contracted to perform fracture mechanics analyses and design weld overlays if needed. A description of NUTECH's flaw evaluation methodology and overlay design is provided as an attachment to this letter.

Induction Heating Stress Improvement (IHSI) is being performed on a best effort basis at both Quad Cities Unit 2 and Dresden Unit 3. Ultrasonic examinations were performed on a sampling of weld joints in the recirculation and RHR systems prior to the IHSI treatment. All welds on which IHSI is performed will receive an ultrasonic examination after treatment.

Weld overlays will be ultrasonically examined for bonding to the piping surface and the final pass will be liquid penetrant examined. Examination of the piping weld joints beneath the overlays will be attempted ultrasonically on a best effort basis. Completion of all weld examinations is expected during the week of December 12th for Quad Cities 2 and the week of December 26th for Dresden Unit 3.

Upon completion of all examinations and repairs, and prior to returning to service, a Sytsem Leakage Test (ASME Section XI, IWB-5221) will be performed. Insulation will be installed prior to the pressure test. The pressure will be held for 4 hours prior to performance of the visual examination (VT-2).

A meeting is tentatively scheduled with your staff on December 20, 1983, to discuss our inspection results and repair decisions and to answer any questions raised by the staff.

If you have any questions regarding this matter, please contact this office.

One signed original and sixty (60) copies of this transmittal is provided for your use.

Very truly yours,



B. Rybak
Nuclear Licensing Administrator

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cc: R. Gilbert (NRR)
R. Bevan (NRR)
NRC Resident Inspector - Dresden
NRC Resident Inspector - Quad Cities
J. G. Keppler - (NRC Region III)
Director, Office of Inspection and
Enforcement

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