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LWP-96-075

ComEd

October 10, 1996

U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attn: Document Control Desk

Subject: Quad Cities Station Unit 2
Augmented Examination of the RPV Shell Welds
Pursuant To 10CFR50.55a(G)(6)
NRC Docket Nos. 50-265

In accordance with the rules of 10CFR50.55a(g)(6)(ii)(A), Quad Cities Station plans to conduct an augmented examination of the Unit 2 reactor pressure vessel (RPV) shell welds during the upcoming refuel outage Q2R14. Quad Cities Station expects that less than 90% of the examination volume of RPV shell welds (ASME Section XI, Category B-A, Item B1.10 shell welds) will be achieved using currently available remote examination technology. Less than 90% examination volume does not satisfy the augmented examination requirements for the RPV shell welds. However, subsection 6(ii)(A)(5) allows licensees unable to satisfy this augmented examination requirement to propose an alternative that provides an acceptable level of quality and safety.

Pursuant to the rules of subsection 6(ii)(A)(5), Quad Cities Station proposes the following examination plan for RPV shell welds (item B1.10 RPV shell welds).

PROPOSED EXAMINATION PLAN

The RPV shell welds (ASME Section XI, Category B-A, Item B1.10 shell welds) will be ultrasonically examined (a) remotely from the inside of the reactor vessel to the extent possible and (b) manually from the outside of the vessel to the extent practical where remote inside examination is not achieved and where scheduled bioshield wall blocks and insulation materials disassembly allows access.

The remote internal examination will be performed in accordance with the remote ultrasonic examination procedure by General Electric, which was demonstrated at the Performance Demonstration Initiative (PDI) Qualification in a manner conducive with the requirements of Appendix VIII of ASME Section XI, 1992 Edition through 1993 Addenda. As such, Regulatory Guide 1.150 is not applicable for the remote internal examination.

The aforementioned remote internal examinations will be supplemented by manual ultrasonic examinations that will be performed from the outside surface to the extent practical. The manual ultrasonic examinations will be performed in accordance with the rules of IWA-2230 of ASME Section XI, 1989 Edition, as modified by Regulatory Guide 1.150.

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Augmented Examination Coverage:

An accessibility study of the RPV shell welds was performed in preparation of this augmented examination. This study was completed before the installation of shroud repair hardware during Q2R13. Quad Cities Station does not intend to remove any shroud repair hardware to perform the remote internal examination. The shroud repair hardware location is such that examination of weld VSC2-22 will not be possible and coverage on CW-C2C3 will be reduced. All remaining weld coverages will be unaffected by the shroud repair hardware and the estimated coverage is 65.1%.(see attached table for projected weld coverages)

Although the greater than 90% coverage required under 10CFR50.55a (g)(6)(ii)(A) will not be achievable for all welds, an acceptable level of quality and safety will be achieved based on the arguments documented in a report, BWRVIP-05, "BWR Reactor Pressure Vessel Shell Weld Inspection Recommendations," issued by the Boiling Water Reactor Owners Group Vessel and Internals Project (BWRVIP). This document provides the technical and economic basis for a reduction in examination scope for the BWR RPV shell weld examination. This report has been submitted for NRC review by the BWR Owners Group.

A final report will be submitted to the Commission for information within 90 days after the completion of the refuel outage, which will provide details on examination coverage and results.

Respectfully,

COMMONWEALTH EDISON COMPANY
QUAD CITIES NUCLEAR POWER STATION

L. W. Pearce
Station Manager

LWP/CP/plm
Enclosure

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QUAD CITIES UNIT 2
PROJECTED COVERAGES

WELD ID	% COVERAGE PROJECTED (WITH REPAIR)	% COVERAGE PROJECTED (WITHOUT REPAIR)	WELD LENGTH	% x LENGTH (WITH REPAIR)	% x LENGTH (WITHOUT REPAIR)
VSC1-77	0.0%	0.0%	133	0.0	0.0
VSC1-197	0.0%	0.0%	133	0.0	0.0
VSC1-317	85.7%	85.7%	133	114.0	114.0
CW-C1C2	53.3%	53.3%	790.1	421.1	421.1
VSC2-22 *	0.0%	51.8%	133	0.0	68.9
VSC2-141	100.0%	100.0%	133	133.0	133.0
VSC2-261	55.6%	55.6%	133	73.9	73.9
CW-C2C3 *	53.4%	67.0%	790.1	421.9	529.4
VSC3-77	22.2%	22.2%	133	29.5	29.5
VSC3-197	23.2%	23.2%	133	30.9	30.9
VSC3-317	72.0%	72.0%	133	95.8	95.8
CW-C3C4	95.4%	95.4%	790.1	753.8	753.8
VSC4-60	100.0%	100.0%	129.9	129.9	129.9
VSC4-99	100.0%	100.0%	129.9	129.9	129.9
VSC4-219	79.0%	79.0%	129.9	102.6	102.6
VSC4-339	100.0%	100.0%	129.9	129.9	129.9
CW-C4FLG	76.8%	76.8%	790.1	606.8	606.8
TOTALS			4877.0	3173.0	3349.3

% COVERAGE WITH REPAIR = 65.1%

% COVERAGE WITHOUT REPAIR = 68.7%

* welds affected by shroud repair hardware

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