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SUBJECT: Forwards suppl info re 941014 request for relief to implement temporary non-code repair of leaking section of pipe in chemical & vol control sys at facility, in response to NRC 941021 telcon request.

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10 CFR 50.55a(g)(5)(iii)

Carolina Power & Light Company
Robinson Nuclear Plant
PO Box 790
Hartsville SC 29550

Robinson File No.: 13510
Serial: RNP/94-1885

NOV 15 1994

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261/LICENSE NO. DPR-23
SUPPLEMENTAL INFORMATION RELATED TO REQUEST FOR RELIEF TO
IMPLEMENT A TEMPORARY NON-CODE REPAIR

Gentlemen:

Carolina Power & Light (CP&L) Company submitted a request dated October 14, 1994, to implement a temporary non-Code repair of a leaking section of pipe in the Chemical and Volume Control System at H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2. During a conference call on October 21, 1994, between CP&L and the NRC, certain additional information was requested by the NRC. The requested information is provided in the Enclosure to this letter.

Questions regarding this matter may be referred to Mr. K. R. Jury at (803) 383-1363.

Very truly yours,

R. M. Krich
Manager - Regulatory Affairs

Enclosure

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9411250117 941115
PDR ADOCK 05000261
P PDR

Highway 151 and SC 23 Hartsville SC

RNP/94-1885

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c: Mr. S. D. Ebnetter, Regional Administrator, USNRC, Region II
Ms. B. L. Mozafari, USNRC Project Manager, HBRSEP
Mr. W. T. Orders, USNRC Senior Resident Inspector, HBRSEP

ENCLOSURE
SUPPLEMENTAL INFORMATION RELATED TO THE OCTOBER 14, 1994 REQUEST
FOR RELIEF TO IMPLEMENT A TEMPORARY NON-CODE REPAIR

NRC Request

(1) Provide a plot of the site that was ultrasonically tested.

Response

A plot showing the site that was ultrasonically tested is attached.

NRC Request

(2) Provide additional information related to the impracticality of performing a Code repair.

Response

A repair in accordance with the American Society of Mechanical Engineers (ASME), Boiler and Pressure Vessel Code, Section XI, of the leaking section of pipe would involve removal of the affected section which would render one flow path of borated water to the reactor vessel inoperable. This condition would require entry into Technical Specifications Section 3.0 which requires placing the plant in hot shutdown within eight (8) hours since this condition is not specifically addressed in the Technical Specifications. A schedule for performing the Code repair was developed, and we have determined that the repair would take approximately 29 hours to complete and restore the system to operable status. Implementation of the repair, then, would require placing the plant in hot shutdown, or obtaining NRC approval of enforcement discretion. Furthermore, the Code repair would require draining the boric acid transfer line prior to replacement. The repaired line would be subsequently refilled and hydrostatically tested, and associated valving would be tested for operability. These evolutions were identified as creating the potential for reactivity management problems due to the challenge of matching boric acid concentrations with the reactor coolant system boric acid concentration, and due to possible leak-by of valves during the hydrostatic testing or operability testing. The Plant Nuclear Safety Committee reviewed the options and deemed the non-Code repair as the appropriate course of action.

NRC Request

(3) What type of material is the affected pipe?

Response

The affected pipe is schedule 10, type TP 304 stainless steel.

NRC Request

(4) Describe plans for periodic reinspection of the affected pipe section.

Response

The affected pipe section will be visually inspected on a weekly basis. The insulation will be removed from the affected section on a monthly basis. We consider this inspection to be appropriate for the identified flaw since there is no reason to expect the leakage to accelerate. Since the pipe is heat traced, frequent removal of the insulation would present a small risk of damage to the heat tracing. For this reason, we are proposing to remove insulation and inspect the affected pipe section on a monthly rather than a weekly basis. Any significant leakage through the temporary repair would be seen on the insulation.

Additionally, the pipe is in an area which is entered during operator rounds on each shift. Any substantial increase in leakage from the piping would most likely be detected within a relatively short period of time (i.e., 12 hours maximum).

NRC Request

(5) Provide more information about the flaw.

Response

A flaw evaluation was performed in accordance with the guidance of Generic Letter 90-05, "Guidance For Performing Temporary Non-Code Repair of ASME Code Class 1, 2, and 3 Piping." The stress intensity factor using the "Through-Wall Flaw" approach was calculated to be $K = 37.095 \text{ ksi}(\text{in})^{0.5}$; this is within the allowable value of $135 \text{ ksi}(\text{in})^{0.5}$ from the ASME Code, Section XI, Article IWB-3640, which is cited in the Generic Letter.

