

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

REGION V

Report No. 50-206/79-16  
Docket No. 50-206 License No. DP-13 Safeguards Group \_\_\_\_\_  
Licensee: Southern California Edison Company  
2244 Walnut Grove Avenue  
Rosemead, California 91770  
Facility Name San Onofre Unit 1  
Inspection at San Onofre and Rosemead, California  
Inspection conducted: November 1-2 and 26, 1979  
Inspectors: L. F. Miller, Reactor Inspector December 19, 1979  
Date Signed  
A. Johnson, Reactor Inspector January 4, 1980  
Date Signed  
B. Pate, Resident Reactor Inspector January 4, 1980  
Date Signed  
B. H. Faulkenberry, Chief, Reactor Projects  
Section #2  
Approved By: B. H. Faulkenberry January 4, 1980  
Date Signed  
B. H. Faulkenberry, Chief, Reactor Projects  
Section #2, Reactor Operations and Nuclear Support Branch

Summary:

Inspection on November 1-2, 1979 and November 26, 1979 (Report No. 50-206/79-16)  
Areas Inspected: Routine, announced inspection of scope and methods of field inspection for IE Bulletin 79-14; routine, unannounced inspection of repair of shorted electrical buswork from the November 7, 1979 reportable occurrence; discussions of this event, of the proposed licensee design change 79-20, and of the recent reportable occurrences (LER's 79-18 and 79-19) involving missing pipe supports. The inspection involved 47 inspector hours by three NRC inspectors.

Results: No items of noncompliance or deviations were identified.

RV Form 219 (?)

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## DETAILS

### 1. Persons Contacted

November 1-2, 1979

\*R. Krieger, SCE Senior Licensing Engineer  
G. MacDonald, SCE QA/QC Supervisor  
S. Marcos, Bechtel Stress Engineer  
R. Blaschke, SCE Engineer  
J. Rainsberry, SCE Senior Engineer  
\*T. Lawrence, SCE Engineer  
P. Koss, Bechtel Project Engineer

The inspector also interviewed other licensee employees.

November 26, 1979

W. Frick, Nuclear Engineer  
M. Short, Nuclear Engineer  
\*J. Curran, Station Manager  
\*R. Brunet, Superintendent, Unit 1  
D. Riley, Watch Engineer  
G. Mc Donald, QA IQC Supervisor

\*Denotes those present at the exit interview.

### 2. Review of Program for IE Bulletin 79-14

Discussions were held with licensee and contractor personnel to examine the details of the licensee's inspections being performed in response to IE Bulletin 79-14. The discussions, and independent observations, were conducted at the in-plant jobsites, at the field offices, and at the corporate offices.

The inspector questioned which seismic design documents were believed to be unavailable, and what the licensee proposed to do to ensure adequate seismic design verification in any portions of systems for which design documents could not be located. Licensee personnel stated that a list of missing documents was being compiled and would be submitted in the next response to this bulletin. No decision had been made at that time about how or when those systems without design documents would be verified. (79-16-01)

The inspector questioned why the licensee considered certain drawings to be "certified" and, therefore, not required to be field inspected. Licensee personnel produced a document entitled "Appendix A Bechtel Scope of Work - Phase 1B to the Balance of Plant Seismic Reevaluation Program Contract San Onofre Nuclear Generating Station Unit 1" pp. 4-8. They stated that this was used to produce the "certified" drawings. The inspector agreed that the field inspections described by

this document and the inspections required by IE Bulletin 79-14 were similar in their requirements. Licensee personnel also stated that system modification to "certified" systems were conducted with an equivalent amount of field inspection to ensure that the "certified" as-built drawing remained accurate. The inspector will verify, during a subsequent inspection, that this up dating of "certified" as-built drawings has occurred. (79-16-02)

The inspector reviewed the licensee's plan to implement IE Bulletin 79-14, "Implementation Program Plan San Onofre Nuclear Generating Station." The plan did not explicitly require that insulation be removed from piping systems where important design elements (e.g. support location) were obscured. The licensee personnel agreed to provide a list of those areas where insulation was removed if it should be requested at a subsequent inspection, and the inspector stated this would be acceptable. The inspector observed that the plan referenced above appeared to be diligently executed at the jobsite. In particular, the organization and qualifications of the personnel who developed the plan were adequate. Field inspections by the licensee's designers were observed and the field reports were noted to accurately reflect the piping configuration. An independent inspection of a section of diesel fuel oil piping was performed by the inspector. No nonconformances not already identified by the licensee's field inspection were observed during this inspection. (79-16-03)

No items of noncompliance or deviations were identified.

3. 480 V Switchgear Bus No. 1 Panel Fire

A. Observation of Damage

The bus bar connecting to the hot side of Breaker 52-1107 (Recirculating Pump A.) was melted with approximately a two inch section missing. The area around the back of the breaker was severely blackened by smoke damage. The breakers and bus bars were removed from the panel. The bus bars were covered with soot, and damage to the breakers ranged from minor discoloration from smoke to severe burns.

