

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 50-206/82-21

Docket No. 50-206 License No. DPR-13 Safeguards Group _____

Licensee: Southern California Edison Company (SCE)
P. O. Box 800
2244 Walnut Grove Avenue
Rosemead, California 91770

Facility Name: San Onofre Unit 1

Inspection at: San Onofre, California

Inspection conducted: July 19-23, 1982

Inspectors: *D. Kirsch* 8-12-82
for J. W. Hornor, Reactor Inspector Date Signed

Date Signed

Approved by: *D. F. Kirsch* 8-12-82
D. F. Kirsch, Chief, Reactor Projects Section 3 Date Signed
Reactor Projects Branch No. 2

Summary:

Inspection on July 19-23, 1982 (Report No. 50-206/82-21)

Areas Inspected: Routine, unannounced inspection of licensee action on IE Circulars and TMI action items, fire protection implementation, follow-up on previously identified items, and independent inspection. The inspection involved 40 inspector-hours on-site by one inspector.

Results: As a result of this inspection, no items of noncompliance or deviations were identified in three areas; and one severity level IV apparent violation was identified in the area of fire protection implementation (paragraph 5).

DETAILS

1. Persons Contacted

- +*P. A. Croy, Manager, Configuration Control and Compliance
- *J. M. Curran, Manager, Quality Assurance (QA)
- *D. P. McCloskey, Manager, Station Emergency Preparedness
- *P. J. Knapp, Manager, Health Physics
- *G. A. Patrissi, Fire Protection Supervisor
- *C. M. Seward, Fire Protection Administrator
- *R. K. Richter, Fire Protection Engineer
- *K. Grote, Senior Emergency Services Officer
- *J. D. Dunn, Project Quality Assurance Supervisor
- *G. W. McDonald, QA/QC Supervisor, Unit 1
- *R. Montroy, QA Engineer, Unit 1
- *M. J. Speer, Compliance Engineer
- *J. Derfelt, Station Administrator
- *W. Rising, Health Physics Foreman
- *B. Miner, Construction Project Engineer
- G. More, Watch Engineer, Unit 1
- J. M. Francis, Compliance Engineer
- L. D. Jones, Lead Engineer, Management Tracking Section

The inspector also interviewed fire brigade members, persons assigned to firewatch duties and other licensee and contractor employees during this inspection.

*Denotes those attending the exit meeting on July 23, 1982.

+Denotes individual contacted by telephone for exit interview, on August 9, 1982, to inform the licensee of the apparent item of noncompliance.

2. Licensee Action on IE Circular

(OPEN) IE Circular 81-13: Torque switch electrical bypass circuit for safeguard service valve motors

The inspector previously reviewed the licensee's action with respect to this circular (see Inspection Report 50-206/82-16). At that time, the licensee committed to complete the needed action by June 16, 1982. When questioned during this inspection concerning completion of action on the circular, the licensee stated that action was still incomplete because the task was more complex than expected. The licensee committed to a revised completion date of August 6, 1982.

3. Follow-up on TMI Action Items

a. (Open) TMI Item I.D.2: Plant Safety Parameter Display Console

The plant safety parameter display console is completed but has not passed all acceptance tests required by the station. The licensee has committed to have the system fully operational prior to plant restart-currently scheduled for November 1982.

b. (Open) TMI Items II.B.2 and II.F.1: Plant Shielding and Accident Monitoring

According to NUREG 0737, these items originally were scheduled for completion by July 1, 1982. When questioned concerning the items, the licensee stated that based on discussions with the NRR project manager, completion was scheduled prior to resumption of power operation in November 1982.

c. (Open) TMI Item II.F.2: Inadequate Core Cooling

The inspector determined that the licensee is awaiting NRC approval of a design concept. Upon approval of a concept, the licensee plans to install the instrumentation during the summer of 1984.

d. (Open) TMI Item II.E.1: Auxiliary Feedwater System Initiation and Flow

The inspector verified that all components needed for this item were on site. Installation is scheduled to begin July 27, 1982 and final calibration was scheduled to begin the week of August 2, 1982.

4. Licensee Action on Previously Identified Items

a. (Closed) Open Item 82-11-03: Acceptance Criteria for Inservice Inspection of Valves

The inspector verified that a procedure change notice was initiated to include ASME acceptance criteria in the procedure used for surveillance testing of safety related valves. (S01-12.7-7 Revision 0, dated January 23, 1981; "Inservice Testing of Valves").

b. (Closed) Open Item 81-25-01: Fire Protection Administrative Controls not in accordance with Requirements

The inspector reviewed the following documents to determine conformance with fire protection requirements:

- (1) Station Order S0123-A-133 Revision 0, dated July 1, 1982; "Fire Protection Plan".
- (2) Station Order S0123-A-130 Revision 0, dated May 6, 1982; "Station Housekeeping and Cleanness Control".
- (3) Fire Protection Procedure S01-XIII-10 Revision 0, dated July 20, 1982; "Fire Fighting".
- (4) Fire Protection Procedure S023-XIII-10 Revision 0, dated July 12, 1982; "Fire Fighting".
- (5) Fire Protection Procedure S0123-XIII-13 Revision 0, dated July 1, 1982; "Control of Combustibles and Transient Fire Loads".
- (6) Fire Protection Procedure S0123-XIII-20, Revision 0, dated July 1, 1982; "Fire Brigade/Emergency Services Officers Training Program".
- (7) Fire Protection Procedure S0123-XIII-21 Revision 0, dated July 1, 1982; "Fire Brigade/Emergency Services Officers Fire Drills".
- (8) Fire Protection Procedure S0123-XIII-14 Revision 0, dated July 1, 1982; "Fire Prevention During Open Flame Process".
- (9) Fire Protection Procedure S0123-XIII-25 Revision 0, dated July 1, 1982; "Personnel Injury".
- (10) Fire Protection Procedure S0123-XIII-26 Revision 0, dated July 1, 1982; "Fire Protection Impairment".
- (11) Maintenance Procedure S01-I-2.11 Revision 1, dated February 22, 1982; "Monthly Fire Hose Station Inspection".
- (12) Maintenance Procedure S01-I-2.13 Revision 0, dated June 12, 1981; "18 Month Fire Hose Station Inspection".
- (13) SCE-SONGS Unit 1 "Fire Pre-Plans" (Fire Strategies) 1 to 35; dated July 1, 1982.

- (14) SCE-SONGS Lesson Plan GT-9000 Revision 0, dated December 19, 1980; "Fire Protection and Prevention".
- (15) SCE-SONGS Lesson Plan GT-9001 dated January 12, 1981; "Portable Firefighting Equipment".
- (16) Health Physics Procedure S0123-VII-2.0 Revision NEW, dated November 17, 1981; "Respiratory Protection Manual".
- (17) Health Physics Procedure S0123-VII-2.2 Revision NEW, dated February 9, 1982; "Use, Cleaning and Maintenance of the Biomarine Biopak 60P Respirator".

Based on a review of the listed documents, interviews with the Emergency Preparedness/Services staff and Fire Brigade members, and inspection of fire equipment, facilities and systems, the inspector determined that the licensee has substantially complied with facility licensee condition 3.H. "Fire Protection" as regards to the establishment of the administrative controls identified in Section 6 of the Fire Protection Safety Evaluation Report. Except as noted below, all of these controls were established by the commitment date of July 1, 1982.

The one exception is that the licensee's fire strategies do not address security control of access for fire fighting as required by NRC document "Nuclear Plant Fire Protection Functional Responsibilities, Administrative Controls and Quality Assurance". The licensee committed to add the necessary steps to their plan, procedures and pre-plans as appropriate to accommodate this security information by July 31, 1982.

c. (Closed) Open Item 81-25-02: Fire Protection Training for Off-Site Fire Department Personnel

The inspector examined the training program, the fire drill requirements and the records of attendance for these items. Based on this review, the inspector verified the acceptability of licensee's implementation of this program for both on-site and offsite personnel responsible for fire protection.

d. (Closed) Open Item 81-25-03: Fire Protection-Overall Program Upgrade

The inspector determined that the Fire Protection Program identified in paragraph b. above has been significantly upgraded and improved and now appears to meet NRC and NFPA Code requirements as required by the Fire Protection Safety Evaluation Report.

e. (Closed) Open Item 81-25-04: Fire Protection-Unauthorized Hose Usage

The Fire Protection Plan and associated procedures listed in paragraph b. above address fire hose maintenance, usage and testing procedures which meet NFPA requirements. The inspector found two deficiencies in the implementation of these procedures, however, during the inspection: (1) a temporary fire hose on the upper east turbine deck was damaged and (2) three of the rack of fire hoses not qualified for use were not so identified. The licensee promptly corrected these items.

The inspector notes that in connection with this item and paragraphs b, c, and d, above, the licensee has invested substantial resources to upgrade the entire station fire protection/prevention program. The management has converted from a part time fire brigade for each unit to a full time professional site fire department serving all three units. In addition to the 5 man full time brigade, staff consultant auxiliary operators, health physicists and SCE security officers are assigned to respond on a 24 hour basis with the fire brigade to any emergencies and supply their expertise as needed. These assigned individuals are trained and participate in drills with the fire brigade. The inspector concludes the expanded program appears to meet or exceed all of the requirements of the Fire Protection Plan.

No items of noncompliance or deviations were identified.

