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April 16, 1993

MSV-01415  
#5368

Docket No. 50-424

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D. C. 20555

Gentlemen:

VOGTLE ELECTRIC GENERATING PLANT  
TEMPORARY RELIEF FROM ASME SECTION XI REQUIREMENTS

During the course of performing routine outage activities during the maintenance/refueling outage currently in progress at Georgia Power Company's (GPC) Vogtle Electric Generating Plant (VEGP), Unit 1, a pinhole leak was identified in the base material of one of the tubes in containment cooler 1-1501-A7-001-000 while the subject cooler was pressurized. The tubing in question is 90/10 copper/nickel material, 5/8" diameter, with a wall thickness of 0.035". A leak was visually observed from the pinhole which is of such a size that it cannot be observed even when liquid penetrant tested. The subject containment cooler was manufactured to the requirements of the 1977 edition of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section III with addenda through Winter 1977 and is a Class 2 component.

Section XI of the ASME Boiler and Pressure Vessel Code, which governs repair and replacement activities in service, requires corrective measures for components with unacceptable flaws. Acceptable corrective measures as determined by GPC would constitute either repair or replacement of the affected cooler tubing. The repair or replacement must meet the original design specification and construction code. Acceptable means of satisfying the original construction criteria and/or ASME Section XI repair requirements would include: 1) replacement of the flawed tubing with acceptable materials, or 2) removal of the defect and plugging the tube by either thermal or mechanical processes such as brazed or mechanical plugs, or 3) removal of the flaw and base metal repair with a Code-compliant welding or brazing procedure. The burden and problems associated with meeting these requirements are documented in the following paragraph. In each case, the Code-acceptable options are either impractical or introduce the likelihood of creating a larger problem than currently exists.

A qualified brazing procedure is not available at VEGP for repairing the affected tubing at this time. Even if a qualified brazing procedure was available, its use could adversely affect other brazed joints in proximity

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of the pinhole because of the high heat input involved in the brazing process. Therefore, because of these concerns with brazing the copper/nickel tubing, the pinhole was sealed using a lead/tin solder. The existing solder sealing the pinhole leak will be removed from the surface of the affected tubing and a split sleeve or coupling will be installed to reinforce the tubing. The split sleeve or coupling will be soldered along its longitudinal joint and at each circumferential end using a silver/tin solder. The enclosed figure depicts the corrective actions to be performed. While the corrective actions to be performed are acknowledged as not being in strict compliance with the repair and replacement requirements of ASME Section XI, they are the most practical in this particular case. Other corrective actions were considered such as plugging of the tubing which would require cutting the tubing and capping it with either a brazed plug or a compression fitting as allowed in ASME Section III. The foregoing corrective actions, while Code compliant, were not considered practical at this time and could adversely affect other tubing. Therefore, a Code repair of the affected tubing is not an option at this time.

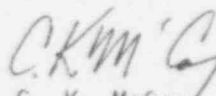
It is our opinion that sealing of the pinhole with solder and reinforcement of the affected tubing is the most desirable corrective action at this time. Should the corrective actions to be taken not be sufficient and the tubing leak, no adverse condition would exist except that the tubing would leak. The leakage of Nuclear Service Cooling Water (NSCW) would drain to a leakage measuring system associated with the containment cooler or to the sump and would be monitored. Any leakage will be monitored in accordance with the appropriate plant procedure(s) and Technical Specification requirements. In the event of a design basis event (Loss of Coolant Accident with loss of off-site power), the sealed and reinforced tubing should prevent direct leakage of containment atmosphere to the outside atmosphere.

Georgia Power Company requests temporary relief from the requirements of Article IWA-4000 of ASME Section XI with respect to corrective actions to be taken to remedy leakage from the containment cooler tubing. Relief is requested to be granted by the NRC as allowed by 10 CFR 50.55a(g)(6)(i) because of the impracticality of imposing the ASME Section XI Code requirements. GPC commits to either perform a Code repair or other long-term resolution during the next maintenance/refueling outage currently scheduled for Fall 1994. We request your prompt consideration of this relief request due to the outage activities currently in progress.

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Should there be any questions in this regard, please contact this office at your earliest convenience.

