U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 50-362/82-04 (CON)

Docket No. 50-362 (CON) License No. CPPR-98 Safeguards Group _____

Licensee: Southern California Edison Company

2244 Walnut Grove Avenue

Rosemead, California 91770

Facility Name: San Onofre Unit 3

Inspection at: Construction Site, San Diego County, California

Inspection conducted: March 8-12, 1982

Inspectors: W. J. Wagner 3/26/82
W. J. Wagner, Reactor Inspector Date Signed

B. Hernandez 3/26/82
B. Hernandez, Reactor Inspector Date Signed

Approved by: J. H. Eckhardt 3/26/82
J. H. Eckhardt, Acting Chief Date Signed
Reactor Projects Section 1

Summary:

Inspection on March 8-12, 1982 (Report No. 50-362/82-04)

Areas Inspected: Routine, unannounced inspection by regional based inspectors of construction activities involving electrical cables, electrical components, and safety related components and structures. The inspection involved 62 onsite inspection hours by two NRC inspectors.

Results: No deviations or items of noncompliance were identified.

DETAILS

1. Individuals Contacted

   a. Southern California Edison Company (SCE)

      *D. B. Schone, Project QA Supervisor
      *D. C. Stonecipher, Construction QA Supervisor
      *G. P. Vaslos, QA Engineer
      *N. M. Ferris, QA Engineer
       V. A. Gow, QA Engineer

   b. Bechtel Power Corporation (Bechtel)

      *J. H. McCarty, Project QC Manager
      *L. W. Hurst, Project QA Manager
      *J. W. Sheppard, Project QA Supervisor
      *D. T. Lobree, Project Field Engineer
       J. L. McGath, Mechanical QC Engineer
       R. R. Garrett, Lead Field Engineer
       R. E. Brown, Senior QC Engineer - Instrumentation/Equipment
       G. Lees, Construction Field Engineer
       J. Duke, Construction Field Engineer

      *Denotes those present at the NRC management meeting on March 12, 1982.

2. Site Tour

   Upon arrival at the site, the inspectors toured the containment building to ascertain general compliance with regulatory requirements, codes, standards and site procedures. The emphasis of tour was to determine if Class IE cables were being provided with adequate protection from potential hazards such as missiles or pipe failures. The Class IE and associated circuit cables inspected appeared to be satisfactorily protected. During the tour the inspectors also examined a number of permanent attachment welds made to heavy sectioned structural columns for compliance with AWS D1.1 preheat requirements. Review of weld records indicated that the welds were made utilizing welding procedure specifications qualified for welding without preheat in compliance with the rules of AWS D1.1.

   No items of noncompliance or deviations were identified.

3. Electrical (Components and Systems)

   The inspector observed various facets of work activities in progress and completed relative to the installation of electrical equipment.

This activity was performed to verify conformance with applicable specifications and QC procedure requirements. This included reviewing receipt inspection documentation, equipment identification and location, and reviewing construction QC inspection reports. The following electrical components were inspected:

a. 125 VDC Batteries

The inspector observed the storage conditions of the 125 VDC batteries associated with Battery Rack Nos. 3B007 (Train A) and 3B008 (Train B). The electrolyte levels and temperatures were as required for rated performance. Each battery installation included instrumentation and alarms, such as, a voltmeter, high and low battery voltage alarms, and ground detectors.

b. 125 VDC Bus to Breaker No. 3BY03 - This breaker feeds battery charger 3B001.

c. Load Center (Distribution Panel) No. 3BZ

d. HPSI Pump No. 3P018

e. Containment Emergency Sump Pump No. 3HV9302

f. Containment Fan No. A072

g. Class 1E Inverter No. S31807EY002 (Channel B)

h. Boric Acid Makeup Pump No. T071 to Panel No. P174

No items of noncompliance or deviations were identified.

4. Electrical Cables and Terminations

The inspector examined work in progress and completed work on the cable schemes indicated below for compliance with licensee procedures, PSAR commitments and IEEE-384. Specific areas inspected included cable size, cable termination points, routing, separation and protection.

Cable Scheme No.	From	To	Type of Circuit
3AA0403	Containment Spray Pump P012	Panel 3A0403	Power - 4160V Switchgear

Cable Scheme No.	From	To	Type of Circuit
3BBZ37P8	Motor Control Center BZ37	AFW Pump P504	Power - 480V Load Center
3ABE36P1	Motor Control Center BE36	Isolation Valve HV 4371	Power - 480V Load Center
3BW47060C	MOV 4706	Relay Panel 3MS-4706	Control Cable to Electric Valve Operator
3BY24100C	Panel L071-3R	Terminal Box	Control Cable
3CY0315P1	NSSS Auxiliary Relay Cabinet L071	Panel 3L71-3R	Power - 250V Switchgear
3AY0124P1	Circuit Breaker Y001	Panel 3L71-3F	Power - 250V Switchgear

The inspector observed that the pull card for cable scheme number 3AY0124P1 indicated the cable was to terminate in panel 3L71-SF instead of panel 3L71-3F as actually installed. However, the cable in question was properly installed and inspected by QA/QC as dictated by the appropriate wiring diagram, and the computer generated pull card was determined to be in error. The wiring diagram provides the acceptance criteria for inspection.

No items of noncompliance or deviations were identified.

5. Safety Related Components - Review of Quality Records

a. The quality records for four safety related components were reviewed to ascertain whether these records reflect work accomplishment consistent with NRC requirements and PSAR commitments. The following four components were selected:

	Component	Serial Number
(1)	HPSI Pump	S/N 1075155
(2)	Containment Spray Pump	S/N 1075145
(3)	Reactor Coolant Pump	S/N 701-N-0561
(4)	MSIV	S/N 484769

The vendor and licensee records examined included the following:

- Records required list
- Material receiving list
- Material received reports
- Document deficiency notices
- Mill test certifications and analysis
- Weld material certification and analysis
- NDE reports
- Hydrostatic test reports
- Nonconformance reports
- Supplier Deviation Disposition Requests
- Post weld heat treat records.

No items of noncompliance or deviations were identified.

b. The field welds and welding documentation for the below listed welds were examined for compliance to the applicable licensee procedures and the applicable codes and standards.

	Component	Spool	Weld Number
(1)	HPSI	No. 015	A
		No. 005	G, J(C), K(C)
(2)	MSIV	Valve inlet/outlet	BC, BD

c. The radiographs for the following welds were examined for compliance to the applicable procedures, codes and standards.

	Component	Weld Number
(1)	HPSI	A
(2)	MSIV	BC and BD

No items of noncompliance or deviations were identified in any of the above examinations.

6. Exit Meeting

The inspectors met with licensee representatives (denoted in paragraph 1) on March 12, 1982. The scope of the inspection and findings as detailed in this report were discussed.