

*Southern California Edison Company*

SAN ONOFRE NUCLEAR GENERATING STATION  
P.O. BOX 128  
SAN CLEMENTE, CALIFORNIA 92672

RECEIVED  
NRC  
SCE  
1982 NOV 26 AM 10:37  
REGION V IEE TELEPHONE  
(714) 492-7700

H. B. RAY  
STATION MANAGER

November 24, 1982

U. S. Nuclear Regulatory Commission  
Office of Inspection and Enforcement  
Region V  
1450 Maria Lane, Suite 210  
Walnut Creek, California 94596-5368

Attention: Mr. R. H. Engelken, Regional Administrator

Dear Sir:

Subject: Docket No. 50-361  
14-Day Follow-Up Report  
Licensee Event Report No. 82-138  
San Onofre Nuclear Generating Station, Unit 2

Reference: Letter, H.B. Ray (SCE) to R.H. Engelken (NRC),  
dated November 10, 1982

The referenced letter confirmed our prompt notification to the NRC on November 9, 1982 of a reportable occurrence involving a manual trip of the reactor and initiation of the Emergency Core Cooling System (ECCS). Pursuant to Appendix A Technical Specification 6.9.1.12g to Operating License NPF-10 for San Onofre Unit 2, this submittal provides the required follow-up report with a completed Licensee Event Report (LER) for this occurrence.

Section 6.9.1.12g requires that conditions arising from natural or manmade events that, as a direct result of the event require unit shutdown, operation of safety systems, or other protective measures required by Technical Specifications, shall be reported within 24 hours with a written follow-up report within 14 days.

On November 9, 1982 while in Mode 1, momentary loss of power to the Feedwater Control System was experienced. As a precaution, the reactor was manually tripped. The ECCS was automatically initiated during the resulting cooldown.

8212070350 821124  
PDR ADOCK 05000361  
S PDR

IE-22  
82-426

Technicians were opening Cabinet 2L-150 to connect a recorder to measure feedwater flow during an anticipated trip test. While opening the cabinet door, the technician dislodged a power cord, deenergizing the Feedwater Control System (FCS) and the Steam Bypass Control System (SBCS).

The Operators noticed dropping Steam Generator (S/G) levels and attempted to manually raise the Main Feedwater (MFW) Pump turbine speed and reopen Main Feedwater and Bypass control valves. These efforts were unsuccessful because with the Feedwater Control System deenergized, manual as well as automatic control was disabled. The reactor was manually tripped at 1556 hours as S/G levels continued to drop.

A technician noticed that annunciator 57C-8, "Instrument BUS 1 Instrument Rack Power Supply Failure", was illuminated and began checking instrument rack cabinets to find which cabinet was without power. He discovered 2L-150 open and deenergized, and informed an SRO in the Control Room that he would attempt to reenergize the cabinet. Upon returning to the cabinet, he discovered the loose power cord and pushed its plug more firmly into the receptacle, returning power to the SBCS and Main Feedwater Control System at 1600.

When power was returned, two of the SBCS valves opened fully, and MFW Main and Bypass valves reopened to their previously-set manual control positions. The rapid Feedwater addition caused the RCS to cool down sufficiently to lower the pressurizer level to below 0% and reduce RCS pressure, which resulted in a Safety Injection Actuation Signal (SIAS) at 1601. Safety injection performed as designed. Minimum RCS pressure reached during the transient was 907 psia. No evidence of substantial voiding in the RCS was apparent during or after the event.

At this point, initiating events were concluded, S/G level and Reactor Coolant System cooldown rate were brought under control.

In addition to the immediate corrective actions taken as described above, the following is the status of other corrective measures undertaken to prevent recurrence of this type of event:

1. All control cabinets with power supply connectors similar to that described in this incident were secured by "Tie-Wraps". A permanent modification will be developed to secure these connectors to their respective cabinets by positive means to prevent inadvertent dislodging.

November 24, 1982

2. Requalification training program for the Operators and Shift Technical Advisors (STA's) will include lessons learned from this incident. This will include as a minimum, instructions to Operators to return any manual control settings undertaken during such an incident, to appropriate conservative settings when not continuously being observed.

The cooldown transient evaluation is continuing and will be the subject of a separate LER 82-136 per Technical Specifications 3.4.8.1b and 6.9.1.13b to be submitted before December 9, 1982.

A detailed engineering evaluation of the ECCS initiation is underway. This will be the subject of a Special Report to be submitted before February 8, 1983, per Technical Specifications 3.5.2 Action b and 6.9.2. The evaluation will also identify any necessary design changes resulting from this incident.

The public health and safety were not affected by this occurrence since all safety systems performed as required. Enclosed LER 82-138 addresses this event.

If there are any questions, please contact me.

Sincerely,

*HBRing / NIMind*

Enclosure: LER 82-138

cc: A. E. Chaffee (USNRC Resident Inspector, San Onofre Unit 2)

U. S. Nuclear Regulatory Commission  
Office of Inspection and Enforcement

U. S. Nuclear Regulatory Commission  
Office of Management Information and Program Control

Institute of Nuclear Power Operations