B. Observation of Repairs

The cleaning of the bus bars and disassembly of the breakers was observed. The most severely damaged breakers, 52-1107 and 52-115, were to be replaced with spare breakers. The other breakers were to be repaired in accordance with the Special Maintenance Procedure SPM-27 "Inspection and Test Program for Electrical Equipment in 4KV Switchgear Room".

After the breakers had been repaired and bench tested, they were reinstalled in the 4KV Bus No. 1 Panel. The repair of the bus bars and control wiring was observed prior to installation of the breakers. One control wire was identified by the inspector that had a few small spots where the insulation had been burned. The burned areas were only part way through the insulation. Although the wire had passed the megger test, the wire was replaced prior to energizing the panel. However, an inspection of the panel for other similar wires with limited damage was not required and was not done. The control wire used was 600 volt wire in a 125 volt application. Since the wire passed the 500 volt megger test, the use of the wire for the present and near term was not a concern. However, life tests on degraded wire insulation had not been conducted. The inspector discussed the possibility of insulation failure at some future time (e.g. 10 or 20 years) with SCE Management. A licensee representative stated that the control wire in the panel would be inspected for minor insulation damage at the next refueling outage and all wire with insulation damage would be replaced. This will be verified by the inspector during a future inspection. (50-206/79-16-05)

C. Document Review

The following procedures and Inspection Planning Data Reports (IPDR) were reviewed:

- (1) RIP-P-61-79, IPDR for receiving the spare parts used to repair the damaged breakers and bus bars.
- (2) CIP-132, IPDR for repair and test of breakers.
- (3) CIP-134, IPDR for overload test of breakers.
- (4) CIP-133, IPDR for functional test of breakers.
- (5) SPM-27, Special maintenance Procedure for repair and testing the breakers.
- (6) Operating Memorandum No. 244, procedure for connecting temporary power to MCC-1 and MCC-1B.
- (7) Special Procedure SPO, Temporary procedure for connecting a portable diesel generator to MCC-1B.

All except procedure SPM-27 appeared to be satisfactory. SPM-27 did not clearly specify which documents would be sent to the records control center. SCE personnel stated that procedure SPM-27 would be changed to include the repair and test procedures and the inspection and test records. This will be verified during a future inspection. (50-206/79-16-06)

D. Observation of Tests

Selected overload and megger tests required by procedure SPM-27 were observed.

No items of noncompliance or deviations were identified.

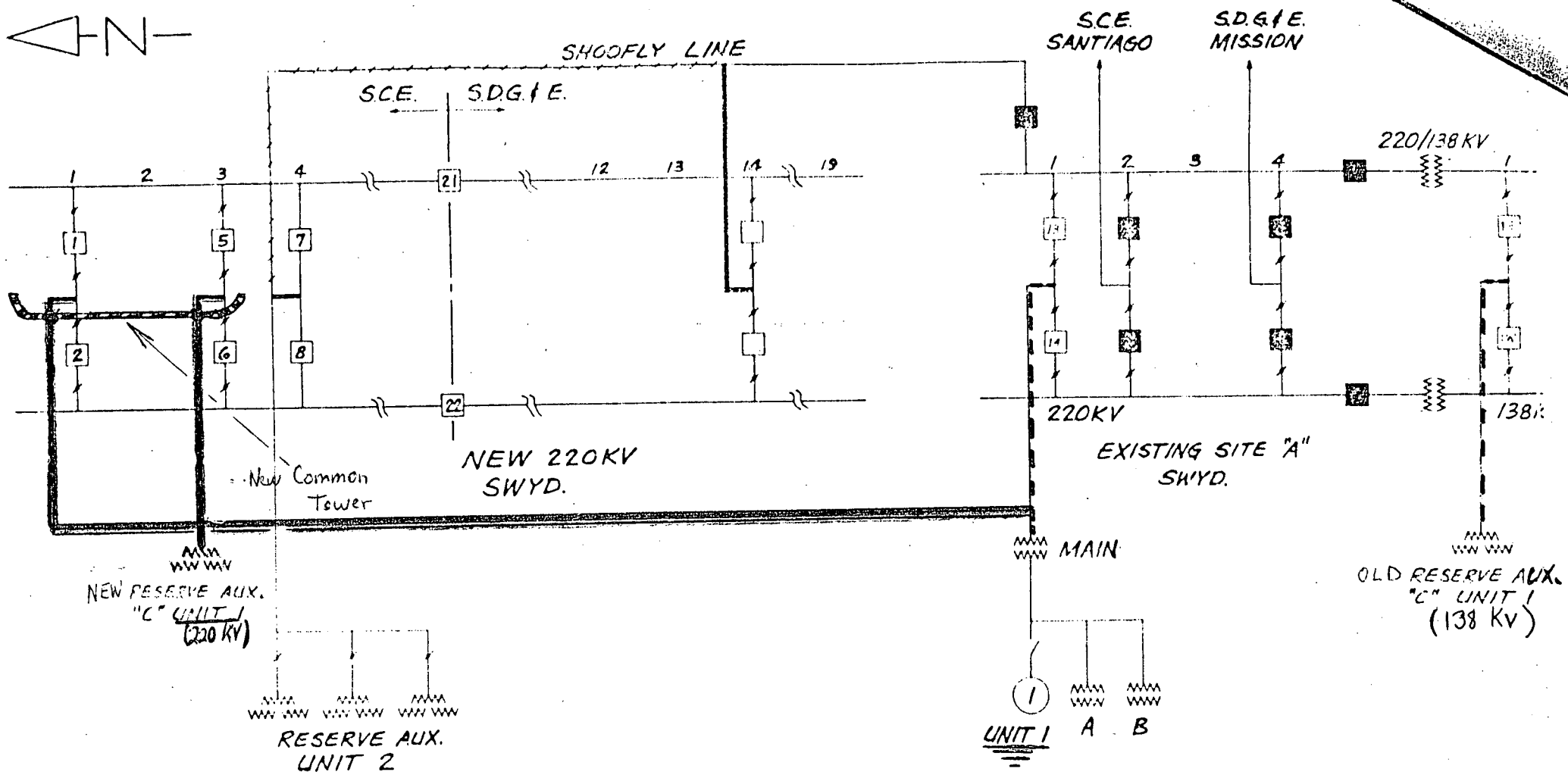
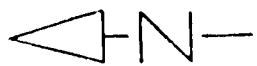
4. Exit Interview

