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

REGION V

Report No. 50-361/79-20
50-362/79-20

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, California

Inspection conducted: July 1-31, 1979

Inspectors: R. J. Pate 9/5/79
R. J. Pate, Resident Reactor Inspector Date Signed

Date Signed

Date Signed

Approved By: R T Dodds 9/6/79
R. T. Dodds, Chief, Engineering Support Section, Reactor Construction and Engineering Support Branch Date Signed

Summary:

Inspection on July 1-31, 1979 (Report Nos. 50-361/79-20 and 50-362/79-20)
Areas Inspected: Routine, unannounced inspection by the resident inspector of construction activities including: piping storage, welding and grinding: reactor pressure vessel and internals installation and protection; followup on 50.55(e) items; fire prevention; licensee corrective actions on previous inspection findings; and general work in progress. The inspection involved 65 inspector-hours onsite by one NRC inspector.

Results: Of the six areas inspected, one item of noncompliance was identified.

RV Form 219 (2)

DETAILS

1. Individuals Contacted

a. Southern California Edison Company (SCE)

=*P. A. Croy, Site Quality Assurance/Quality Control Supervisor
R. Frick, Quality Assurance Engineer
*R. R. Hart, Construction Superintendent
J. Huey, Quality Assurance Engineer
=P. R. King, QA Engineer
=*D. E. Nunn, Manager, Quality Assurance
J. J. Pantaleo, Quality Assurance Engineer
F. Pimentel, Quality Assurance Engineer
=H. B. Ray, Project Manager
*M. Rodin, Quality Assurance Engineer
=*W. F. Rossfeld, Quality Assurance Engineer
D. B. Schone, Lead Engineering Site Representative
*L. D. Tipton, Nuclear Engineering Site Representative
*D. Erdmon, Project Construction Engineer

b. Bechtel Power Corporation (Bechtel)

*J. E. Bashore, Division Quality Assurance Manager
*A. L. Erickson, Project Field QC Engineer
=C. A. Blum, Quality Control Manager
J. Hosmer, Assistant Project Engineer
=*J. E. Geiger, Project QA Supervisor
=*W. D. Nichols, Assistant Project Field Engineer
*J. D. Paulson, Safety Supervisor
=L. W. Hurst, Project Field QA Supervisor

In addition, construction craftsmen, engineers and foremen were contacted during the inspections.

*Denotes attendees at management meeting on July 6, 1979.
=Denotes attendees at management meeting on July 20, 1979.

2. Construction Status

The licensee reported that site construction work is 68% complete as of August 2, 1979. The licensee's project management personnel estimated that the construction of Units 2 and 3 was 79% and 55% complete respectively.

The licensee has issued a new construction schedule as follows:

	SONGS 2	SONGS 3
Fuel Load	11/80	11/81
Initial Criticality	1/81	1/82
Initial Full Power	7/81	7/82
Full Firm Operation	10/81	1/83

3. Licensee Action on Previous Inspection Findings

The inspector examined the action taken by the licensee on the following outstanding items:

a. (Closed) Followup item (50-361/79-03/01): The records for the tanks built for Unit 2 by Brown Minneapolis Tank Company (BMT) were not available for review during the inspection conducted January 23-26, 1979.

The records for the two refueling water tanks and the condensate storage tank for Unit 2 were reviewed. The inspector verified that the required records had been submitted to SCE in accordance with the Vendor Quality Document List. Selected records were examined for completeness. No items of noncompliance were found.

b. (Closed) Followup item (50-361/78-17/01): The adequacy of plant procedures to provide for protection of items stored in-place was addressed in IE Inspection Report No. 50-361/78-13. Portions of this item were resolved as reported in Report No. 50-361/78-17/01. However, a complete review of the plant procedures had not been made.

The inspector reviewed the plant procedure as reported in Report No. 50-361/79-01 and the results of the review were discussed with the licensee on February 15, 1979. All the procedures appeared to satisfy the storage and maintenance requirements of ANSI N45.2.2-1972, except that there were no provisions for documented periodic inspections of storage conditions for items stored in Zone V housekeeping areas.

