

October 24, 2000

SVP-00-166

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555Quad Cities Nuclear Power Station, Unit 1  
Facility Operating License No. DPR-29  
NRC Docket No. 50-254**Subject:** Change to a Commitment in the Remediation Plan for the Unit 1  
Intergranular Stress Corrosion Cracking Susceptible Welds

- Reference:**
- (1) Letter from J.P. Dimmette, Jr. (ComEd) to U.S. NRC, "Remediation Plan for the Unit 1 Intergranular Stress Corrosion Cracking Susceptible Welds," dated March 31, 1999.
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- (2) Letter from U.S. NRC to O. D. Kingsley (ComEd), "Review of Remediation Plan for Quad Cities, Unit 1 IGSCC Susceptible Welds," dated June 14, 1999
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- (3) Letter from E.S. Kraft, Jr. (ComEd) to NRC, "Submittal of Weld Overlay Repair Designs and Flawed Pipe Evaluations," dated April 4, 1996
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- (4) Letter from U.S. NRC to D.L. Farrar (ComEd), "Flaw Evaluation of Recirculation Piping Welds – Quad Cities Nuclear Power Station, Unit 1," dated May 10, 1996
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- (5) Letter from J.P. Dimmette, Jr. (ComEd) to U.S. NRC, "Request for Approval of Pipe Weld Overlays and Pipe Flaw Evaluations," dated November 24, 1998

The purpose of this letter is to describe a change in our remediation plan for the Quad Cities Nuclear Power Station (QCNPS) Unit 1 intergranular stress corrosion cracking (IGSCC) susceptible welds. In Reference 1 we described our remediation plan for the welds susceptible to IGSCC. This plan was reviewed by the NRC in Reference 2. The plan stated that weld overlay repairs would be performed for three welds that were categorized as Category F, "Cracked – Inadequate or No Repair," in accordance with Generic Letter (GL) 88-01, "NRC Position on IGSCC in BWR Austenitic Stainless Steel Piping." For the reasons described below, we are now planning to defer weld overlays for two of these welds, identified as 02AS-S4 and 02AD-F12.

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In Reference 3, we submitted flaw evaluations for welds 02AS-S4 and 02AD-F12 based on ultrasonic testing (UT) examinations performed in 1996. These evaluations were conducted in accordance with NUREG-0313, "Technical Report on Material Selection and Processing Guidelines for BWR Coolant Pressure Boundary Piping," and determined that it would take at least 44,000 hours of operation to reach the critical flaw size for the unrepaired welds. The evaluations were reviewed and approved by the NRC in Reference 4. Subsequently, in Reference 5, we stated that, based on examinations performed in 1998, the flaw evaluations were determined to remain valid for continued operation through the refueling outage scheduled for October, 2000.

Examinations of these welds during the current refueling outage, using Performance Demonstration Initiative (PDI) qualified procedures and personnel, show that no growth has occurred. Furthermore, these welds have been examined using industry, NRC and Electric Power Research Institute (EPRI) approved UT techniques in four examinations spanning at least an eight-year period. Each of these examinations found indications in the same circumferential locations that were determined to be either root geometry, with no measurable depth, or shallow flaws. No growth of these indications has occurred over the time period of these examinations. The results of the examinations are presented in Attachment 1.

QCNPSS has implemented significant IGSCC mitigation strategies. Hydrogen water chemistry was implemented in 1992, and system availability has been greater than 94% over the past two years, with electro-chemical potential (ECP) values consistently less than negative 230 millivolts – Standard Hydrogen Electrode (SHE). Noble metal chemical application was performed in April 1999. Welds 02AS-S4 and 02AD-F12 have been effectively treated with induction heating stress improvement (IHSI) that met or exceeded the minimum requirements for through-wall temperature differential and other essential parameters in accordance with the industry guidelines in Boiling Water Reactor Vessel and Internals Project (BWRVIP) Report 61, "BWR Vessel and Internals Project Induction Heating Stress Improvement Effectiveness on Crack Growth in Operating Plants."

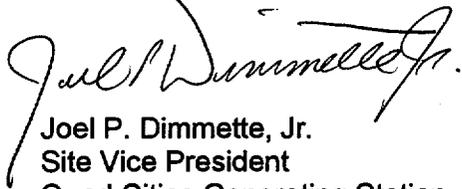
Due to higher than expected primary system radiation dose rates experienced during the current refueling outage, completing these weld overlay repairs would involve significant personnel radiation exposure. Based on the above evaluations, we have determined that it is technically justified and prudent to defer the planned weld overlays for welds 02AS-S4 and 02AD-F12 and thus eliminate the significant personnel radiation exposure that would be required to perform them.

To further characterize the indications found on these welds, QCNPSS is performing an automatic UT examination during the current refueling outage to conclusively categorize these welds in accordance with GL 88-01. In addition to the review by General Electric (GE), the automatic UT data will be reviewed and evaluated by independent, third party reviewers from EPRI. Based on the results, these welds will either remain in Category F, or be reclassified to the appropriate category.

October 24, 2000  
U.S. Nuclear Regulatory Commission  
Page 3

Should you have any questions concerning this letter, please contact Mr. C.C. Peterson at (309) 654-2241, extension 3609.

Respectfully,

A handwritten signature in black ink, reading "Joel P. Dimmette, Jr." with a stylized flourish at the end.

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

Attachments: Examination Results for Welds 02AS-S4 and 02AD-F12

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

October 24, 2000  
U.S. Nuclear Regulatory Commission  
Page 4

bcc: Project Manager – NRR  
Office of Nuclear Facility Safety, - IDNS  
Senior Reactor Analyst – IDNS  
Manager of Energy Practice – Winston and Strawn  
Director, Licensing and Compliance – ComEd  
Vice President, Regulatory Services– ComEd  
ComEd Document Control Desk Licensing (Hard Copy)  
ComEd Document Control Desk Licensing (Electronic Copy)  
W. Leech – MidAmerican Energy Company  
D. Tubbs – MidAmerican Energy Company  
Regulatory Assurance Manager – Dresden Generating Station  
Regulatory Assurance Manager – Quad Cities Generating Station  
NRC Coordinator – Quad Cities Generating Station  
NSRB Site Coordinator – Quad Cities Generating Station  
Site Vice President - Quad Cities Generating Station  
Station Manager - Quad Cities Generating Station  
SVP Letter File

## ATTACHMENT

### Change to a Commitment in the Remediation Plan for the Unit 1 Intergranular Stress Corrosion Cracking Susceptible Welds

#### Examination Results for Welds 02AS-S4 and 02AD-F12

##### 02AS-S4 UT Examination History

Year	Manual Exam Procedure	Personnel Training	Exam Result
1992	3 Party Agreement	3 Party Agreement	Root geometry
1996	3 Party Agreement	3 Party Agreement	IGSCC - 0.2" deep x 1.25" long
1998	3 Party Agreement	PDI	IGSCC - 0.2" deep x 1.25" long
2000	PDI	PDI	Root geometry observed at the same location

##### 02AD-F12 UT Examination History

Year	Manual Exam Procedure	Personnel Training	Exam Result
1989	3 Party Agreement	3 Party Agreement	Root geometry at multiple locations
1996	3 Party Agreement	3 Party Agreement	IGSCC flaws - 0.14" deep x 2.05" long - 0.18" deep x 2.5" long
1998	3 Party Agreement	PDI	2 IGSCC flaws - 0.14" deep x 2.05" long - 0.18" deep x 2.5" long
2000	PDI	PDI	Root geometry observed at the same location