Docket File

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

March 8, 1995

Mr. D. L. Farrar, Manager
Nuclear Regulatory Services
Commonwealth Edison Company
Executive Towers West III
1400 Opus Place, Suite 500
Downers Grove, IL 60515

SUBJECT: QUAD CITIES, UNITS 1 AND 2 - NUREG-0619 - INSPECTION PROGRAM FOR FEEDWATER NOZZLES (TAC NOS. M91129 AND M91130)

Dear Mr. Farrar:

By letter dated December 14, 1994, Commonwealth Edison Company (ComEd, the licensee) requested NRC review of certain changes to commitments concerning the NUREG-0619 inspection program performed for the reactor vessel feedwater (FW) nozzles at the Quad Cities Nuclear Power Station. This change involves the elimination of the routine liquid penetration test (PT) of the FW nozzles during the next Unit 2 refueling outage (Q2R13) scheduled to start in March 1995 and Q1R15 for Unit 1 scheduled for March 1998. An external ultrasonic testing (UT) examination of the feedwater nozzles would continue as previously approved by the NRC.

The licensee's letter of December 14, 1994, stated that elimination of the need to perform a PT examination by using the enhanced, automated UT from the nozzle outer surface, would avoid significant radiation exposure associated with the removal of the FW spargers and performance of the required PT. The conclusion was based on the 1) effectiveness of the current UT examination techniques, 2) absence of relevant FW nozzle indications during previous nondestructive examinations, 3) online leakage monitors that will assure early detection of significant leakage, 4) removal of the blend radius cladding in Q1R6 and Q2R4, and 5) use of the General Electric designed triple-sleeve double piston sparger installed in Q1R6 for Unit 1 and Q2R4 for Unit 2.

In place of the periodic PT scheduled for Q2R13 for Unit 2 and Q1R15 for Unit 1 in accordance with NUREG-0619, Section 4.3.2, Table 2, Quad Cities proposes the following:

1. Perform an enhanced automated UT on the nozzle blend radius and bore areas. The licensee plans to use the General Electric GERIS-2000 UT system that had been approved for use on NUREG-0619 feedwater nozzle examinations at Edwin I. Hatch, Units 1 and 2.

2. Complete the fracture mechanics assessment prior to Q2R13 to verify that an assumed crack of 0.25" deep would not exceed the allowable crack depth for the remainder life of the units.

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3. In the event relevant indications are discovered, an engineering evaluation will be used to determine unit operability.

In response to an NRC request concerning Item 2 above, by letter dated February 17, 1995, ComEd submitted a plant specific fracture mechanics analysis. The licensee indicated that this analysis is based on conservative flaw sizing using the proposed automated UT inspection technique.

For subsequent inspections, ComEd stated that it intends to follow the recommendations of the pending submittal from the Boiling Water Reactor Owners' Group (BWROG) to the NRC "Alternate BWR Feedwater Nozzle Inspection Requirements" for Quad Cities. The acceptability of the BWROG proposed inspection interval is a matter for future staff review.

Based on our review of the December 14, 1994, and February 17, 1995, submittals, the staff has determined that it is acceptable for ComEd to proceed with the described commitment for Q2R13 for Unit 2. However, for subsequent inspections, including the Unit 1 inspection for Q1R15, our evaluation of your automated inspection technique and proposed inspection interval will be provided after receipt of your plant-specific submittal following staff review of the BWROG's proposal discussed above.

Sincerely,

original signed by:

Robert M. Pulsifer, Project Manager
Project Directorate III-2
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Docket Nos. 50-254, 50-265

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3. In the event relevant indications are discovered, an engineering evaluation will be used to determine unit operability.

In response to an NRC request concerning Item 2 above, by letter dated February 17, 1995, ComEd submitted a plant specific fracture mechanics analysis. The licensee indicated that this analysis is based on conservative flaw sizing using the proposed automated UT inspection technique.

For subsequent inspections, ComEd stated that it intends to follow the recommendations of the pending submittal from the Boiling Water Reactor Owners' Group (BWROG) to the NRC "Alternate BWR Feedwater Nozzle Inspection Requirements" for Quad Cities. The acceptability of the BWROG proposed inspection interval is a matter for future staff review.

Based on our review of the December 14, 1994, and February 17, 1995, submittals, the staff has determined that it is acceptable for ComEd to proceed with the described commitment for Q2R13 for Unit 2. However, for subsequent inspections, including the Unit 1 inspection for Q1R15, our evaluation of your automated inspection technique and proposed inspection interval will be provided after receipt of your plant-specific submittal following staff review of the BWROG's proposal discussed above.

Sincerely,

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Robert M. Pulsifer, Project Manager
Project Directorate III-2
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3. In the event relevant indications are discovered, an engineering evaluation will be used to determine unit operability.

For subsequent inspections, ComEd intends to follow the recommendations of the pending submittal from the Boiling Water Reactor Owner's Group (BWROG) to the NRC staff "Alternate BWR Feedwater Nozzle Inspection Requirements" for Quad Cities. Although we have not completed our review of the December 14, 1994, submittal, we have determined that it is acceptable for ComEd to proceed with the described commitment for Q2R13 for Unit 2. We will advise ComEd of the final results of our review of the BWROG submittal which should provide generic basis for the substitution of the PT specified by NUREG-0619 with enhanced UT.

Sincerely,

Robert M. Pulsifer, Project Manager
Project Directorate III-2
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

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