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

REGION V

Report No. 50-206/79-07

Docket No. 50-206 License No. DPR-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 Unit 1

Inspection conducted: May 1-3, 1979

Inspectors: H. L. Canter — June 1, 1979
H. L. Canter, Reactor Inspector — Date Signed

R. J. Dodson — 6-1-79
D. Haist, Reactor Inspector (in-office only) — Date Signed

Date Signed

Approved By: B. H. Faulkenberry — 6/1/79
B. H. Faulkenberry, Chief, Reactor Project Section 2 — Date Signed
Reactor Operations and Nuclear Support Branch

Summary:

Inspection on May 1-3, 1979 (Report No. 50-206/79-07)
Areas Inspected: Routine, announced inspection to review actions taken in response to IE Bulletin 79-06A; inservice inspection data review and evaluation; LER followup; and independent inspection effort. The inspection involved 29 inspector-hours by two NRC inspectors.

Results: No items of noncompliance or deviations were identified.

RV Form 219 (2)

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DETAILS

1. Persons Contacted

*H. Ottosan, Manager, Nuclear Generation
*D. Nunn, Manager, Quality Assurance
*J. Curran, Plant Manager
*R. Brunet, Superintendent, Unit 1
*H. Morgan, Superintendent, Unit 2
*D. Dunn, Project Quality Assurance Supervisor
*W. Moody, Supervisor, Licensing and Safety
*G. McDonald, Site QA Supervisor
*W. Frick, Nuclear Engineer
*D. Howard, Engineer
*J. Tate, Watch Engineer
M. Bruns, Watch Engineer
J. Reeder, Watch Engineer
A. Schramm, Watch Engineer
J. Cummings, Control Operator
G. Tilton, Control Operator
M. Kirby, Control Operator
D. Flomerfelt, Assistant Control Operator
J. Pierson, Assistant Control Operator
J. Moore, Assistant Control Operator
E. Echevarria, Assistant Control Operator
R. Kuhns, Assistant Control Operator

The inspector also interviewed several other licensee employees including maintenance and security personnel.

*Denotes those attending exit interview.

2. Review of Licensee Actions Taken in Response to IE Bulletins 79-06, 06A, and 06A Revision 1

a. Onsite Review of Operator Training

On April 10-11, 1979 (IE Report 50-206/79-06) the inspector briefed SONGS personnel on the events that took place at Three Mile Island (TMI) on March 28, 1979. On April 20, 1979, direct training discussions with licensed operators were conducted by an IE and NRR task group for the purpose of updating licensee personnel on the TMI incident and discussing the generic implications of the incident on Westinghouse plants.

Licensed operators have also received other informal training in the form of temporary operating memo reviews, management memo reviews, and management discussions.

The inspector determined by discussions with at least two licensed operators on each shift that the above training had been effective and that the operators were knowledgeable of the items of concern identified in IE Bulletin 79-06.

The licensee stated that, in addition to the above, formal, documented training will be conducted prior to May 23, 1979, for all licensed operators (79-07-1). This training will cover the following material:

(1) Review of the procedure changes initiated as a result of IE Bulletins 79-06, 06A and 06A Revision 1.

(2) Instruction on the specific measures which provide assurance that engineered safety features will be available if required. Emphasis will be on measures for returning such systems to operable status following maintenance and testing.

(3) Instruction on the specific and detailed measures to assure that automatic actuations of emergency safety features are not overridden except as permitted in the bulletins.

(4) Review of plant automatic actions initiated by reset of engineered safety features that could effect the control of radioactive liquids and gases.

(5) Instruction (to operators and supervisory personnel) in the provisions and directives for early NRC notification of serious events. This will include instructions on the use of a continuous communication channel to the NRC.

The inspector noted and commented on the lack of a permanent Training Administrator (see Figure 6.2.2.2 of the Technical Specifications). Currently, a Watch Engineer is temporarily assigned to this position. By having a temporarily assigned Training Administrator, the licensee's ability to develop a formal, effective, and up-to-date training program appears to be limited. The licensee stated that the hiring of a permanent Training Administrator is imminent.

Finally, in discussions with plant personnel, it is evident that no simulator training has been given to operators. There is no requirement for this training, but a licensee representative stated that plans are being made to provide simulator training for SONGS 1 operators at the Zion simulator.