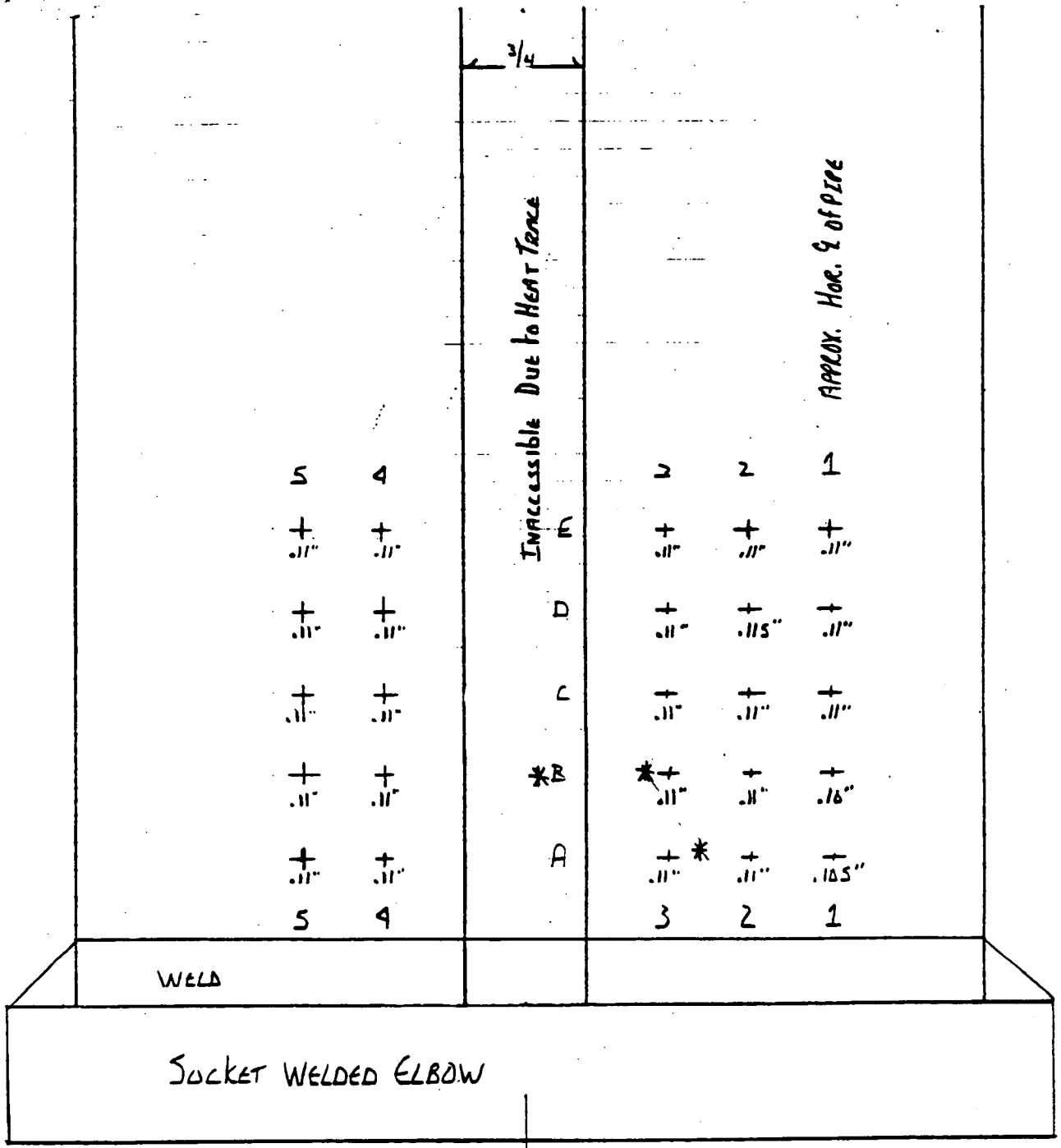
NRC Request

(6) Discuss the considerations of systems interactions such as flooding, spraying of water on equipment, and loss of flow.

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Response

The effects of flooding, spraying of water on equipment, and loss of flow were considered in the temporary modification which installed the stopgap measure consisting of a clamp which compresses a seal material compatible with the pipe on the leak sites. The clamp was installed due to a concern with the potential effect of the leaking borated water on the pipe's heat tracing. In any case, the heat tracing is monitored and annunciated in the control room, and any loss of heat trace function would be identified and corrected immediately.



2" Sch 10 (.109")

TOP &
2-CH-32

* = PIPE LEAK