



Commonwealth Edison
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January 7, 1983

Mr. Darrell G. Eisenhut, Director
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Dresden Station Units 2 and 3
Quad Cities Station Units 1 and 2
Supplemental Response to Generic
Letter 81-04 on Implementation of
NUREG-0313, Revision 1
NRC Docket Nos. 50-237, 50-249,
50-254, and 50-265

- References (a): D. G. Eisenhut letter to All BWR
Licensees dated February 26, 1981
(Generic Letter 81-04).
- (b): L. O. DelGeorge letter to D. G.
Eisenhut dated July 7, 1981.
- (c): G. C. Lainas letter to L. O.
DelGeorge dated October 28, 1982.

Dear Mr. Eisenhut:

In Reference (c), Commonwealth Edison was requested to provide a further response to Generic Letter 81-04 (later referenced to as 81-03) for our Dresden, Quad Cities and LaSalle stations regarding implementation of NUREG-0313, Rev. 1. The following provides the requested response for Dresden Station Units 2 and 3 and Quad Cities Station Units 1 and 2. The LaSalle response is being provided under separate cover.

Our response is provided in four parts:

1. Identify any materials that do not meet the guidelines of NUREG-0313.
2. Implementation of augmented Inservice Inspection requirements.
3. Plans for replacement of nonconforming materials.
4. Installation of a more sensitive leak detection system.

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Item 1

Systems with nonconforming materials are identified in Tables 1 and 2 for Dresden 2/3 and Quad Cities 1/2, respectively. It should be noted that the overwhelming majority of Class 2 piping utilizes conforming materials - ferritic steels.

Item 2 - Implementation of Augmented ISI

To complete the examinations as recommended by NUREG-0313, Rev. 1, very large expenditures of man-hours and man-rem are required with essentially no compensating increase in plant safety margins. Therefore, Commonwealth Edison proposes an alternative ISI augmentation focusing on the Stress Rule Index (SRI) calculations that will be performed to identify the relative cracking susceptibility of all Class 1 welds having non-conforming materials. SRI numbers will be used for relative ranking of welds and not for discriminating between welds believed to be above or below some IGSCC threshold.

Service sensitive
lines

- The highest 25% SRI of all Class 1 welds, distributed among affected systems to the extent practicable, are to be inspected at least once in 120 months.

Nonservice
sensitive lines

- the highest 10% SRI of all Class 1 welds, distributed among affected systems to the extent practicable, are to be inspected at least once in 120 months.

We do not propose to perform augmented inspections on Class 2 welds, because we are not aware of any industry problems with Class 2 systems. It should be noted that welds chosen for augmented inspection will also satisfy ASME XI requirements when such welds also happen to be part of the normal 10 year programs.

Item 3

No schedule for systematic replacement of nonconforming lines has been developed at this time. As reported previously, this requirement of NUREG-0313 is unwarranted from a plant availability standpoint, since no significant safety hazard to the public exists.

Procurement of conforming replacement materials (piping, fittings, etc.) is being considered and some portions are being prepared to be available if needed. Our options at this point are as follows:

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- a) Replacement of sections or the complete system replacement should a crack be identified, or
- b) Weld overlay of the affected weld as a permanent fix or until material becomes available (especially larger sizes), or
- c) Development of Induction Heating Stress Improvement (IHSI) Implementation, for larger piping sizes (≥ 10 "). If IHSI can be implemented, then the augmented inspections will take place until time of implementation. After that, ASME XI will be used.
- d) An IGSCC preventive measure being considered is Hydrogen addition which reduces the level of free oxygen in the water. There is a potential (by use of this method) to reduce stress corrosion cracking of reactor internals/ piping and greatly extend their life, resulting in large savings of replacement costs. However, this procedure is still in the experimental stages with final results not presently available. Dresden 2 will likely implement Hydrogen addition after the Spring, 1983 refueling outage.

Item 4

We believe that the capability of the leak detection systems installed at Dresden 2 and 3 and Quad Cities 1 and 2 meets the intent of the guidelines in NUREG-0313, Rev. 1. More information concerning these systems will be provided by January 17, 1983.

Please address questions you may have concerning this matter to this office.

One (1) signed original and sixty (60) copies of this transmittal are provided for your use.

Very truly yours,



Thomas J. Rausch
Nuclear Licensing Administrator

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Attachment

cc: Region III Inspector - Dresden
Region III Inspector - Quad Cities

5652N

TABLE 1

DRESDEN STATION UNITS 2 and 3

System With Nonconforming Materials

Unit 2, Class 1

Recirculation suction and discharge (28") - all lines including safe ends (2).

Recirculation ring header (22") - entire line.

* Recirculation riser inlets (12") - all lines including safe ends (10).

* Recirculation bypass loops (4") - isolatable sides only.

* Isolation Condenser (12" and 14") - all lines excluding safe ends.

Low Pressure Cooling Injection (16") - all lines.

Reactor Clean-up (8") - entire line.

* Shutdown Cooling (14" and 16") - all lines

* Control Rod Drive return (3" and 4") - entire line excluding safe end.

Jet Pump Instrumentation (4") - safe ends only (2).

Unit 2, Class 2

* Core Spray loops (10") - between MO 2-1402-24 and 25 only.

* Isolation Condenser (8", 12" and 14") - all lines.

* Lines designated as service sensitive in NUREG-0313, Revision 1.

Unit 3, Class 1

- Recirculation suction and discharge (28") - all lines.
- Recirculation ring header (22") - entire line.
- * Recirculation riser inlets (12") - all lines excluding safe ends.
- * Core spray loops (10") - all lines excluding safe ends.
- * Isolation Condenser (12" and 14") - all lines excluding safe ends.
- Low Pressure Cooling Injection (16") - all lines.
- Reactor Clean-up (8") - entire line (including 14' replacement piece).
- * Shutdown Cooling (14" and 16") - all lines
- * Control Rod Drive Return (3" and 4") - seven of ten welds are nonconforming.

Unit 3, Class 2

- * Core Spray loops (10") - between MO 3-1402-24 and 25 only.
 - * Isolation Condenser (8", 12" and 14") - all lines.
- * Lines designated as service sensitive in NUREG-0313, Revision 1.

TABLE 2

QUAD CITIES STATION UNITS 1 and 2

System With Nonconforming Materials

CLASS I

<u>UNIT</u>	<u>SYSTEM</u>	<u>SIZE</u>	<u>NOM. COMMENTS</u>
1 & 2	Recirculation Risers	12"	Service sensitive
1 & 2	Recirc. Stub Tubes	4"	Service sensitive - only sockolet is nonconforming
1 & 2	Core Spray	10"	Service sensitive - partial replacement
1 & 2	CRD Return	3" & 4"	Service sensitive
1 & 2	RHRS (shutdown cooling)	20"	Service sensitive
1 & 2	Recirc. (Pump Suction)	28"	Nonservice sensitive
1 & 2	Recirc. (Pump disch.)	28"	Nonservice sensitive
1 & 2	Recirc. (Ring header)	22"	Nonservice sensitive
1 & 2	RHRS (LPCI)	16"	Nonservice sensitive
1 & 2	RHRS (Head Spray)	4"	Nonservice sensitive
1 & 2	Rx. Clean-up	6"	Nonservice sensitive - substantial replacement on Units 1 and 2

CLASS II

1 & 2	Core Spray	10"	Service sensitive -
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