An exit interview was conducted on November 26, 1979 to discuss the licensee's plan to switch over offsite power to the new station 220 KV switchyard during the next refueling outage. The design change, 79-20, would replace the existing offsite transmission lines from the onsite electrical busses to the existing 220 KV/138 KV Switchyard with new transmission lines, towers, transformers, and a 220 KV-only Switchyard (Figure 1). This change is part of the licensee's plan to integrate San Onofre Units 1, 2 and 3 offsite power distribution into a common site 220 KV Switchyard (Units 2 and 3 are under construction). As planned, the new transmission lines from the Unit 1 onsite power busses to the new switchyard would share one tower of their respective transmission paths to the site switchyard. This would be a significant departure from the present offsite power network described in the FSAR (p. 3-29): "The 220 KV and 138 KV transmission lines between the Switchyards and the station are physically separated (emphasis added) to keep a postulated tower failure on one circuit from affecting the other circuit." After the change, the only two transmission paths from the site to the new switchyard would no longer be physically independent, because they would now pass onto a common tower located inside the perimeter of the switchyard. Failure of the new common tower could simultaneously fault both lines. This possibility for one tower failure faulting both lines does not exist with the present network because there are no common towers for the two independent lines to the existing switchyard. Therefore, the probability of loss of all offsite power would be increased by this change. Since loss of all offsite power is an accident or malfunction of equipment important to safety evaluated in the Safety Analysis Report (Section 9), this design change would appear to be an unreviewed safety question, as defined by 10 CFR 50.59(a)(2).

The licensee representative stated that it was his understanding they had received approval from the Office of Nuclear Reactor Regulation (NRR) to proceed with this change. The inspectors noted that they were aware of the meeting which had been held between the licensee and NRR, and NRR's acceptance of the proposed design change. The inspectors informed the licensee representative that since this change appears to be an unreviewed safety question, the licensee will be in noncompliance if the change is made prior to receiving formal review and approval from NRR in accordance with 10CFR 50.59 requirements. The licensee representative acknowledged the inspector's statement.

The electrical bus failure of November 7, 1979 was reviewed with the licensee. The inspectors noted they had observed several openings in the floor of the control room which might admit smoke into the control room during a fire. The licensee representative stated that these would be promptly plugged. (79-16-04) The licensee stated that a change to provide for alternate power supplies for control room ventilation in the event of a single 480 V bus failure was being investigated, as well as an explanation for the apparent negative pressure in the control room during this event.

The inspectors reviewed NRC policy regarding the proper use of the dedicated telephone circuitry (the so-called "red phone") by the licensee. They emphasized that licensee personnel should use the dedicated line promptly in accordance with directions provided in IEB-79-05B. The licensee representative acknowledged this position, and agreed that they would continue to make reports as promptly as plant conditions allow in the event a significant transient should occur.



CUT-OVER PLAN FOR UNIT 1

1. CONNECT SHOOFLY TO POSITION 14. (OCT. '79)
2. CONNECT UNIT 1 MAIN AND RES. AUX. TRANSFORMERS TO NEW SWYD. (MARCH '80)
3. KEEP SITE "A" ENERGIZED UNTIL NOV. 1980, i.e. THE CONTROLS OF SCE. PCB'S SHOWN AS HAVE TO BE OPERABLE.

LEGEND

- EXISTING SET-UP
- PROPOSED CHANGE

SONGS I

SIMPLIFIED  
ONE-LINE  
FOR SWYD  
CUT-OVER