Sincerely,

  
C. K. McCoy

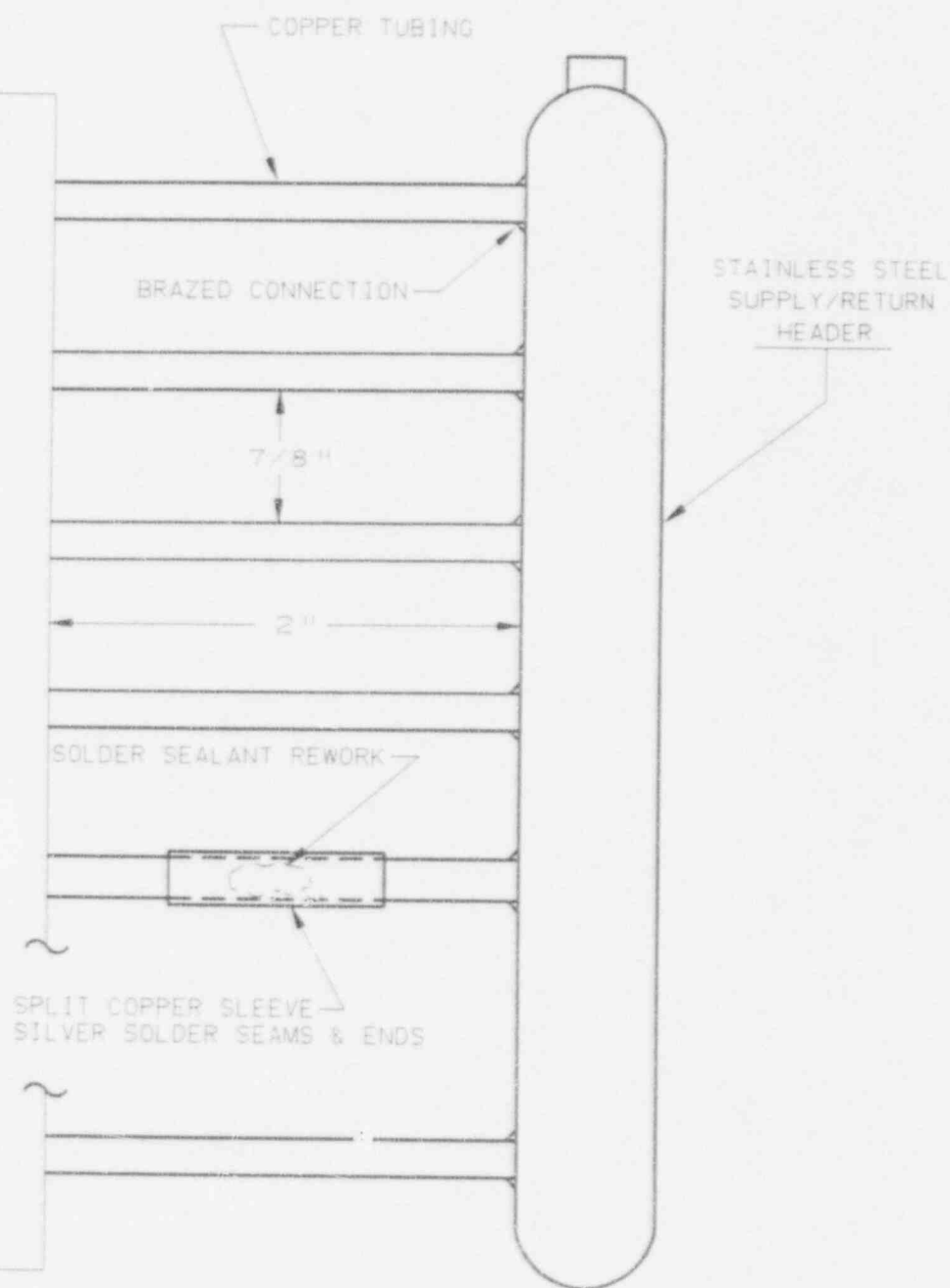
CKM/JAE/jae

Enclosure: Figure depicting re-worked tubing

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CONTAINMENT COOLER  
1-1501-A7-001-000



PROJECT VOGTLE ELECTRIC  
GENERATING PLANT, UNIT 1

GEORGIA POWER COMPANY

TITLE RE-WORKED CONTAINMENT  
COOLER TUBE

REV. A *DLW*  
*11/10/93*  
*PA 11/16/94*