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MEMORANDUM FOR: Karl V. Seyffrit, Chief  
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THRU: Earl J. Brown, Lead Engineer  
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FROM: Chuck Hsu, Engineer  
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Reactor Operations Analysis Branch, AEOD

SUBJECT: LOOSENING OF FLANGE BOLTS ON RHR HEAT EXCHANGER LEADING  
TO PRIMARY TO SECONDARY SIDE LEAKAGE

AEOD/E417

The attached Engineering Evaluation Report is forwarded for your information and further consideration. This evaluation indicates that flow-induced vibration and thermal cycling were the causes of loosened nuts which resulted in leaking at the floating head gasket joint. Since the primary coolant pressure is greater than the service water pressure in the RHR heat exchangers at the Browns Ferry units, the floating head gasket leak could cause primary coolant flow into the service water system.

The conditions of the events in this review appear to be different than the assumptions used to evaluate the Generic Safety Issue C-9. This report suggests NRR and IE consider the following actions:

1. NRR should reconsider the Generic Issue C-9 to determine whether the conditions different from the assumptions used in the priority evaluation of C-9 would impact the priority ranking of that issue.
2. IE should consider issuing an Information Notice to identify the use of a stud elongation approach to assure tightness of the floating head gasket joint of a RHR heat exchanger.

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Attachment:  
As stated

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DATE: 6/26/84

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