U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos. 50-206/85-24, 50-361/85-25 and 50-362/85-24

Docket Nos. 50-206, 50-361 and 50-362

License Nos. DPR-13, NPF-10, NPF-15

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

Facility Name: San Onofre Nuclear Generating Station, Units 1, 2 and 3

Inspection at: San Onofre Site, San Diego County, California

Inspection conducted: August 5-9, 1985

Inspectors: G. M. Temple — 9/3/85
G. M. Temple, Emergency Preparedness Analyst, Team Leader — Date Signed

K. M. Prendergast — 9/3/85
K. M. Prendergast, Emergency Preparedness Analyst — Date Signed

Team Members: M. I. Good, Comex Corporation
T. H. Essig, Pacific Northwest Laboratories

Approved By: R. F. Fish — 9/5/85
R. F. Fish, Chief
Emergency Preparedness Section — Date Signed

Summary:

Inspection on August 5-9, 1985 (Report Nos. 50-206/85-24, 50-361/85-25 and 50-362/85-24)

Areas Inspected: Announced inspection of the emergency preparedness exercise and associated critique, follow-up on two violations issued from the December 10-14, 1984 emergency preparedness inspection, follow-up on an IE Information Notice and follow-up on corrective actions resulting from previous exercises/drills. This inspection involved about 136 hours onsite by two NRC inspectors and two contractor team members. Inspection Procedures 82301, 92702 and 92717 were covered.

Results: No significant deficiencies or violations of NRC requirements were identified.

DETAILS

1. Persons Contacted

A. Southern California Edison

D. Barney, Shift Supervisor
K. Baskin, Vice President, Nuclear Engineering, Safety and Licensing Department
D. Bennette, Supervisor, Station Emergency Preparedness
K. Brooks, Health Physics Foreman
D. Dack, Quality Assurance Engineer
P. Dooley, Supervisor, Nuclear Affairs and Emergency Planning
J. Firoved, Emergency Preparedness Engineer
D. Herbst, Supervisor, Independent Safety Engineering Group (ISEG)
R. Jervey, Health Physicist (Quality Assurance)
P. Knapp, Manager, Health Physics
N. Maringas, ISEG Engineer
H. Morgan, Station Manager
D. Peacor, Manager, Station Emergency Preparedness
D. Pilmer, Manager, Nuclear Engineering
H. Ray, Vice President/Site Manager
J. Reynoso, Shift Technical Advisor
R. Rosenblum, Manager, Nuclear Safety
H. Schutter, Shift Supervisor
D. Shull, Manager, Maintenance
J. Stubbs, Emergency Planning Coordinator
T. Sturtevant, Senior Captain, Emergency Services Organization
R. Tye, Supervisor, Emergency Services Organization
S. Wylie, Technical Program Administrator

B. Other Personnel

C. Anderson, Emergency Preparedness (ASTA)

2. Action on Previous Inspection Findings

(Closed) Violation (84-33-01): Three primary and six alternate individuals who occupy supervisory positions in the emergency response organization had not received all of the required annual retraining. The inspector verified that corrective actions, as described in the licensee's March 1, 1985 response to the violation, had been implemented. Training status documentation was examined which showed that Emergency Plan (EP) training/retraining was up to date in all cases. The specific changes which have been made to the licensee's EP Training Program appear to have produced a system that is effective and manageable. This violation is considered to be closed.

(Closed) Violation (84-33-02): When the offshore pad became unavailable as an assembly area on September 24, 1984, the nonessential personnel who had been instructed to use the offshore pad assembly area were not reinstructed on the location of their new assembly area until October 29,

1984. The inspector verified that the corrective actions associated with this violation had been implemented. In addition to the corrective actions described in the licensee's response to the violation (same date as above), the Station Emergency Preparedness Group has initiated the use of an emergency planning bulletin to promulgate information relating to emergency preparedness issues. The inspector was informed that the system was recently tested when a lower mesa assembly area was eliminated. This represents a condition similar to that which lead to the violation. The response to this situation by Station Emergency Preparedness personnel appeared to be effective and timely. This violation is considered to be closed.

