U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION V

Report No. 50-361/79-13
50-362/79-13

Docket No. 50-361, 50-362 License No. CPPR-97, CPPR-98 Safeguards Group

Licensee: Southern California Edison Company
2244 Walnut Grove Avenue
Rosemead, California 91770

Facility Name: San Onofre Units 2 and 3

Inspection at: Construction Site, San Diego County, California

Inspection conducted: May 7-10, 1979

Inspectors: R J Dodds for 6/14/79
J. H. Eckhardt, Reactor Inspector Date Signed

R J Dodds for 6/14/79
P. P. Narbut, Reactor Inspector Date Signed

Date Signed

Approved By: R J Dodds 6/14/79
R. T. Dodds, Chief, Reactor Engineering Support Section, Reactor Construction and Engineering Support Branch Date Signed

Summary:

Inspection on May 7-10, 1979 (Report Nos. 50-361/79-13 and 50-362/79-13)
Areas Inspected: Routine, unannounced inspection by regional based inspectors of construction activities including licensee's actions on previous inspection findings, pipe installation, pipe welding, and containment post tensioning system. This inspection involved 50 inspector-hours onsite by two NRC inspectors.

Results: Of the four areas inspected, no items of noncompliance or deviations were identified.

RV Form 219 (2)

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DETAILS

1. Individuals Contacted

a. Southern California Edison (SCE)

*D. E. Nunn, QA Manager
*P. A. Croy, QA/QC Supervisor
F. Pimentel, QA Engineer
*R. R. Hart, Site Construction Manager
*P. King, QA Engineer
*L. Tipton
M. E. Rodin, QA Engineer
W. L. Rossfeld, QA Engineer
J. J. Panteleo, QA Engineer

b. Bechtel Power Corporation (Bechtel)

*C. A. Blum
E. G. Young, Superintendent, Unit 3
R. M. Reinsch, QCE Welding
R. H. Cutler, Project Field Engineer
*J. E. Geiger, Project Field QA Supervisor
R. S. Koogle, Lead Field Weld Engineer
G. Vechinski, Mechanical Startup Engineer
K. Williamson, Mechanical Startup Engineer
H. Benson, Pipefitter General Foreman, Unit 2
J. Pugliese, Superintendent, Piping, Unit 2, Swing Shift
W. Ferguson, Piping C.F.E.

c. VSL Corporation (VSL)

C. A. Grosvenor, Field Inspector
J. V. Bond, Superintendent

*Denotes those attending the exit interview.

2. Licensee Action on Previous Inspection Findings

(Closed) Followup Item (78-10/03): Cleanliness of electrical cable trays with cable installed. Bechtel procedure WPP/QCI-009, Appendix II, Rev. 0, 3/1/79, "Maintaining Cleanliness in Cable Trays" was reviewed. An examination of surveillance records indicated that the requirements of this procedure were being met. Examination of cable trays indicate that cleanliness conditions and cable protection is satisfactory. This item is considered closed.

3. Installation and Welding of Reactor Coolant Pressure Boundary and Other Safety-Related Piping

The inspector examined the activities detailed below in the areas of installation and welding for both reactor coolant pressure boundary and safety-related piping. The areas examined and the results of the examination are listed below.

a. Observation of Work

(1) Automatic Welding:

Unit 3 field welding of reactor coolant loop piping weld D, S3-1201-ML-006, Sht 1, using the Dimetric machine welding system was examined for compliance with the requirements of WPP/QCI-200.

No items of noncompliance or deviations were observed.

(2) Grinding:

The inspector examined the grinding of stainless steel in Unit 3 for compliance with the requirements of WPP/QCI-206, Rev. 4, "Control of Grinding Wheels, Discs and Wire Brushes." The grinding of reactor coolant loop piping weld A, SC-1201-ML-004 in preparation for NDE was examined. Defect removal grinding in reactor coolant loop piping weld A, SC-1201-ML-003 was examined. Weld bevel grinding for safety injection piping weld C, SC-1204-ML-055, Sht 1 was examined. Procedure WPP/QCI-206 requires that grinding wheels to be used on stainless steel be marked with a white stripe. In the three areas examined, grinding wheels were observed in the immediate work area which were not marked with a white stripe. None of these unmarked wheels were observed in use; however, in one area, the mechanic had a large unmarked cutoff wheel which he used by hand to lap the 0.005 inch flat on the weld bevel. The mechanic stated he could not guarantee he hadn't used the cutoff wheel on carbon steel previously.

