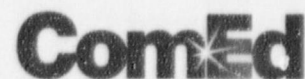


Commonwealth Edison Company  
Quad Cities Generating Station  
22710 206th Avenue North  
Cordova, IL 61242-9740  
Tel 309-654-2241



SVP-99-063

April 9, 1999

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555

Quad Cities Nuclear Power Station, Units 1 and 2  
Facility Operating License Nos. DPR-29 and DPR-30  
NRC Docket Nos. 50-254 and 50-265

Subject: **Reply to a Notice of Violation**  
**NRC Inspection Report Nos. 50-254/98021 and 50-265/98021**

- References: (1) Letter from S.A. Reynolds (USNRC) to O.D. Kingsley (ComEd), dated March 5, 1999, "NRC Inspection Report 50-254/98021(DRS); 50-265/98021(DRS) and Notice of Violation"
- (2) Letter from J. P. Dimmette, Jr. (ComEd), SVP-99-019, to USNRC, dated February 11, 1999, "ISI Improvement Plan"

Enclosed is the Commonwealth Edison (ComEd) Company reply to a Notice of Violation (NOV) as requested in the Referenced (1) Inspection Report.

The Inspection Report cited one Severity Level IV violation. The violation cited that the licensee had failed to identify to the NRC those welds where complete examination coverage was determined to be impractical along with the basis for that determination for the Second Ten Year Inservice Inspection (ISI) Program Interval which ended in 1993.

Our response to the NOV is provided in the attachment to this letter.

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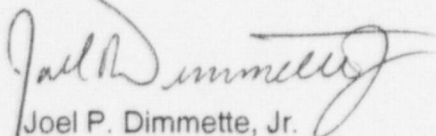
This letter contains the following commitments with regard to the NOV.

- We will submit the relief request(s) for those ASME Section XI weld examinations performed to date during the Third ISI Program Interval where the coverage achieved was less than or equal to 90%. Specifically, this includes the first period of the Third ISI Program Interval and two refueling outages that have been completed in the second period of the Third ISI Program Interval. The review of examinations completed and the evaluation of percent coverage achieved is in progress. The relief request(s) will be prepared and submitted no later than October 30, 1999.
- For those welds for which a relief request has not yet been submitted for the current Third ISI Program Interval, we will submit a general relief request in accordance with 10 CFR 50.55a that will cover those welds for which an examination of greater than 90 percent of the weld volume was not achieved during the Second ISI Program Interval. This general relief will only be needed until the end of the Third ISI Program Interval, at which time the complete population of welds will have been examined and appropriate specific relief requests will have been submitted. This general relief request will be submitted by May 14, 1999.

As agreed to by teleconference between Mr. Steven Dort (ComEd) and Mr. Christopher Miller (U.S. NRC) held on April 5, 1999, the submittal date for this letter was extended from April 5, 1999, to April 9, 1999.

Should you have any questions concerning this letter, please contact Mr. Wally Beck, Acting Regulatory Assurance Manager, at (309) 654-2241, extension 3100.

Respectfully,

  
Joel P. Dimmette, Jr.  
Site Vice President  
Quad Cities Nuclear Power Station

Attachment: Reply to a Notice of Violation

cc: Regional Administrator – NRC Region III  
NRC Senior Resident Inspector – Quad Cities Nuclear Power Station

**Attachment  
Reply to a Notice of Violation  
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**NOTICE OF VIOLATION**

Quad Cities Technical Specification 4.0.E requires that the "inservice inspection of ASME Code Class 1, Class 2, and Class 3 components ... shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a (g)."

10 CFR 50.55a (g)(5)(iv) requires, "Where an examination requirement by the code or addenda is determined to be impractical by the licensee and is not included in the revised inservice inspection program as permitted by paragraph (g)(4) of this section, the basis for this determination must be demonstrated to the satisfaction of the Commission not later than 12 months after the expiration of the initial 120-month period of operation and each subsequent 120-month period of operation during which the examination is determined to be impractical."

Contrary to the above, as of December 18, 1998, the licensee had not included in a revised Inservice Inspection (ISI) program nor demonstrated to the satisfaction of the NRC, the basis for their determination that the code required examination was impractical for the Unit 2 Reactor Pressure Vessel (RPV) nozzle weld N8B, the Unit 1 RPV nozzle weld N1A, and the recirculation system tee to valve weld 02BS-F6.

This is a Severity Level IV Violation (Supplement I). (50-254(265)/98021-01)

**REASON FOR THE VIOLATION**

The violation was caused by our misinterpretation of the applicability of 10 CFR 50.55a(g) that requires that relief be obtained for ISI Program Non-Destructive Examinations (NDEs) that accomplish less than essentially 100 percent coverage. The timeliness of response to this issue was inadequate because required procedural changes were not implemented within 12 months after identification of the issue.

