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SUBJECT: Requests relief from ASME, Code Section XI requirements re temporary repair to Class 3 pipe in moderate energy sys.

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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

REQUEST FOR RELIEF FROM ASME CODE SECTION XI REQUIREMENTS
 CONCERNING A TEMPORARY REPAIR TO A CLASS 3 PIPE IN A MODERATE
 ENERGY SYSTEM

Gentlemen:

This letter is submitted in accordance with 10 CFR 50.55a(g)(5)(iii) to request relief from the American Society of Mechanical Engineers (ASME), Boiler and Pressure Vessel Code, Section XI, Subsection IWA and IWD requirements as implemented by our repair and replacement program, Technical Support Management Manual (TMM) 015, "Inservice Inspection Repair And Replacement Program," Revision 18, regarding the repair or replacement of a pipe installed at the H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2.

On September 30, 1994, the plant staff identified that a section of Chemical and Volume Control System (CVCS) Line 2-CH-151R-32 had through-wall pinhole leaks. This line is a 2 inch diameter, schedule 10 pipe, located downstream of the Boric Acid Filter near valve CVC-348. The line was installed in accordance with American National Standards Institute (ANSI) B31.1 requirements, but was reclassified using the guidance of Regulatory Guide 1.26, Revision 2, "Quality Group Classifications and Standards for Water-, Steam-, and Radioactive-Waste-Containing Components of Nuclear Power Plants," as equivalent to ASME Code, Section III, Class 3. A total of three separate leaks have been identified within a 3 square inch section of pipe. The leak rate with the line pressurized to its operating pressure of 105 psig is characterized by observation to be approximately 2 cubic centimeters per minute (i.e., 0.00053 gpm). Line 2-CH-151R-32 provides a flow path from the Boric Acid Transfer Pumps to the suction of the Charging Pumps or to the Volume Control Tank. This path is used to provide soluble boric acid for chemical reactor reactivity control. The results of ultrasonic testing (UT) of other sections of the same pipe have not revealed any other flaws or significant pipe wall thinning.

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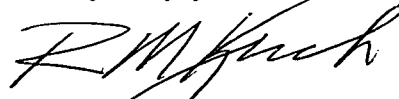
NRC Generic Letter (GL) 90-05, "Guidance for Performing Temporary Non-Code Repair of ASME Code Class 1, 2, and 3 Piping," provides guidance for evaluating the structural integrity and the use of temporary non-Code repairs on Code Class 3 piping. Specifically, the GL states that temporary non-Code repairs on flawed moderate energy Code Class 3 piping may be acceptable if the piping cannot be isolated without a plant shutdown and the structural integrity of the pipe has not been irreversibly affected. Additionally, a temporary non-Code repair may be considered acceptable until the next scheduled outage exceeding 30 days, but no later than the next scheduled refueling outage. However, the NRC must grant relief for the temporary non-Code repair.

The flaws in this piping have been evaluated in accordance with the guidance of NRC GL 90-05, and we have determined that the pipe is operable, in that, it is capable of performing its safety function without any compensatory actions, limitations, or the need for alternate functional capability, and the stresses remain within Code allowables. The flaw is suspected to be the result of a manufacturing defect. Detailed visual and UT results indicate that the flaw does not appear to be due to stress corrosion. Since the leakage is minimal, we request approval to apply a temporary repair consisting of a clamping device which compresses a seal material compatible with the pipe and process fluid against the leak site. Replacement of the piping (i.e., the Code repair) will be performed during Refueling Outage 16 which is currently scheduled to begin April 1995, since there are no planned outages greater than 30 days between now and the next scheduled refueling outage. If the requested relief is approved, this section of pipe will be monitored as described in the enclosed relief request and the necessary actions will be taken in the event further pipe degradation occurs. The flawed section of pipe will be analyzed to ascertain the specific cause of the flaws after replacement.

Therefore, we are requesting that the NRC approve the enclosed relief request which contains specific information and details concerning the ASME Code requirements from which relief is requested, the basis for this relief, and the alternate provisions. In order to minimize the effect of the leakage on the pipe heat tracing, we are currently evaluating whether to apply stopgap measures during the time that this relief request is being reviewed by the NRC.