5. Fire Protection/Prevention Program Implementation

The inspector toured numerous protected and vital areas, including inside containment, and examined these areas for evidence of the implementation of the Fire Protection/Prevention Program as defined in the Fire Protection Plan (Station Order S0123-A-133 Revision 0, dated July 1, 1982) and associated procedures and references.

The inspector found that combustible materials were reasonably controlled considering the amount of construction in progress. Exceptions were noted in the following limited access areas:

- a. Spent Fuel Storage Building: There was a large pile of refuse adjacent to the cask handling area. The licensee stated that trash handlers were not allowed in the spent fuel area without an escort, and therefore, the trash was not removed on a routine basis. Although the trash was promptly removed when the condition was brought to the licensee's attention, the condition did not conform to the requirements of Station Order S0123-A-130, paragraph IV.D.7 and therefore, is an apparent item of noncompliance (82-21-04).

- b. Lower Level Auxiliary Building: More than 100 pounds of filter material and associated cartons were found stored beneath the stairs in this area with no evidence of implementation of supplemental fire protection measures. This conflicts with the licensee's procedure S0123-XIII-13, which defines significant combustible material as greater than 100 pounds and requires additional fire protection measures in such instances. This condition also appears to be a repetition of a condition which was previously addressed in the staff's Fire Protection Safety Evaluation (paragraph 5.5.2) and thought to be corrected. Accordingly, this is an apparent item of apparent noncompliance (82-21-04).
- c. Lube Oil Storage Shed, (Fire zone 9B): The inspector observed oily rags, debris and oil spills on the floor of this area. The housekeeping did not conform to either control of combustibles (S0123-XIII-13), or station housekeeping (S0123-A-130) requirements. Although the station Fire Protection Administrator promptly corrected the condition, this failure to follow these procedures is an item of apparent noncompliance (82-01-04).

Although a specific written requirement was not identified, the inspector noted that temporary supplies of flammable liquids were not being stored in safety cans. The inspector also noted that the door to the shed was an automatic closing fire rated door which did not latch as required when released. The licensee representative stated that these problems would be attended to before the end of the day. The inspector stated that other automatic fire doors would be checked during future inspections. A work order was issued to check all automatic fire doors and adjust those found out of adjustment.

Other flammable liquids and gases appeared to be handled in accordance with fire codes and station procedures.

The inspector witnessed several welding, grinding and cutting operations and verified that the requirements of the approved "open flame permits" were met including provision of a fire watch, fire blanketing of adjacent safety related components and the presence of portable fire extinguishing equipment. The inspector inquired as to how many operations a single fire watch was allowed to cover and was told that the policy was not based on a number but rather on an immediately accessible and completely visible area. The licensee stated that SCE will provide a more definitive answer by July 31, 1982 (82-21-01).

The inspector interviewed several firewatch personnel and found that one of the firewatch staff did not know or understand all of his duties. These duties included visual inspection of the entire 4KV Room four times per hour including the upper level of the cable trays when the fire suppression system is out of service. The licensee committed to improve the instructions, upgrade the training, and look into the need for testing fire watch personnel on their knowledge of their duties prior to assignment (82-21-02).

The inspector observed some areas where egress would be difficult in an emergency (e.g. fire, injury). The inspector notes that the National Fire Protection Association requires three foot accessibility from hazardous work areas; however, this may not be practical in existing facilities. Improvements in available egress, however, could be accomplished during the present construction effort by judicious placement of scaffolding, temporary utilities and equipment and also by adhering to good housekeeping procedures. In particular, egress through the Unit 1 containment emergency escape hatch was severely hindered by cables, hoses, rope barriers, signs and other debris. A temporary fire hose was coiled in the hatch, which would completely block egress if energized for fire lighting. This is the second inspection in which the inspector has found egress impeded through the emergency escape hatch, and although immediate action was taken by the licensee in both instances, the inspector will examine this area routinely in the future. The licensee committed to issue a memorandum addressing this problem by July 31, 1982 (82-21-03).

The inspector determined that at least three fire extinguishers inside containment and one in the auxiliary building had not been inspected and tagged within their required annual frequency. The licensee stated this was because the state-licensed fire service engineers were not health physics-qualified. The inspector stated this did not relieve the licensee of responsibility and that the fire service personnel could be escorted until they were qualified. The licensee promptly qualified the fire service personnel and all Unit 1 fire extinguishers were inspected prior to the exit meeting.

The inspector determined that, contrary to the requirements of station procedure S0123-XIII-13 (paragraph 6.2.3), wood materials apparently untreated for fire retardance were being used for temporary and permanent structures located in safety related areas. Specifically, this was noted for cabinets in the "back yard" (northwest corner of the protected area, adjacent to the sphere enclosure building), the wooden overhead porch on the contaminated clothing area in the auxiliary building and wooden parts stored on the roof of the contaminated clothing building. Although this condition was also identified previously by on-site quality assurance audits and an off-site fire consultant organization, the condition remained uncorrected. Failure to follow the station procedure for control of combustibles is an item of apparent noncompliance (82-21-04).