3. Exercise/Drill Records Review

The tracking of major emergency preparedness exercise/drill deficiencies is accomplished through the use of the San Onofre Commitment Register (SOCR) system. The Compliance Manager is responsible for this computerized tracking system. The system is implemented by plant procedure S0123-XIV-7.1, "SOCR Operations". Major items identified from inspections, drills, exercises or other sources are entered into the system. The SOCR printout includes category, date, source, responsibility, due date, forecasted completion date, priority and a narrative description of the problem. The SOCR listing was reviewed to see if it contained any listings of deficiencies identified during previous exercises/drills. The inspector noted that the listing contained three deficiencies from the 1984 exercise. All three deficiencies were scheduled to be evaluated during the 1985 exercise.

A formal tracking system to insure the correction of minor deficiencies identified during the critiques of drills and exercises was not apparent. Informal methods such as weekly Station Emergency Preparedness staff meetings, managerial tickler files, procedural change histories and a newly established emergency planning bulletin were being used to track corrective actions for minor deficiencies.

Concurrent with the examination of the exercise/drill records, the inspector initiated a review of the licensee's medical emergency drill which was conducted on May 15, 1985. In addition to reading the summary report on the drill, the inspector viewed a videotape of the drill. The inspector was informed that for both the 1984 and 1985 medical emergency drills, an outside consulting firm had been used to develop the scenario, conduct the drill, critique the drill and write a summary report. No documentation to show that the licensee had performed an evaluation and/or developed corrective actions could be produced at the time of inspection for the 1984 or 1985 medical drills. This matter was discussed with both the Nuclear Affairs and Emergency Planning (NA&EP) and Station Emergency Preparedness organizations. The discussions disclosed that, in the past, there appeared to be some confusion between the two organizations with respect to who had responsibility for preparing a formal evaluation (i.e., determining corrective actions and assigning responsibilities for effecting any necessary changes). Recent procedural changes have been made to clarify this issue. As a result, beginning with the May 15, 1985 medical drill, a committee, composed of NA&EP and Station Emergency Preparedness personnel, will meet and prepare

a formal evaluation. NA&EP will have overall responsibility for the formal evaluation, however, where appropriate, corrective actions will be assigned to Station Emergency Preparedness personnel. Based on the fact that the formal evaluation for the May 15, 1985 medical drill has not been completed, this issue will be classified as "open" and tracked by the Region (85-24-01).

No significant deficiencies or violations of NRC requirements were identified.

4. Follow-up on Information Notice

The inspector verified that the licensee had received, reviewed for applicability and taken or had initiated appropriate action in response to IE Information Notice No. 85-44, "Emergency Communication System Monthly Test". The licensee's Independent Safety Engineering Group (ISEG) is responsible for screening, assignment, evaluation, transmittal and tracking of IE Information Notices. The ISEG program from receipt to final disposition is well defined and provided an auditable paper trail with respect to specific items.

Although action was not complete with respect to IE Information Notice No. 85-44 at the time of the inspection, the evaluation was in draft form and it appeared that the matter was being addressed appropriately. This item is considered closed.

5. Emergency Preparedness Exercise Planning

The licensee's NA&EP staff has the overall responsibility for developing, conducting and evaluating the emergency preparedness exercise. A member of this staff was assigned to act as Lead Controller with the responsibilities of developing the scenario package and conducting the exercise. He was assisted by members of the Station Emergency Preparedness staff and SCE contractor personnel, none of whom were participants in the exercise.

The emergency preparedness exercise objectives were established by the licensee's NA&EP staff. The objectives were discussed and agreed upon by the Interjurisdictional Planning Committee. The exercise document, generated under the direction of the Lead Controller, included the objectives, instructions to exercise controllers, controller assignments, guidelines for participants, the exercise scenario, cue cards to be used during the exercise, initial and subsequent plant parameters, meteorological and radiological data, and exercise evaluation/response forms. The exercise document was tightly controlled before the exercise. Two controllers' briefings were held the week before the exercise, however, the scenario package was collected at the conclusion of each of the briefings. Advance copies of the scenario package were provided to the NRC observers and other persons having a specific need. The players did not have access to the exercise document or information on the scenario events. The exercise was intended to meet the requirements of IV.F.3 of Appendix E to 10 CFR Part 50. The counties and the utility participated fully with partial participation of the State.