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

Very truly yours,



R. M. Kfich
Manager - Regulatory Affairs

Enclosure

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
H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
REQUEST FOR RELIEF
FROM THE ASME SECTION XI REQUIREMENTS

I. IDENTIFICATION OF COMPONENTS

This Relief Request involves a section of Chemical and Volume Control System (CVCS) Line 2-CH-151R-32 that has through-wall pinhole leaks. This line is a 2 inch diameter, schedule 10 pipe, installed at the H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2 downstream of the Boric Acid Filter near valve CVC-348. The line was installed in accordance with American National Standards Institute (ANSI) B31.1 requirements, but was reclassified using the guidance of Regulatory Guide 1.26, Revision 2, "Quality Group Classifications and Standards for Water-, Steam-, and Radioactive-Waste-Containing Components of Nuclear Power Plants," as equivalent to American Society of Mechanical Engineers (ASME) Code, Section III, Class 3. A total of three separate leaks have been identified within a 3 square inch section of pipe. The leak rate with the line pressurized to its operating pressure of 105 psig is characterized by observation to be approximately 2 cubic centimeters per minute (i.e., 0.00053 gpm). Line 2-CH-151R-32 provides a flow path from the Boric Acid Transfer Pumps to the suction of the Charging Pumps or to the Volume Control Tank. This path is used to provide soluble boric acid for chemical reactor reactivity control. This piping is categorized in Generic Letter (GL) 90-05, "Guidance for Performing Temporary Non-Code Repair of ASME Code, Class 1, 2, and 3 Piping," as moderate energy piping (i.e., less than 200 degrees F and less than 275 pig maximum operating conditions), and uses borated water as a process fluid.

II. CODE REQUIREMENTS FROM WHICH RELIEF IS REQUESTED

ASME Boiler and Pressure Vessel Code, Section XI, 1986 Edition, Articles IWA/IWD-4000 and IWA/IWD-7000, as implemented by our repair and replacement program, Technical Support Management Manual (TMM) 015, "Inservice Inspection Repair And Replacement Program," Revision 18, provide requirements for the repair or replacement of ASME Code Class 3 pressure retaining components with defects exceeding the acceptance standards of ASME Code, Section XI, Article IWA-3000.

Relief is requested to defer the ASME Code Section XI repair or replacement required by IWA/IWD-4000 or IWA/IWD-7000 until the next scheduled outage exceeding 30 days, but no later than the next refueling outage which is currently scheduled to begin in April 1995. This request for relief follows the guidance specified in NRC GL 90-05, since repair or replacement of this portion of piping is not practical at this time.

III. BASIS FOR RELIEF

On September 30, 1994, the plant staff identified that a section of CVCS Line 2-CH-151R-32 had through-wall pinhole leaks. This line is a 2 inch diameter, schedule 10 piping, located downstream of the Boric Acid Filter near valve CVC-348. A total of three separate leaks have been identified within a 3 square inch section of pipe. The leak rate with the line pressurized

to its operating pressure of 105 psig is characterized by observation to be approximately 2 cubic centimeters per minute (i.e., 0.00053 gpm). Line 2-CH-151R-32 provides a flow path from the Boric Acid Transfer Pumps to the suction of the Charging Pumps or to the Volume Control Tank. This path is used to provide soluble boric acid for chemical reactor reactivity control. The Code repair involves replacement of the piping and would involve making the normal boric acid flow paths inoperable, and is currently estimated to require approximately 30 hours to complete. Plant Technical Specifications (TS) Section 3.2.2.d requires that CVCS "piping, instrumentation, controls, and valves shall be operable to the extent of establishing one flow path from the boric acid tanks and one flow path from the refueling water storage tank to the Reactor Coolant System." If this TS requirement cannot be met, TS Section 3.0 is entered and requires the plant be placed in hot shutdown within 8 hours of its entry and in cold shutdown within the next 30 hours. The Code repair (i.e., pipe replacement) cannot be accomplished without requiring a plant shutdown.

The flaws in this piping have been evaluated in accordance with the guidance of GL 90-05, and we have determined that the pipe is operable, in that, it is capable of performing its safety function without any compensatory actions, limitations, or the need for alternate functional capability, and the stresses remain within Code allowables.

We request relief to perform a temporary non-Code repair which consists of a clamping device which compresses a seal material that is compatible with the pipe material and process fluid against the leak site. The integrity of the temporary non-Code repair will be monitored as described in GL 90-05 by a qualitative visual examination on a weekly basis. GL 90-05 also recommends either UT or Radiographic Testing on a three-month interval until the Code repair is completed; however we will not perform this examination, because of the possibility of damaging the pipe heat tracing, unless the visual examination indicates further degradation of the pipe.

IV. ALTERNATIVE PROVISIONS

Four additional locations were observed with no leakage. Contrary to the guidance in GL 90-05 with respect to the examination of five other locations, only two of the four locations were examined by UT to determine if the flaws reflect a localized phenomenon or whether they are indicative of a more pervasive problem. The results of these additional examinations show that the inspected locations are acceptable regarding minimum wall thickness requirements; and therefore, maintain adequate structural integrity. No additional inspections are planned at this time due to accessibility concerns due to the use of heat tracing on the pipe.

During the monitoring period, if the conditions of the pipe degrade further and structural integrity cannot be assured, an emergency replacement would be required. Since the flawed pipe section cannot be replaced without requiring a plant shut down, a request for enforcement discretion would be submitted to the NRC prior to undertaking replacement or the plant would be shut down.