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July 1, 1994

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

Gentlemen:

Subject: **Docket Nos. 50-361 and 50-362**
Second Ten Year Inservice Inspection Submittal
San Onofre Nuclear Generating Station
Units 2 and 3

Reference: Letter from W. C. Marsh to the Document Control Desk of the U. S. Nuclear Regulatory Commission dated October 4, 1993; Subject: ASME Code Update for the Second Ten year Interval, Inservice Inspection Programs, San Onofre Nuclear Generating Station, Units 2 and 3

This letter provides a correction to the San Onofre Units 2 and 3 Inservice Inspection (ISI) programs submitted for the second ten year interval which were submitted to the NRC by the referenced October 4, 1993, letter. This also clarifies the statement included in that submittal regarding the reactor vessel inspections performed during the first ten year inspection interval at San Onofre Units 2 and 3. Southern California Edison (Edison) determined the need to provide this correction while preparing answers for the NRC questionnaire concerning 10 CFR 50.55a(g)(6)(ii)(A)(2).

UNITS 2 AND 3 ISI PROGRAM REVISION

Paragraph 2.11.1 "Reactor Vessel, Category B-A," found on page 22 of the ISI programs for both Units 2 and 3, submitted by Reference 1, states:

> "The augmented examination requirements in 10 CFR 50.55a(g)(6)(ii)(A)(2), 1993 Revision of the Code of Federal Regulations Title 10, Part 50 were satisfied during the last period of the first inspection interval by examining 100% of the circumferential (Item No. B1.11) and 100% of the longitudinal (Item No. B1.12) shell welds in the reactor vessel. These augmented examinations may also be performed during the last period of the second inspection interval."

Paragraph 2.11.1 "Reactor Vessel, Category B-A," is being deleted. Revised pages of both the Units 2 and 3 ISI programs are enclosed.

The augmented examination in 50.55a(g)(6)(ii)(A) was a one time examination applicable to the ISI inspection interval in effect on September 8, 1992. On that date San Onofre Units 2 and 3 were in their first inspection interval,

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and satisfied this rule as discussed below. Inspections for the second interval, which began on April 1, 1994, will be performed in accordance with the 1989 Edition of the ASME Code. The augmented examination is not applicable to the second interval.

FIRST TEN YEAR INTERVAL EXAMINATIONS

Examinations of the reactor vessel were performed in accordance with 50.55a(g)(4) during the Cycle 7 refueling outages at each Unit (completed in August of 1993, on San Onofre Unit 2 and December of 1993, on San Onofre Unit 3.) These were the final outages during the first 10-year ISI interval and were examined in accordance with the 1977 Edition, 1979 Addenda, of the Code.

Because San Onofre Units 2 and 3 were in the first inspection interval on September 8, 1992, the requirements of the rule regarding "augmented examinations of reactor vessel" were met in accordance with paragraph 50.55a(g)(6)(ii)(A)(4). In accordance with this paragraph, the examinations were performed in accordance with 50.55a(g)(4). It is our interpretation of this rule that the definition of "essentially 100%" included in 50.55a(g)(6)(ii)(A)(2) did not apply to our first inspection interval inspections. This interpretation is supported by the Federal Register Notice which accompanied the rule (Vol. 57 No 152, dated August 6, 1992, page 34670) which states:

> "Section 50.55a(g)(6)(ii)(A)(4) specifies that a licensee that has either completed or scheduled an inspection of essentially 100 percent of the length of all Examination Category B-A shell welds during the inservice inspection interval in effect when the rule becomes effective does not have to implement the required augmented examination of the reactor vessel shell welds. Primarily, this paragraph is intended to permit licensees who are in the first inspection interval who use the essentially 100 percent reactor vessel shell welds examination required for that interval by section XI to satisfy the requirements for the augmented examination of the reactor vessel. The technical objective of the augmented examination will be accomplished under these conditions. These licensees will continue to apply the current requirements of §50.55a(g)(4) until the next inspection interval when future examinations will be performed based on ASME section XI, 1989 Edition, or later Code edition and addenda specified in §50.55a(b)."