Subsequent to February 15, 1979, the licensee revised the plant procedure WPP/QCI 009 to include periodic documented inspections of all safety-related material in Zone V housekeeping areas. This satisfies the requirements of ANSI N45.2.2-1972.

c. (Closed) Followup item (50-361/79-05/02): SCE could not provide the acceptance standards for inspection of the welds on the diesel engines for the Unit 2 diesel/generator set.

SCE and Bechtel representatives reviewed with General Motors, the diesel engine subvendor, the welds identified by the NRC as having undercut and porosity. General Motors provided SCE with the acceptance standards and the welds were found to be within the acceptance standards for non-structural welds.

4. Undersized Safety-Related HVAC Damper Actuators, 50.55(e) Report

The licensee reported that approximately 15 damper actuators for Units 2 and 3 were undersized and would have to be modified or replaced in insure that the HVAC system would automatically align

for the post accident condition. The damper actuators were not properly sized due to inadequate communication of engineering design information/criteria by University Mechanical and Engineering Contractors, Inc. (UMEC) among sub-tier suppliers, Air Balance (damper manufacturer) and Johnson Controls, Inc. (supplier of damper actuators).

The licensee initiated action to obtain the properly sized actuators for the HVAC dampers. The investigation conducted by the constructor, Bechtel, determined that the interface procedures between UMEC, Air Balance and Johnson Controls were adequate, but in this one instance had not been properly implemented. No other instances of improper implementation was reported. As no generic deficiencies were identified, the corrective action taken appeared to be satisfactory.

5. Reactor Vessel and Internals Installation and Storage

Site activities for storage of the Units 2 and 3 reactor pressure vessels and internals were observed. Both vessels are installed and installation of Unit 2 internals is essentially complete. Installation of Unit 3 internals is in progress.

No items of noncompliance or deviations were identified.

6. Reactor Coolant Pressure Boundary and Safety-Related Piping

The piping related activities listed below were observed to ascertain compliance with applicable construction specifications and procedures.

Activity	System	Identification No.
Storage	Safety Injection	3-SI-044-1
Grinding	Feedwater	3-FW-190-4, Weld BC
Pipe Welding	Chilled Water	52-1513-ML-348, Sh. 2, Rev. 2, Weld SBA
Grinding	Cont. Spray	52-1206-ML-002 Sh.2, Rev. 8 Weld M (C)
Grinding	Component Cool Water	3-cc-277-4
Cutting/Grinding	Safety Injection	52-SI-045-1

The inspector observed a craftsman cutting a section of stainless steel pipe (spool 52-SI-045-1) with a grinding disc that was not identified as a disc to be used only on stainless steel. This is contrary to the requirements of the construction procedure WPP/QCI 206, Revision 4, which states, "Grinding wheels, discs and wire wheels to be used on stainless steel or nickel base alloys shall be color coded by the tool room attendant or by the warehouse personnel with a white metal marker. . ." This is an item of noncompliance (50-361/79-20/01)

The craftsman was questioned as to why the disc was not properly marked. He responded that the disc had just been obtained from the tool room and had not been properly marked. He immediately returned the disc to the tool room for marking.

No other items of noncompliance or deviations were identified.

7. Fire Prevention

The applicable codes and standards for fire prevention were discussed with the San Onofre Units 2 and 3 Fire Marshall. The Fire Marshall and the inspector toured Unit 3 containment building to observe the position of hose reels and fire extinguishers. Also observed was the storage of forms, lumber and scaffolding materials; the storage of flammable liquids; and the cutting and welding processes in progress. One hose reel was found partially blocked and one temporary fire hydrant was not protected by barriers. These items did not meet the requirements of National Fire Protection Association (NFPA) Standards Nos. 14 and 24 respectively. However, the inspector could not identify any commitment to fire protection codes and standards applicable to San Onofre Units 2 and 3 for construction. Subsequent to the inspection, the licensee's management personnel committed to define the fire prevention standards being implemented at San Onofre Units 2 and 3 for construction.

8. Plant Tour

The inspector toured both Units 2 and 3 several times each week during the inspection report period. Particular attention was directed to observing work in progress, availability of supervision and quality control inspectors at the work areas, housekeeping and preservation of equipment.

No items of noncompliance or deviations were identified.

9. Management Interview

The inspector met with the licensee representatives (denoted in Paragraph 1) on July 6 and 20, 1979. The scope of the inspections and the inspector's findings as noted in this report were discussed. The licensee representatives had no additional comments.