

April 13, 1988

Docket Nos. 50-254
and 50-265

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Mr. L. D. Butterfield, Jr.
Nuclear Licensing Manager
Commonwealth Edison Company
Post Office Box 767
Chicago, Illinois 60690

Dear Mr. Butterfield:

SUBJECT: 1987 AND 1988 IGSCC INSPECTION PROGRAMS AT QUAD CITIES NUCLEAR
POWER STATION, (TAC NOs. 66529 AND 67016)

- References
- a. Letter from I. Johnson to T. Murley
dated December 10, 1987 (Unit 1)
 - b. Letter from T. Ross to L. Butterfield
dated December 18, 1987 (Unit 1)
 - c. Letter from I. Johnson to T. Murley
dated January 22, 1988 (Unit 2)

In reference (a), Commonwealth Edison Company (CECo, the licensee) submitted a final report detailing the results of an expanded inspection plan for piping susceptible to Intergranular Stress Corrosion Cracking (IGSCC) at Quad Cities Unit 1. A conference call was held on December 17, 1987 between CECo and NRR staff to discuss these results. Based on our review of material submitted to date, we will need additional information not contained in reference (a) or previous submittals to finalize our review and issue a Safety Evaluation of the IGSCC inspections conducted at Unit 1 during the ninth refueling outage. Enclosed is a list of the additional information requested.

The IGSCC inspection plan for the Spring 1988 Quad Cities, ninth Unit 2 refueling outage was provided by reference (c). Based upon a preliminary review, and brief discussions with CECo (held during a conference call on February 4, 1988), the NRC staff has determined that the inspection plan described in reference (c) is consistent with the requirements of Generic Letter (GL) 84-11. However, the scheme for expanding the inspection sample, when new flaws are found, does not comply with GL 84-11. Consequently, the staff has determined CECo's proposed alternative sample expansion scheme is not acceptable without some further justification. Future evaluations and staff approval if appropriate, of CECo deviations from the guideline of GL 84-11 for sample expansion will be addressed on a case-by-case basis as they occur.

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PDR ADOCK 05000254
Q PDR

Mr. L. D. Butterfield, Jr.

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The reporting and/or recordkeeping requirements contained in this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P.L. 96-511.

Sincerely,

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Thierry Ross, Project Manager
Project Directorate III-2
Division of Reactor Projects - III,
IV, V and Special Projects

Enclosure:
As stated

cc: See next page

PDIII-2:PM
TRoss:bjr
4/17/88

PDIII-2:LA
LLuther: 17
4/17/88

ENTB
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cyheng
4/11/88

PDIII-2:PD
DMuller
4/14/88

Mr. L. D. Butterfield, Jr.
Commonwealth Edison Company

Quad Cities Nuclear Power Station
Units 1 and 2

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Quad CitiesAdditional Information Request

Please provide additional information regarding the 1987, Unit 1 IGSCC inspection plan and results. Required information is identified in the following listed items. These items were discussed during a December 17, 1988 conference call between CECO and NRR.

1. Provide justification including technical reasons and hardship considerations for not inspecting all recirculation piping welds, after cracking was found in expanded sample welds.
2. In view of reported UT inspection results, which showed new cracks or growth of cracks at some IHSI treated welds, the staff has some concerns regarding the effectiveness of the IHSI mitigation process applied at QCNPS. Review applicable IHSI implementation data to assure all process controlling parameters were met for each application and provide the staff with a brief description including details of any inconsistencies. Also incorporated in this description should be a discussion of industry-wide experience in applying the IHSI process to mitigate IGSCC.
3. Provide the following detailed information regarding UT examinations:
 - (a). Contractors, mode of examinations and method of recording.
 - (b). Personnel and equipment qualifications
 - (c). Techniques and procedures used for discrimination, sizing (length and depth) and reexamination of overlay repaired welds.
 - (d). Identify limitations of UT examination for each weld including overlay repaired welds.
4. Discuss the discrepancies in inspection results, as identified below, between the 1987 inspection and previous inspections:
 - (a). For some IHSI treated welds - presence of new indications or growth of indications.
 - (b). For overlay repaired welds - presence of new indication, growth of indications or changes of orientation of indications.
5. Provide a schematic drawing for weld 02B-S7 to show overlay dimensions and flaw locations. In Figure 5.3.1 of the NUTECH report, the finite element model did not appear to reproduce the actual flaw locations in weld 02B-S7.
6. In Table 5.2-1 (page 5.9) of the NUTECH report, the calculations of "a" (evaluation flaw depth) for welds 02C-S4 and 02G-S3 are not correct. Consequently, the calculations of predicted FDR in Table 5.2-2 for those two welds using the correct "a" would exceed the ASME code allowable flaw depth ratio. Discuss and explain.

7. With respect to page 5 of the report attached to letter dated December 10, 1987, provide a schematic drawing for the "backwelded" root condition and explain why it can be confused with shallow circumferential IGSCC.
8. In the report attached to your letter dated December 10, 1987, the following inconsistencies were discovered. Explain.
 - (a). On page 11, first sentence - There are 18 standard weld overlay repaired welds instead of 17.
 - (b). On page 12, Table 3 - Only 17 overlay repaired welds are listed.