The inspector also determined that several new construction sheds and trailers, not equipped with automatic sprinklers were located within 30 feet of permanent structures at the northwest corner of Unit 1. This conflicts with the requirements of station procedure S0123-XIII-13 (paragraph 6.6.2) and, therefore, is an item of apparent noncompliance (82-21-04).

The inspector identified two sets of emergency lights required by 10 CFR 50, Appendix R, Section III.J which were located in 480 Volt Room (Cable Spreading Room) and were out of service. The licensee stated that these lights were removed from service due to construction activity in that area. The licensee, however, was unable to provide documentation allowing these lights to be out of service as required by station procedure S0123-XIII-26, paragraphs 4.1 and 4.3.5. Failure to follow this procedure is an item of apparent noncompliance (82-21-04).

The inspector determined that Fire Brigade training and drills were being conducted according to an approved procedure and regulatory requirements, and all drills were reviewed and approved before implementation. The inspector examined the qualifications and attendance records of several fire brigade members and found that those members were accounted for and training and drills were conducted within the required frequency.

Fire protection equipment including the new fire truck, ambulance, warehouse supplies and area fire protection equipment inventories, including breathing apparatus, were examined by the inspector and appeared to be in conformance with station requirements and referenced fire code documents.

Fire protection systems examined were either operable or the required out of service procedure was implemented, including the required firewatches. These systems were covered by Equipment Control Procedures and the Control Room Operators were alerted to these conditions. All of the activities examined were conducted under an approved work authorization.

6. 10 CFR 50 Appendix R Status

a. (Open) 10 CFR 50 Appendix R, III.G: Fire Protection of Safe Shutdown Capability

The licensee by letter (SCE to NRC dated June 30, 1982; R. W. Krieger to D. M. Crutchfield) submitted for approval a proposal for implementing safe shutdown. This must be approved by the NRC before further action can be taken by the licensee.

b. (Closed) 10 CFR 50 Appendix R, III.J: Emergency Lighting

The inspector reviewed the "turnover package" for the installation and testing of the eight hour emergency lighting systems. The inspector also inspected the installation, including the witnessing of tests of several of the lights. The system appears satisfactory except as mentioned in paragraph 5 of this report.

c. (Closed) 10 CFR 50 Appendix R, III.0: Reactor Coolant Pump (RCP) Lube Oil Collection System

The inspector examined the installation of the lube oil collection system on each reactor coolant pump and traced the new piping to the required collection tank. The systems appear to meet the requirements of 10 CFR 50, Appendix R, III.0.

No items of noncompliance or deviations were identified.

7. Independent Inspection Effort

a. The following list of automatic fire detectors were scheduled for installation since the last fire protection inspection:

- (1) Above the Motor Control Center in lower area of the auxiliary building.
- (2) In the solid waste baling room of the auxiliary building.
- (3) In the pipe tunnel to the auxiliary building.
- (4) In the oil storage shed in the east feedpump area of the turbine building.
- (5) In the west feed pump area of the turbine building above the air compressors.
- (6) In the battery room located in the diesel generator building.
- (7) In the area of the residual heat removal pumps in the containment.
- (8) In the electrical penetrations area.

The inspector verified that these detectors were present and tied into the control room portion of the fire detection system. This final fire detector installation appears to complete the Fire Protection Safety Evaluation Report requirements for automatic fire detectors.

b. The inspector reviewed the required annual and three year audits of the fire protection program by both on-site and off-site personnel. These audits were completed in a timely manner and corrective actions were requested for any findings not in compliance with the various applicable fire codes.

c. The inspector is continuing to follow the Corrective Action Request (CAR) program to verify that the station is responding in a timely

manner to QA-issued CARs. Although trending plots indicated an increasing backlog of incomplete CARs, the inspector determined that more than 50 percent of the outstanding CARs had been closed. Since these completions occurred within the last week, they were not reflected in the trending plots. The inspector commended the licensee for the improved CAR closure, but emphasized the importance of a long term and continuing timely closure of CARs. The inspector stated that he would continue to focus inspection effort in this area.

No items of noncompliance or deviations were identified.

8. Exit Meeting

The inspector met with the licensee representatives (denoted in paragraph 1) on July 23, 1982. The scope of the inspection and the findings as detailed in this report, were discussed. The licensee's station management committed to several changes in the Fire Protection Program as described in paragraphs 4 and 5. The station management also stated that corrective actions would be taken to satisfy open items in paragraphs 2, 3, and 4.

A representative of the licensee's management was contacted by telephone on August 9, 1982 and informed of the apparent violations of Fire Protection Procedure requirements. The licensee representative acknowledged the apparent item of noncompliance (paragraph 5).