

August 21, 1990

Docket Nos. 50-254
and 50-265

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Mr. Thomas J. Kovach
Nuclear Licensing Manager
Commonwealth Edison Company-Suite 300
OPUS West III
1400 OPUS Place
Downers Grove, Illinois 60515

Dear Mr. Kovach:

SUBJECT: REVIEW OF RESPONSE TO GENERIC LETTER 88-01, "NRC POSITION ON
ISSCC IN BWR AUSTENITIC STAINLESS STEEL PIPING," QUAD CITIES
STATION, UNITS 1 AND 2 (TAC NOS. 69154 AND 69155)

The NRC staff has completed its review of your submittals dated July 29, 1988, June 9, 1989, July 21, 1989, November 7, 1989 and December 18, 1989 in response to Generic Letter (GL) 88-01. A copy of the staff's Safety Evaluation (SE) and a copy of the Technical Evaluation Reports prepared by the staff's contractor, Viking Systems International, are enclosed.

Based on the Safety Evaluation, the staff finds your responses to GL 88-01 are acceptable with some exceptions. You are requested to review these exceptions and notify the staff of actions taken to address them. When the Committee to Review Generic Requirements (CRGR) met on this topic, they approved Technical Specifications (TS) to be incorporated by licensees. Thus, you are requested to propose amendments to your TS to:

- (1) Include a statement in the surveillance or administrative controls section that includes the following: "The inservice inspection program for piping identified in NRC Generic Letter 88-01 shall be performed in accordance with the NRC staff positions on schedule, methods, personnel, and sample expansion included in Generic Letter 88-01 or in accordance with alternate measures approved by the NRC staff."
- (2) Include an additional Limiting Condition for Operation (LCO) that specifies reactor coolant system leakage shall be limited to a two gpm increase in unidentified leakage within any 24-hour period.
- (3) Your Technical Specifications include a surveillance requirement that primary containment sump flow rate will be monitored at least once per 8 hours. This is now considered acceptable. It should be noted that the position in GL 88-01 on leak rate monitoring was modified to permit leakage measurements based on sump flow instruments to be taken every 8 hours instead of every 4 hours.
- (4) For Quad Cities Station, Units 1 and 2, include an LCO on operability of sump monitoring instruments. Since your plant has Intergranular Stress Corrosion Cracking (ISCC) weld Category E weldments, Generic Letter 88-01 provides an allowed outage time of 24 hours for repairing

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the drywell floor drain sump monitoring system, or an orderly shutdown should be initiated. As an alternative, the staff recommends that when the drywell sump monitoring system is inoperable, the operator should use a demonstrated manual method for determining leak rate, such as measuring the time to manually pump the sump at a fixed interval (4 hours). The staff considers manual measurement a viable sump monitoring method without hardship to the operator; therefore, this method could be added to the appropriate LCO section. With the manual method operable, the outage time for the drywell sump monitoring system could be extended to 30 days. However, if the sump pump and drywell sump monitoring systems are inoperable concurrently, then either system has to be repaired within 24 hours or an orderly shutdown should be initiated.

Pertinent sections of the model BWR Technical Specifications are enclosed as examples of acceptable positions for Items 2 and 3 above. Accordingly, please submit the requisite TS change requests or notify the staff of actions taken within 60 days.

You need to address the Reactor Water Clean-Up (RWCU) piping outboard of the isolation valves in the Inservice Inspection (ISI) Program. If the piping is within the scope of GL 88-01, you will need to modify the program to include the identity of the welds as well as plans for mitigation and inspections. A minimum of 10% of the RWCU system piping outboard of the isolation valves should be inspected at each refueling outage. If cracks are found, the licensee should discuss sample expansion and mitigation methods with the NRC staff.