No items of noncompliance or deviations were identified.

b. Onsite Inspection of Engineered Safety Features (ESF)

The inspector verified by independent examination of records, procedures and equipment that the ESF systems are operable according to Technical Specification requirements and that licensee procedures and administrative controls appear to be adequate. To provide this verification, the inspector did the following:

(1) Reviewed valve/breaker/switch alignment procedures for all ESF systems against current P&ID's and verified the accuracy of the procedures.

(2) Verified valve/breaker/switch alignments for all accessible ESF system components.

*(3) Reviewed the administrative controls imposed by the licensee to assure proper "return to service" of ESF components following test and maintenance activities.

*(4) Reviewed surveillance test and maintenance procedures and verified they contain provisions to assure systems are returned to an operable condition upon completion of the work.

(5) Reviewed the last surveillance test on each ESF system and verified that the acceptance criteria were met.

(6) Verified that the pressurizer low level bistables that feed the safety injection circuitry for the coincident low level, low pressure safety injection had been placed in the tripped condition.

*(7) Reviewed administrative controls and verified these controls appear to be sufficient to assure ESF systems are returned to operability after extended outages.

*The licensee is performing further reviews in these areas and will respond with a schedule for completion of these reviews by May 23, 1979. (See 79-07-8 in Paragraph 2.d)

(8) Verified the licensee has a system for independent verification of correct valve/breaker/switch alignments following extended outages and maintenance/test activities. This independent verification is provided through an independent review of the completed work or the completed paper work by a Watch Engineer or Supervisor. The licensee does not provide for an independent visual verification of valve/breaker/switch alignments by someone other than the person performing the work.

(9) Verified that valves in the auxiliary feedwater system identified by the licensee as requiring locking or similar positive position control were actually locked or controlled.

The inspector determined, while verifying that the pressurizer low level bistables had been tripped (Item 6 above), that the licensee is currently studying the effects which the jumpered signals have on the SIS sequencer. This item is open pending review of the analysis on the SIS sequencer (79-07-2).

In reviewing ESF lineups, there were some anomalies noticed in the P&ID's. Some valves were locked shut but not shown as such on the P&ID's or the "Locking of Critical Valves" procedure S-0-108. Also, the control room index of P&ID's did not agree with the P&ID's in the controlled stock file. Feed pump discharge valves HV852A and HV852B receive SIS signals but P&ID 568779-21 did not show the SIS inputs to the valves. P&ID 568769-14 had an SIS signal missing from HV851B (feed pump loop discharge valve) and the diagram also showed a flow comparator system to be in place, even though it was removed from the plant. The licensee stated that as part of their response to Item 8 in IE Bulletin 79-06A in which positioning requirements of all safety-related valves are being reviewed, they will review S-0-108 and appropriate P&ID's for necessary changes and will implement those changes as appropriate. In addition, the licensee will revise their procedures to include the basis for required valve positions (79-07-3).

During the performance on the onsite inspection of engineered safety features, the inspector reviewed the following operating instructions (OI), procedures, and P&I diagrams:

OI S-3-3.3. Rev. 11	Hot Operational Test of the SIS and CS Spray System
OI S-3.2.21, Rev. 7	Cold Shutdown Arrangements of the SIS
OI S-2-1, Rev. 6	MFP Operation

OI S-3-1.1, Rev. 19	Plant S/U from Cold Condition to Min. Load
OI S-3-3.10, Rev. 4	SIS Venting
OI S-3-2.21, Rev. 7	Checkoff Sheet (PSSO 113)
OI S-3-1.1, Rev. 19	Checkoff Sheet (PSSO 136)
OI S-3-1.1, Rev. 19	Checkoff Sheet (PSSO 137)
OI S-3-1.1, Rev. 19	Checkoff Sheet (PSSO 138)
P&I 568766-16	RCS
P&I 568767-19	CVCS
P&I 568767-15	Auxiliary Coolant System
P&I 568779-21	Feed and Condensate
P&I 568769-14	SIS

No items of noncompliance or deviations were identified.

c. Onsite Assessment of Operating Procedures

There has been no case where partial actuation of a safety injection system was necessary to assist in level control of the pressurizer during routine operation event induced pressurizer level transients. It is also noted that a second charging pump will automatically start at a 2200 psig discharge header pressure (normal is 2500 psig). This automatic start feature has not had to function on any normal transient.

