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Dwight E. Nunn
Vice President

May 16, 2002

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

Subject: **Docket Nos. 50-361 and 50-362**
60-day Response to NRC Bulletin 2002-01
Reactor Pressure Vessel Head Degradation and
Reactor Coolant Pressure Boundary Integrity
San Onofre Nuclear Generating Station, Units 2 and 3

References: See Enclosure

Dear Sir or Madam:

This letter provides the Southern California Edison Company (SCE) 60-day response to NRC Bulletin 2002-01, "Reactor Pressure Vessel Head Degradation and Reactor Coolant Pressure Boundary Integrity" (reference 1) for San Onofre Nuclear Generating Station (SONGS) Units 2 and 3. The information, requested in NRC Bulletin 2002-01, Item 3.A and the SCE response is provided below:

3.A. The basis for concluding that your boric acid inspection program is providing reasonable assurance of compliance with the applicable regulatory requirements discussed in Generic Letter 88-05 and this bulletin. If a documented basis does not exist, provide your plans, if any, for a review of your program.

SCE Response

This response addresses the boric acid inspection program as it is related to the components of the reactor coolant pressure boundary (RCPB) other than the reactor pressure vessel head which was addressed in the SCE 15 day response to NRC Bulletin 2002-01 (reference 2).

As a result of Generic Letter 88-05, "Boric Acid Corrosion of Carbon Steel Reactor Pressure Boundary Components in PWR Plants" (reference 3) and the SCE response (reference 4), containment walkdowns of RCPB components were formalized in a procedure in April 1989. The NRC performed an audit of the SCE program in April 1989 and an acceptable finding was concluded.

An internal SCE surveillance was performed on the SONGS Boric Acid Corrosion Prevention Program in April 1997. The surveillance found the program consistent with

P.O. Box 128
San Clemente, CA 92674-0128
949-368-1480
Fax 949-368-1490

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Generic Letter 88-05, effective in actively locating and correcting boric acid leaks and providing a high confidence that there is a low probability of abnormal leakage that could result in failures or ruptures both inside and outside of containment. The surveillance recommended minor changes to the program to provide more consistent methods for data collection and trending. These recommendations were incorporated into the "Boric Acid Leak Inspection" procedure, SO123-V-8.15, in December 1998. One of the changes made resulted from the implementation of an integrated computer based documentation system at the station. Boric acid leaks are now documented using an "Action Request" or AR. Various assignments can be assigned to the AR such as Operability Assessments (OAs), Non-Conformance Reports (NCRs), Apparent Cause Evaluations (ACEs), and Root Cause Evaluations (RCEs). Previously, boric acid leaks would be evaluated using only a Non-Conformance Report.

The program currently requires that for any active (wet) leak, an Operability Assessment (OA) be performed to address the impact on the leaking component and any other affected components. Station Management's expectation is that there will be no leaks in containment upon return to service after a shutdown period. SO123-V-8.15 currently provides direction for performing inspection of containment RCPB components, documenting, classifying and evaluating boric acid leaks (active or dry), and documenting qualified individuals that can perform the inspection.

The procedure requires a containment boric acid leak inspection to be performed if all of the following criteria are met:

1) The containment is accessible,

2) The planned outage/shutdown will be for more than four days, and

3) The unit has operated for greater than 30 days since the last outage in which a boric acid leak inspection was performed.

The procedure allows the deferral of an inspection if Management approves the rationale provided by the responsible Engineer (documented in an attachment in the procedure).

The inspections are performed as close to normal system operating conditions as possible (prerequisite of the procedure is to be initially in Mode 3) to enhance the detection of any small leaks. Equipment and component insulation is not removed during initial walkdowns but will be removed subsequently if liquid leakage or a buildup of boric acid is identified as coming from under an insulated location. Locations include all accessible locations that contain RCPB components (including valves, flanges, pumps, seals, thermowells, instrumentation tubing and connections). Some locations (such as the bottom of the Pressurizer) are inspected initially using a high power flashlight and binoculars due to their distance from the inspection location. In most cases, the leak or boric acid residue is documented with a picture. ARs are written on all active leaks and on components with significant dry boric acid residue. If leakage is identified from a pressure boundary (such as a pipe, valve body, or weld), Operations is notified promptly so the appropriate actions

can be taken. Corrective maintenance is performed to correct identified leaks and remove any boric acid. The reworked components are reinspected to verify the leaks have not reoccurred prior to returning the unit to service. Components with small amounts of dry boric acid residue are cleaned and reinspected prior to returning to power operation. Components that have a history of chronic leakage will have an ACE or RCE assignment created in the AR to document the cause of the recurring leakage and corrective actions.