For SE deficiencies related to welds, categorization of welds, and qualification of personnel, these deficiencies shall be corrected in the ISI program. Since you previously submitted integrated IGSCC inspection plans, our Safety evaluation precludes the necessity for you to submit IGSCC inspection plans for each future outage. However, if flaws are found that do not meet the criteria of Section XI of the ASME Code for continued operation without evaluation, NRC approval of flaw evaluations or repairs in accordance with IWB 3640 and IWB 4130 is required before resumption of operation. Note that weld overlay repair is considered as a non-Code repair, which requires NRC approval.

Sincerely, /s/

Leonard N. Olshan, Project Manager
Project Directorate III-2
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

1. Examples of Acceptable Technical Specifications
2. Safety Evaluation
3. Technical Evaluation Reports

cc w/enclosures:

See next page

Office: LA/PDIII-2

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Date: 8/20/90

PM/PDIII-2

LOlshan/tg

8/21/90

PD/PDIII-2

RBarrett

8/21/90



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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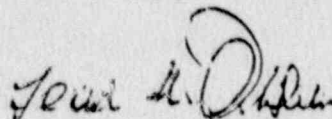
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Leonard N. Olshan, Project Manager
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Division of Reactor Projects - III,
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1. Examples of Acceptable Technical Specifications
2. Safety Evaluation
3. Technical Evaluation Reports

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See next page

Mr. Thomas J. Kovach
Commonwealth Edison Company

Quad Cities Nuclear Power Station
Unit Nos. 1 and 2

cc:

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MODEL BWR TECHNICAL SPECIFICATIONSREACTOR COOLANT SYSTEMOPERATIONAL LEAKAGELIMITING CONDITION FOR OPERATION

3.4.3.2 Reactor coolant system leakage shall be limited to:

- a. No PRESSURE BOUNDARY LEAKAGE.
- b. 5 gpm UNIDENTIFIED LEAKAGE.
- c. 25 gpm total leakage averaged over any 24-hour period.
- d. 1 gpm leakage from any reactor coolant system pressure isolation valve specified in Table 3.4.3.2-1.
- (e. 2 gpm increase in UNIDENTIFIED LEAKAGE in any 24-hour period.)

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3.

ACTION:

- a. With any PRESSURE BOUNDARY LEAKAGE, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.
- b. With any reactor coolant system leakage greater than the limits in b and/or c, above, reduce the leakage rate to within the limits within 4 hours or be in at least HOT SHUTDOWN WITHIN THE NEXT 12 hours and in COLD SHUTDOWN within the following 24 hours.
- c. With any reactor coolant system pressure isolation valve leakage greater than the above limit, isolate the high pressure portion of the affected system from the low pressure portion within 4 hours by use of at least two closed manual or deactivated automatic valves, or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- d. With any reactor coolant system leakage greater than the limit in e above, identify the source of leakage within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.)

SURVEILLANCE REQUIREMENTS

4.4.3.2.1 The reactor coolant system leakage shall be demonstrated to be within each of the above limits by:

- a. Monitoring the primary containment atmospheric particulate (and/or gaseous) radioactivity at least once per (4 or 12 as applicable to plant) hours,
- b. Monitoring the primary containment sump flow rate at least once per eight (8) hours,

REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS (Continued)

- c. Monitoring the primary containment air coolers condensate flow rate at least once per (4 or 12 as applicable to plant) hours, and
- d. Monitoring the reactor vessel head flange leak detection system at least once per 24 hours.

4.4.3.2.2 Each reactor coolant system pressure isolation valve specified in Table 3.4.3.2-1 shall be demonstrated OPERABLE pursuant to Specification 4.0.5, except that in lieu of any leakage testing required by Specification 4.0.5, each valve shall be demonstrated OPERABLE by verifying leakage to be within its limit:

- a. At least once per 18 months.
- b. Prior to entering HOT SHUTDOWN whenever the plant has been in COLD SHUTDOWN for 72 hours or more and if leakage testing has not been performed in the previous 9 months.
- c. Prior to returning the valve to service following maintenance, repair or replacement work on the valve.
- d. Within 24 hours following valve actuation due to automatic or manual action or flow through the valve.