The licensee's position on the operation of reactor coolant pumps in the event of a safety injection high pressure SI pump initiation is to restart the reactor coolant pumps. Temporary Operating Memorandum (TOM) 213, Rev. 3 describes these operator actions. The licensee response to IE Bulletin 79-06A, Item 7c, however, states that the licensee does not plan to alter operating instructions to specify continued operation of reactor coolant pumps in all cases following safety injection actuation. The licensee will issue a TOM which will be in accordance with IE Bulletin 79-06A, Paragraph 7c, in that one RCP will remain operating in each loop as long as the pump(s) is providing forced flow and continued operation shall not result in an unsafe plant condition, e.g., loss of seal integrity may result in system failure of greater consequence than the benefit derived from forced flow.

Discussions with reactor operators indicates an awareness of the criteria for operation of reactor coolant pumps and how to determine the 50 degrees subcooling specified in Item 7.b(2) in IE Bulletin 79-06A. The licensee plans to install a three pin chart recorder which will help in determining the amount of subcooling. This item is open pending review to verify that proper temperature indications exist to verify subcooling for the core flow occurring during the accident (79-07-4).

There are no procedures for feeding dry steam generators and therefore the operators have received no training in this area.

There is the potential for obscuring status indicators on control panels in the control room. The licensee is aware of this potential and is looking into alternative tagging systems (79-07-5).

No items of noncompliance or deviations were identified.

d. Other Comments

Besides items already discussed as requiring followup, the response to Paragraphs 2 and 10b to IE Bulletin 79-06A require followup. Paragraph 2 deals with coping with void formation in the reactor coolant system (79-07-6), and Paragraph 10b deals with a review of plant administrative controls on returning systems to operable status following maintenance or testing (79-07-7).

Finally, the licensee stated that the schedule for completion of all items left open in the response to IE Bulletins 79-06, 06A and 06A Revision 1, will be submitted with the May 23, 1979 response to Item 13 of the same bulletin (79-07-8).

3. Inservice Inspection

The licensee's summary report of the refueling outage No. 6 inservice inspection was reviewed in the NRC regional office for compliance with Facility Technical Specifications and ASME code requirements. (Inspection of refueling outage No. 6 ISI activities are also discussed in IE Report 50-206/78-14.)

No items of noncompliance or deviations were identified.

4. Licensee Event Followup

(Closed) LER 78-12: This LER dealt with class 2 pipe cracks. The licensee reported cracks in portions of the reactor coolant pump seal water return line and an elbow in the charging pump discharge line.

The inspector reviewed a followup report and LER 78-012, Revision 1, dated April 19, 1978 describing additional indications discovered and corrective action taken. The inspector had no further questions on this matter.

No items of noncompliance or deviations were identified.

5. Followup Items

Various followup items appear in this report. They are identified below by item number, subject, and applicable paragraph from IE Bulletin 79-06, 06A, or 06A Revision 1.

Item No.	Subject	Related Bulletin Paragraph
79-07-1	Formal Training Sessions	1
79-07-2	SIS Sequencer "Low Level" Jumpers	06A, Rev. 1
79-07-3	Valve Positioning and P&I Updates	8
79-07-4	Subcooling	7
79-07-5	Obscuring of Indications	8
79-07-6	Void Formation Analysis	2
79-07-7	Verification of Operability	10
79-07-8	Schedule of Completion	all

6. Independent Inspection Effort

The inspector witnessed a demonstration and training session on a live fire. Live fire training for the fire brigade is expected to be completed during the month of May.

7. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) on May 3, 1979 at the conclusion of the inspection. He summarized the purpose, scope and findings of the inspection.

A licensee representative stated that a formal training program on the subject of the TMI incident and its relationship to SONGS 1 will be developed, implemented and completed by May 23, 1979 (79-07-1). (See Paragraph 2a.)

A licensee representative stated that a schedule for completion of the various open items mentioned in the response to IE Bulletin 79-06A will be submitted by May 23, 1979 (79-07-8). (See Paragraphs 2b and 2d.)