Section 50.55a(g)(4) allows the examiner to complete the required examinations to the "extent practical within the limitations of design, geometry and materials of construction of the components." Since we satisfied this requirement, we believe we are in compliance with the rule and the definition of "essentially 100%" included in paragraph 50.55a(g)(6)(ii)(A)(2) did not apply to this inspection interval.

As stated in our October letter we examined all of the reactor vessel welds;

however, as discussed below we were not able to examine 100% of each weld.

During the reactor vessel examinations, we used a remote ISI tool to perform UT examinations from the inside surface. No outside vessel surface examinations were performed, as we determined them not to be necessary to properly comply with the inspection requirements, and thus could not justify the radiation exposure and expense associated with such an examination.

All of the accessible portions of all of the shell welds were examined. The San Onofre Units 2 and 3 reactor vessel shells each contain 12 welds; 3 circumferential (B1.11) and 9 longitudinal (B1.12). We were able to examine greater than 90% of the total weld volume of all the welds but not 90% of each individual weld. This was due to design interferences presented by the flow skirt, support lugs, and specimen holders. During the course of examination we looked at each weld several times, in different angles and orientation. We did 100% of the accessible portions of each weld. On an individual weld basis, for Unit 2, we examined the three circumferential weld volumes at 85, 87, and 100 %. For the 9 longitudinal welds, two fell below the 90% level at 77 and 84 %. The remaining 7 longitudinal welds were 100% accessible. The Unit 3 welds were similarly inspected. The coverage of the three circumferential weld volumes was 96, 84, and 100%, and the coverage of the two longitudinal welds was 85 and 76%. The remaining welds were 100% accessible.

Very Truly Yours,

Walter C. Marsh

Enclosures

cc: L. J. Callan, Regional Administrator, NRC Region IV
K. E. Perkins, Jr., Director, Walnut Creek Field Office, NRC Region IV
J. A. Sloan, NRC Senior Resident Inspector, San Onofre Units 2 & 3
M. B. Fields, NRC Project Manager, San Onofre Units 2 and 3

High Pressure Safety Injection System (recirculation portion), Low Pressure Safety Injection System (shutdown cooling portion), Reactor Coolant Sampling System (post-accident sampling piping), and Containment Spray System.

.2 The VT-2 visual examination reports will cover the pressure retaining boundary up to the containment penetrations.

2.11 Augmented Inservice Inspection

Pursuant to the requirements of 10 CFR 50.55a (g)(6)(ii), augmented inservice inspection may be performed on certain components to provide added assurance of structural reliability. The following section defines the component augmented inservice examination requirements for the second inspection interval.

~~2.11.1 Reactor Vessel, Category B-A:~~

~~The augmented examination requirements in 10 CFR 50.55a(g)(6)(ii)(A)(2), 1993 Revision of the Code of Federal Regulations Title 10, Part 50 were satisfied during the last period of the first inspection interval by examining 100% of the circumferential (Item No. B1.11) and 100% of the longitudinal (Item No. B1.12) shell welds in the reactor vessel. These augmented examinations may also be performed during the last period of the second inspection interval.~~ Rev 1

2.11.2 High Energy Lines:

.1 "No break zones" in the Main Steam Lines and portions of other high energy piping which penetrate containment will receive 100% ultrasonic examination of all circumferential and longitudinal welds in the area between the first pipe whip restraint beyond inboard and outboard containment isolation valves. Piping which operates above 200°F or 275 psig is considered high energy piping.

.2 The ISI Zone Drawings included in Appendix 14 define the augmented ISI boundaries for piping in the Main Steam, Main Feedwater, Auxiliary Feedwater, and Steam Generator Blowdown systems.

.3 In addition, certain welds at postulated breakpoints on the Main Steam line inside containment are subject to augmented ISI to provide an additional safety margin, such that effects of jet impingement do not require further protective measures as explained in FSAR Section 3.6A.2.4.3.

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