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# ComEd

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SVP-98-324

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October 30, 1998

United States Nuclear Regulatory Commission Attn: Document Control Desk Washington, D. C. 20555

> Quad Cities Nuclear Power Station - Unit 1 Facility Operating License No. DPR-29 NRC Docket No. 50-254

### Subject: Change in Status of NRC Generic Letter 96-06 Resolution Actions for Unit 1

- References: (a) Letter from J.B. Hosmer (ComEd), to USNRC, Response to Generic Letter 96-06, "Assurance of Equipment Operability and Containment Integrity During Design-Basis Accident Conditions," dated January 28, 1997
  - (b) Letter from J.B. Hosmer (ComEd), to USNRC, Commonwealth Edison Company (ComEd) Response to Nuclear Regulatory Commission (NRC) Generic Letter 96-06, "Assurance of Equipment Operability and Containment Integrity During Design-Basis Accident Conditions," dated May 2, 1997
  - (c) Letter from J.P. Dimmette (ComEd), SVP-98-287, to USNRC, dated August 31, 1998, "Response to Request for Additional Information for Generic Letter 96-06"
  - (d) Letter from E.S. Kraft (ComEd), SVP-97-102, to USNRC, dated May 16, 1997, "NRC Generic Letter 96-06 Status – Unit 2"

On May 2, 1997, ComEd provided an updated response to Generic Letter 96-06, "Assurance of Equipment Operability and Containment Integrity During Design Basis Accident Conditions." The Generic Letter required licensees to evaluate equipment operability and containment integrity during design basis accident conditions.

9811050121 981030 PDR ADOCK 05000254 PDR PDR In accordance with 10CFR50 Appendix B, Criterion XVI, Quad Cities Nuclear Power Station had developed a corrective action plan for resolving the long-term issues raised by Generic Letter 96-06. To support continued plant operation, Quad Cities Nuclear Power Station has completed an operability assessment (January, 1997) on affected equipment in accordance with Generic Letter 91-18. This operability assessment addresses the concerns raised in Generic Letter 96-06 and concludes that affected components will remain operable during design basis a cident conditions. This operability assessment will remain in place until the long-term corrective actions for resolving Generic Letter 96-06 issues are implemented.

In Reference (b) ComEd described for Units 1 and 2 that eight (8) penetrations were determined to be susceptible to thermally induced pressurization conditions. For Unit 2, relief valves were installed in five of the penetrations (RHR shutdown cooling (penetration X-12), RWCU (penetration X-14), RBCCW (penetrations X-23/24) and recirculation sample systems (penetration X-41)). Two of the Unit 2 penetrations had existing relief valves from a previous modification (drywell sump discharge systems (penetrations X-18/19)). For Unit 2, a temporary modification was recently performed to remove the relief valve for the recirculation sample system (penetration X-41). An assessment is in progress to determine the long-term solution for this penetration. For both Units, procedures were changed for one of the penetrations (clean demin system (penetration X-20)) to drain the piping to prevent thermal overpressurization. Reference (d) provided the completion status for Unit 2 long-term corrective actions. In addition, Reference (b) provided that actions to be taken for Unit 1 would be similar to actions taken for Unit 2.

On November 13, 1997, the NRC issued Supplement 1 to Generic Letter 96-06. This supplement, in conjunction with Generic Letter 91-18, Revision 1, dated October 8, 1997, allowed the use of ASME Section III Appendix F analyses to resolve thermal overpressurization issues with specific penetrations.

This letter provides the planned actions to resolve the Generic Letter 96-06 concerns for the affected penetrations of Unit 1. Attachment A to this letter provides for each Unit 1 affected penetration, the resolution status, the current and revised commitments, and the basis for continued plant operation.

Based on the provisions of Generic Letter 96-06 and its supplement, the thermal overpressurization issues for each of the Unit 1 penetrations have been addressed by use of appropriate analyses, procedure changes, or modifications.

Since resolutions to the affected Unit 1 penetrations encompass the use of appropriate analyses, procedure changes, or modifications, as allowed by Generic Letter 96-06, Supplement 1, the Unit 2 completed modifications may be re-evaluated against potential alternative solutions.

USNRC SVP-98-324

If there are any questions or comments concerning this letter, please refer them to Mr. Charles Peterson, Regulatory Assurance Manager, at (309) 654-2241, extension 3609.

Sincerely,

mell Joel P. Dimmette, Jr.

Site Vice President Quad Cities Nuclear Power Station

Attachment A Change in Status of NRC Generic Letter 96-06 Resolution Actions for Unit 1

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

# ATTACHMENT A CHANGE IN STATUS OF NRC GENERIC LETTER 96-06 RESOLUTION ACTIONS FOR UNIT 1 SVP-98-324 (Page 1 of 6)

### Penetration X-12 (Residual Heat Removal Shutdown Cooling)

### Original Commitment of Reference (b):

Install a relief valve during Q1R15. Administrative procedures have been implemented to partially drain the Unit 1 Shutdown Cooling Suction piping to mitigate the potential for overpressurization pending installation of a design change.

### **Revised Commitment:**

An ASME Section III Appendix F analysis will be performed. Temperature calculations based on design parameters will be performed to determine thermal heatup pressures. The Appendix F analysis will identify critical components, typically the flex wedge and bonnet for valves, and piping susceptible to thermal overpressurization. The isolation valves are not required to open after the accident. The post-accident function is limited to only providing containment isolation. This analysis is expected to demonstrate that the piping will remain intact during the accident conditions postulated by Generic Letter 96-06.