The licensee has issued a Corrective Action Request (CAR) to ensure the requirements of WPP/QCI 206 are properly implemented. This item will be examined further during a future inspection. (50-361/79-13/01)

(3) Piping Cleanliness:

The fitup of piping to a Unit 3 safety injection tank at weld C, S3-1204-ML-055, Sht 1 was examined in the areas of fitup gap tolerances, verification of cleanliness, and

installation of water soluble purging dams for compliance to the requirements of WPP/QCI-021, Rev. 0, Appendix I, "Control of Water Soluble Purge Dams," and Construction Specification CS-P-204, "ASME III Piping Installation." The inspector observed a heavy layer of dust and grinding particles in the bottom of the safety injection tank. Through discussion with the startup engineers, it was determined that plans had already been established to enter and clean the tank prior to cleanliness flushing of the systems. The inspector had no further questions on this item.

(4) Manual Pipe Welding:

Unit 2 manual welding of safety injection piping weld B S2-1204-ML-043, Sht 1 was examined for compliance to WPP/QCI-200.

No items of noncompliance or deviations were observed.

(5) Piping Fitup:

While inspecting the welding of Unit 2 safety injection pipe weld B above (Paragraph 4), the inspector observed that the other end of the 12-inch diameter piping sub-assembly (which was not fitup for welding) was axially misaligned with the adjacent piping by one inch at weld joint BA, S2-1204-ML-043. That night weld BA was fitup and welded. Swing shift personnel stated they had performed the fitup by lowering approximately 40-feet of safety injection system piping about one inch by removing some of the wooden wedges in the temporary pipe supports. The lowered 40-foot safety injection system piping run was the piping from the safety injection nozzle in the reactor coolant system cold leg S2-1201-ML-007 to the penetration through the biological shield. The piping personnel interviewed stated they did not consider the piping had been stressed since they had not applied any force with chainfalls. They stated that they did not consider lowering pipe on hangers to be cold springing.

In a separate instance, the inspector observed the fitup of Unit 3, 42-inch diameter two-inch thick, Main Steam Pipe Weld CD, S3-1301-ML-002, Sht. 3. An approximately 60-foot vertical run of pipe was axially misaligned with an elbow by 5/16 inch. Fitup was made by using a "come-along" to pull the vertical run into position. The piping personnel interviewed stated they did not consider the use of the come-along to be stressing the pipe since the pipe could almost be sprung into place by physical force alone.

The inspector observed that Construction Specification CS-P-204, Rev. 8, SCN No. CS-98 of January 22, 1979 stated that the use of cold springs for alignments will be evaluated on a case-by-case basis by Engineering.

The inspector concluded from interviews with pipefitters, piping general foreman and piping superintendent in Units 2 and 3 that the meaning of cold springing was not understood. The licensee has committed to have Engineering provide specific limits for cold springing of pipe beyond which pipefitters will get a specific engineering evaluation. The licensee further committed to take actions as necessary to ensure piping personnel understand what cold springing is; that is the addition of pipe stress by deflection of pipe through the use of force or by the use of the weight of the pipe alone. This item will be examined further during a future inspection. (50-361/79-13/02)

b. Review of Quality Records

The training and qualification records for five welders were examined to determine their qualifications for the welding they were observed performing in the field.

No items of noncompliance or deviations were identified.

4. Containment Post Tensioning System (Unit 3)

The inspector reviewed the VSL QA program to ascertain compliance with selected requirements of Specification S023-204-3, "QA Program for VSL Post-Tensioning System and Its Installation in Nuclear Containment Structures." Specific items examined included:

a. Equipment calibration records

b. Crew member and data recorder qualification records

c. Sequence of vertical tendon stressing

Tendon installation and stressing reports for Unit 3 vertical tendons 75-167, 79-163, 81-161, 93-149, and 91-151 were also reviewed. At present, 44 vertical tendons (one-half of the total vertical tendons) are installed and stressed in Unit 3. The next evolutions will include installation of horizontal tendons and adding grease to the sheathing of the stressed vertical tendons.

No items of noncompliance or deviations were observed.

5. Exit Interview

The inspectors met with licensee representatives (denoted in Paragraph 1) at the conclusion of the inspection on June 1, 1979 and summarized the scope and findings of the inspection as stated in this report.