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*Southern California Edison Company*

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P. O. BOX 800  
2244 WALNUT GROVE AVENUE  
ROSEMead, CALIFORNIA 91770

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TELEPHONE  
(213) 572-1742

J. G. HAYNES  
MANAGER OF NUCLEAR OPERATIONS

October 1, 1982

U. S. Nuclear Regulatory Commission  
Office of Inspection and Enforcement  
Region V  
1450 Maria Lane, Suite 210  
Walnut Creek, California 94596-5368

Attention: Mr. R. H. Engelken, Director

Gentlemen:

Subject: Docket No. 50-206  
I.E. Bulletin No. 82-02: Degradation of Threaded Fasteners  
in the Reactor Coolant Pressure Boundary of PWR Plants  
San Onofre Nuclear Generating Station  
Unit 1

Action Item No. 5 of I.E. Bulletin No. 82-02 requested us to provide a report of information identified as a result of Action Item No. 3 within 60 days of the date of the bulletin. Our letter to the NRC dated August 5, 1982 informed you that this report would be provided by October 1, 1982. Accordingly, enclosed is our report, signed under oath and affirmation as requested by Action Item No. 5, concerning threaded fasteners at San Onofre Unit 1.

Action Item No. 4 requires reports of information identified through the inspections required by Action Item No. 2. You requested these reports be provided within 60 days following the completion of outages during which Action Item No. 2 was performed. However, we are also required to submit reports of information identified through our Inservice Inspection Program within 90 days following the completion of outages during which an inservice inspection was performed. We anticipate separate reports will be required 60 and 90 days following the completion of certain outages. This situation could result in unnecessary duplicative efforts and inconsistent report

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Mr. R. H. Engelken

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October 1, 1982

preparation. To assure a consistent effort in preparing these reports, we intend to submit the reports required by Action Item No. 4 within 90 days following the completion of outages during which Action Item No. 2 was performed.

If you have any questions or require additional information, please contact me.

Subscribed on this 1 day of October, 1982.

Very truly yours,

By J. G. Haynes  
J. G. Haynes  
Manager of Nuclear Operations

Subscribed and sworn to before me  
this 1st day of October, 1982

Agnes Crabtree  
Notary Public in and for the County  
of Los Angeles, State of California

Enclosure



ACTION ITEM NO. 5

REPORT OF INFORMATION IDENTIFIED  
AS A RESULT OF ACTION ITEM NO. 3

I.E. BULLETIN NO. 82-02  
DEGRADATION OF THREADED FASTENERS  
IN THE REACTOR COOLANT PRESSURE  
BOUNDARY OF PWR PLANTS

SAN ONOFRE NUCLEAR GENERATING STATION  
UNIT NO. 1

October 1, 1982

INFORMATION IDENTIFIED AS A  
RESULT OF ACTION ITEM NO. 3

I.E. BULLETIN NO. 82-02  
DEGRADATION OF THREADED FASTENERS IN THE  
REACTOR COOLANT PRESSURE BOUNDARY OF PWR PLANTS

SCOPE

The scope of the action item listed below is limited to the RCPB. Included are the threaded fasteners (studs or bolts) in (1) steam generator and pressurizer manway closures, (2) valve bonnets, and pump flange connections installed on lines having a nominal diameter of 6 inches or greater, and (3) control rod drive (CRD) flange and pressurizer heater connections that do not have seal welds to provide leak tight integrity. That is, CRDs having an omega seal weld design are excluded from this bulletin action. The reactor head closure studs are also excluded for those PWR licensees committed to the provisions of Regulatory Guide 1.65, "Materials and Inspection for Reactor Vessel Closure Studs."

ACTION ITEM NO. 3

Provide the following information for closures and connections within the scope of this bulletin:

- a. Identify those bolted closures of the RCPB that have experienced leakage, particularly those locations where leakage occurred during the most recent plant operating cycle. Describe the inspections made and corrective measures taken to eliminate the problem. If the leakage was attributed to gasket failure or its design, so indicate.
- b. Identify those closures and connections, if any, where fastener lubricants and injection sealant materials have been or are being used and report on plant experience with their application particularly any instances of SCC of fasteners. Include types and composition of materials used.

RESPONSE

- a. The only RCPB bolted closure that has experienced leakage is the bonnet assembly of motor operated valve MOV-833 located on a 6 inch line of the RHR System. The leak was identified by visual inspection on June 8, 1981. Leakage was stopped by tightening the twelve carbon steel bonnet bolts. A visual inspection of these bolts revealed some corrosion, which was attributed to boric acid attack, but no evidence of SCC. The bolts were also cleaned to prevent additional corrosion. The cause of leakage is unknown.

- b. No injection sealant materials have ever been used on RCPB bolted closures. The only thread lubricant used on threaded fasteners contained in the scope of this bulletin is Fel-pro N-5000. A detailed composition list for Fel-pro N-5000 can be obtained from Fel-pro, Inc. of Skokie, Illinois, but this compound does not contain Molybdenum Disulfide and we have experienced no adverse effects from the use of this lubricant. In addition, no stress corrosion cracking has ever occurred on any RCPB bolted closures.

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