#### Schedule:

The analysis is scheduled to be completed during the first quarter of 1999. (NTS 2541239807101)

### **Basis for Continued Plant Operation:**

The operability assessment performed in January, 1997, in response to PIF 1997-0234 concerning Generic Letter 96-06 issues, provides the basis for continued plant operation.

# ATTACHMENT A CHANGE IN STATUS OF NRC GENERIC LETTER 96-06 RESOLUTION ACTIONS FOR UNIT 1 SVP-98-324 (Page 2 of 6)

### Penetration X-14 (Reactor Water Cleanup)

#### Original Commitment of Reference (b):

Install a relief valve during Q1R15.

### **Revised Commitment:**

An ASME Section III Appendix F Analysis will be performed. Temperature calculations based on design parameters will be performed to determine thermal heatup pressures. The Appendix F analysis will identify critical components, typically the flex wedge, bonnet and retainer rings for valves, and piping susceptible to thermal overpressurization. The isolation valves are not required to open after the accident. The post-accident function is limited to only providing containment isolation. The calculation/analysis is expected to demonstrate that the piping will remain intact during the accident conditions postulated by Generic Letter 96-06.

#### Schedule:

The calculation/analysis is scheduled to be completed during the first quarter of 1999. (NTS 2541239807102)

#### **Basis for Continued Plant Operation:**

The operability assessment performed in January, 1997, in response to PIF 1997-0234 concerning Generic Letter 96-06 issues, provides the basis for continued plant op\_ration.

# ATTACHMENT A CHANGE IN STATUS OF NRC GENERIC LETTER 96-06 RESOLUTION ACTIONS FOR UNIT 1 SVP-98-324 (Page 3 of 6)

# Penetrations X-18 and X-19 (Drywell Sump Discharges)

## Original Commitment of Reference (b):

Install a relief valve or alternative relief path during Q1R15.

### **Revised Commitment:**

No change from Reference (b), a relief valve will be installed during Q1R15.

#### Schedule:

A relief valve will be installed during Q1R15. (NTS 2541239807103)

### **Basis for Continued Plant Operation:**

The operability assessment performed in January, 1997, in response to PIF 1997-0234 concerning Generic Letter 96-06 issues, provides the basis for continued plant operation.

# ATTACHMENT A CHANGE IN STATUS OF NRC GENERIC LETTER 96-06 RESOLUTION ACTIONS FOR UNIT 1 SVP-98-324 (Page 4 of 6)

### Penetration X-20 (Clean Demin)

### Original Commitment of Reference (b):

Revise operating procedures to drain piping prior to each startup following each refueling outage and prior to other startups if the clean demineralized water piping has been valved into service for this penetration.

### **Revised Commitment:**

No change from Reference (b).

#### Schedule:

This commitment is currently implemented in accordance with Reference (b).

### **Basis for Continued Plant Operation:**

The commitment has been implemented, no further justification is necessary.

# ATTACHMENT A CHANGE IN STATUS OF NRC GENERIC LETTER 96-06 RESOLUTION ACTIONS FOR UNIT 1 SVP-98-324 (Page 5 of 6)

### Penetrations X-23 and X-24 (Reactor Building Closed Cooling Water)

### Original Commitment of Reference (b):

Install a relief valve during Q1R15.

### **Revised Commitment:**

The isolation valves for this system are always open during normal operation. The RBCCW system provides cooling water for the reactor recirculation pump seals and the drywell coolers. RBCCW is not required for post-accident conditions. Therefore relief valves are not required. As noted in Reference (c), procedures, QCOP 3700-02, RBCCW System Startup and Operation, and QOP 5750-19, Drywell Coolers, have been revised to prevent operators from reestablishing RBCCW flow post-LOCA, either if the system is isolated due to indications of a RBCCW line break inside containment, or if drywell temperatures are greater than 260 degrees F. These procedure revisions have been made to alleviate water hammer and two-phase flow concerns.

### Schedule:

The above referenced procedures have been revised.

#### **Basis for Continued Plant Operation:**

The issue has been addressed by revisions to appropriate procedures as noted in Reference (c) and no further justification is necessary.

# ATTACHMENT A CHANGE IN STATUS OF NRC GENERIC LETTER 96-06 RESOLUTION ACTIONS FOR UNIT 1 SVP-98-324 (Page 6 of 6)

### Penetration X-41 (Reactor Recirculation Sample Line Piping)

### Original Commitment of Reference (b):

Install a relief valve during Q1R15.

### **Revised Commitment:**

Temperature calculations based on design parameters will be performed to determine thermal heatup pressures. A simplified ASME Section III Appendix F analysis will be performed to determine if the thermal pressures developed will overcome the spring forces in the air-operated outboard valve to relieve the pressure. If the spring forces are too great, a more detailed Appendix F analysis will be performed to identify critical components, typically the flex wedge and bonnet for valves, and piping susceptible to thermal overpressurization. The calculation/analysis is expected to demonstrate that the piping will remain intact during the accident conditions postulated by Generic Letter 96-06.

### Schedule:

The calculation/analysis is scheduled to be completed during the first quarter of 1999. (NTS 2541239807104)

#### **Basis for Continued Plant Operation:**

The operability assessment performed in January, 1997, in response to PIF 1997-0234 concerning Generic Letter 96-06 issues, provides the basis for continued plant operation.