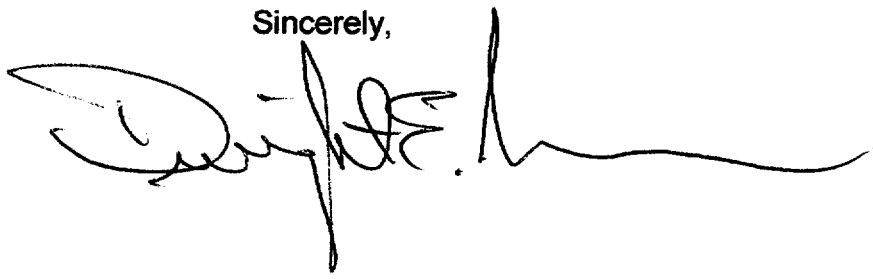
During normal power operation, the containment is not normally accessed. However, in some cases, a containment entry at power (Mode 1) is performed to identify the source of abnormal leakage (as detected by an increase in containment radiation monitors, containment normal sump inleakage, and/or water inventory balance).

The personnel performing the containment inspection per the procedure are required to be qualified by the Reactor Coolant System (RCS) Engineer or a Qualified Engineer and the Maintenance Engineering Supervisor or designee. To qualify as the inspection Engineer, personnel must perform an inspection under the direction of a Qualified Engineer or become qualified as a RCS Engineer. During the inspection, the person to be qualified is shown the principal leak locations where leaks could occur that could result in degradation of the RCPB. This qualification is documented in an attachment to the procedure and retained by the RCS Engineer. Generally, the RCS Engineer performs the containment inspection.

The current "Boric Acid Leak Inspection" program provides reasonable assurance that there are no active boric acid leaks that could degrade any RCPB components prior to power operation. Monitoring of the containment and RCS conditions during power operation provides reasonable assurance that no significant boric acid leakage is occurring.

If you have any questions or would like additional information concerning this subject, please call Mr. Jack Rainsberry (949-368-7420).

Sincerely,



Enclosure

cc: E. W. Merschoff, Regional Administrator, NRC Region IV
A. B. Wang, NRC Project Manager, San Onofre Units 2, and 3
C. C. Osterholtz, NRC Senior Resident Inspector, San Onofre Units 2 & 3

State of California
County of San Diego

Subscribed and sworn to (or affirmed) before me this 16th day of May, 2002.

Dwight E. Nunn
Vice President

Notary Public

MARIANE SANCHEZ
Commission #1196482
Notary Public - California
San Diego County
My Comm. Expires Oct 14, 2002

Enclosure to the SCE 60-day Response to NRC Bulletin 2002-01

References:

1) NRC Bulletin 2002-01, "Reactor Pressure Vessel Head Degradation and Reactor Coolant Pressure Boundary Integrity," dated March 18, 2002

2) Letter from D. E. Nunn (SCE) to the Document Control Desk (NRC) dated April 2, 2002; Subject: Docket Nos. 50-361 and 50-362, 15-day Response to NRC Bulletin 2002-01, "Reactor Pressure Vessel Head Degradation and Reactor Coolant Pressure Boundary Integrity," San Onofre Nuclear Generating Station, Units 2 and 3

3) Generic Letter 88-005 - "Boric Acid Corrosion of Carbon Steel Reactor Pressure Boundary Components in PWR Plants" dated March 17, 1988

4) Letter from M. O. Medford (SCE) to the Document Control Desk (NRC) dated September 22, 1988; Subject: Response to NRC Generic Letter 88-05, Docket Nos. 50-206, 50-361 and 50-362, San Onofre Nuclear Generating Station, Units 1, 2, and 3