For the Second Ten Year ISI Program Interval, 1983-1993, our interpretation of the requirements resulted in the conclusion that relief was not required because the examinations were performed to the extent practical within the constraints of design, geometry and fabrication. Specifically, Quad Cities Nuclear Power Station, Unit 2 RPV Nozzle-to-Shell weld N8B generally has an Outside Diameter (OD) radius on the nozzle which precludes Ultrasonic Testing (UT) angle beam and straight beam scanning from the nozzle side of the weld. Due to the geometric condition, scanning is limited to the RPV shell side of the weld. Also, interferences were encountered that limit the extent of scanning from the shell side of the weld.

This misinterpretation is the same as that cited in NRC Information Notice (IN) 98-42, "Implementation of 10 CFR 50.55 a(g) Inservice Inspection Requirements."

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**CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED**

Corrective actions taken as a result of the root cause analysis include the following.

- Site ISI procedure, QCAP 0410-06, "Inservice Inspection Plan Implementation for Third Ten Year Inspection Interval," was revised to require the ISI Coordinator to record all welds whose UT results did not meet the requirements of the applicable section of the approved ISI Program and to ensure that a relief request is submitted to the NRC at or before the end of the ISI 10 year interval. This was completed in September, 1998. Subsequently, a common corporate procedure, NSP-ER-3016, "Implementing Procedure for Conduct of Inservice Inspection Activities," was implemented that supercedes the site specific procedure, and assigns specific responsibilities for assuring that relief requests are submitted as required.
- ComEd Nondestructive Testing procedure, NDT-C-30, "Ultrasonic Examination of Reactor Vessel Welds to NRC Reg Guide 1.150," was revised to require calculating and recording the percent weld volume scanned and a determination of whether the percent of weld volume scanned meets ISI Program requirements. The purpose of NDT-C-30 is to detect, locate and evaluate discontinuities within the weld and adjacent base material utilizing UT techniques. To address the coverage issues, ComEd procedure, NDT-Z-1, "Method for Calculating ASME Section XI Examination Coverage for Volumetric and Surface Examinations," was created and implemented in August, 1998. The procedure requires that the ISI Coordinator be notified in writing if any welds receive less than essentially 100% coverage (i.e.,  $\leq 90\%$  as defined in Code Case N-460). Therefore, examinations that are less than the required coverage will be documented, using a standardized approach, and a relief request will be submitted for those limited exams.

The above corrective actions address ISI Programmatic relief request issues and timeliness issues by enhancing the procedural controls for ISI relief request submittals.

On January 8, 1999, an evaluation of the effect of this deficiency on operability of the affected components and their respective systems was initiated. The evaluation concluded that an operability concern does not exist based on the following considerations.

- There were no reportable indications detected for the affected components during examinations in either the Second or Third ISI Program Interval. To date, examination of approximately 55% of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (B&PV), Section XI, "Inservice Inspection and Testing," component population is complete for the Third ISI Program Interval.

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- There are no outstanding generic, failure mechanisms associated with the Nozzle-to-Shell welds. It should be noted that all the feedwater nozzles were modified during earlier refueling outages to prevent thermal fatigue cracking addressed in NUREG 0619, "BWR Feedwater Nozzle and Control Rod Drive Return Line Nozzle Cracking." Specialized augmented examinations of the feedwater nozzles were completed satisfactorily as scheduled.
- In general, the inside surface of the Nozzle-to-Shell weld, where flaws, if present, would most likely initiate, are examined during the UT examination.
- In addition to the efforts described above, limited access exams received augmented techniques to increase coverage and detectability of flaws during the recently completed refueling outage Q1R15. Specifically, six Nozzle-to-Shell welds, one RPV top head to flange weld and approximately 55 various piping weld configurations were examined utilizing augmented techniques. No reportable indications were detected.

To date, for the Third ISI Program Interval, we have completed five refueling outages (Q1R13, Q1R14, Q1R15 for Unit 1 and Q2R13, Q2R14 for Unit 2). These inspections represent approximately 55% of the total population required to be examined during the interval. The components examined during the Third ISI Program Interval are essentially the same components examined during the Second ISI Program Interval.

#### **CORRECTIVE STEPS TAKEN TO AVOID FURTHER VIOLATIONS**

We will submit the relief request(s) for those ASME B&PV, Section XI weld examinations performed to date during the Third ISI Program Interval where the coverage achieved was less than or equal to 90%. Specifically, this includes the first period of the Third ISI Program Interval and two refueling outages that have been completed in the second period of the Third ISI Program Interval. The review of examinations completed and the evaluation of percent coverage achieved is in progress. The relief request(s) will be prepared and submitted no later than October 30, 1999.

For those welds for which a relief request has not yet been submitted for the current Third ISI Program Interval, we will submit a general relief request in accordance with 10 CFR 50.55a that will cover those welds for which an examination of greater than 90 percent of the weld volume was not achieved during the Second ISI Program Interval. This general relief will only be needed until the end of the Third ISI Program Interval, at which time the complete population of welds will have been examined and appropriate specific relief requests will have been submitted. This general relief request will be submitted by May 14, 1999.

All planned milestones of the ISI Program Improvement Plan, detailed in Reference (2), are completed or on schedule.

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**DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED**

Quad Cities Nuclear Power Station will be in full compliance on May 14, 1999, at which time a general relief request for the remaining Second ISI Program Interval welds will be submitted.