Controllers were stationed at each of the licensee's Emergency Response Facilities (ERFs) (e.g., Control Room (CR), Technical Support Center (TSC), Operations Support Center (OSC) and Emergency Operations Facility (EOF)) to provide cue cards where appropriate. Controllers were also dispatched with every repair/monitoring team. All controllers acted as evaluators and had knowledge related to the activities they were evaluating. A final briefing of the controllers was conducted on August 6, 1985. During the briefing, controllers were asked to pay particular attention to problem areas identified during the 1984 exercise. A listing of these problem areas was included with the controllers' scenario binders. All of the NRC observers were present for this controllers' briefing.

6. Exercise Scenario

The exercise scenario started with an event classified as an "alert" and ultimately escalated to a "general emergency" condition. The initiating event, which occurred at 6:00 p.m., was detection of a steam generator tube rupture (SGTR) of about 70 gallons per minute (gpm) (i.e., Reactor Coolant System (RCS) leakage greater than 50 gpm). At 7:15 p.m. the SGTR degraded to 300 gpm. A "site area emergency" was declared based on RCS leakage greater than charging pump capacity. The sequence of events that followed caused the site to lose all offsite and onsite power. This situation lead to the declaration of a "general emergency" based on a SGTR in conjunction with an active release path for fission product gases and a challenge to the fuel cladding. The scenario also involved an injured security guard. The actual times for the event declarations were: 6:10 p.m. for the "alert"; 7:20 p.m. for the "site area emergency" and; 8:10 p.m. for the "general emergency".

All of the licensee's emergency response facilities were activated in response to the accident scenario. Several repair/monitoring teams were dispatched and the licensee's Emergency Services Organization (ESO) responded to the fire and the injured security guard.

7. Federal Observers

Four NRC inspectors evaluated the licensee's response. One inspector was stationed in each of the licensee's ERFs. Two NRC resident inspectors observed the exercise, however, neither acted as an evaluator. The NRC inspector assigned to the OSC accompanied repair/monitoring/ESO teams for the purpose of evaluating their performance.

FEMA, Region IX evaluators were also present during the exercise. The FEMA team of evaluators (approximately 20 individuals) were evaluating those portions of the exercise that involved State and local agencies, as well as the interface occurring at the EOF. The results of FEMA's evaluation of the State and local participation will be issued by FEMA in a separate report.

8. Control Room

The following aspects of CR operations were observed during the exercise: detection and classification of emergency events, mitigation,

notification and protective action recommendations. The following NRC observations were made in the CR.

a. The status (i.e., location and progress) of repair/medical teams should be provided to the CR in a more timely fashion.

b. The Operations Leader was so busy passing routine plant data to the TSC that he had difficulty keeping track of plant status. A dedicated communicator would appear to be appropriate.

c. Headsets should be provided to CR personnel to increase comfort and decrease background noise.

d. Follow-up information on significant events should be provided to the CR. The CR was not informed when the fire was out or whether any adjacent equipment had been damaged.

9. Technical Support Center

The following aspects of TSC operations were observed: activation, accident assessment/classification, dose assessment, notification, protective action recommendation and CR support. The following NRC observations were made in the TSC.

a. Several data inconsistencies were noted between the CR log and the sequence of events board in the TSC.

Examples:

1) The TSC sequence board contained an entry at 2051 that the atmospheric steam dumps were opened. According to the CR log, the steam dumps were opened at 2045. This meant that the release was already in progress.

2) The TSC sequence board had an entry marked at 2110 that noted that the steam dumps were out-of-service. According to the CR log, the steam dumps were shut at 2114. Thus, the TSC would have considered the release terminated prior to the actual termination.

b. The controller for the shift communicators informed them to actually make the notification call to NRC Headquarters. Since the controller mentioned this before the shift communicators were ready to make the notification, it appeared that they were being prompted. However, this could have been due to the inexperience of the controller. It should be noted that the controller contacted the NRC Operations Center shortly before the start of the exercise to determine whether notification calls should be made or simulated.

c. Additional emergency lighting should be provided to the TSC. There appeared to be only one emergency lighting unit installed in the TSC. Due to the location of the unit, only a small portion of the TSC would have adequate lighting, given the situation that existed during the scenario (i.e., loss of all offsite and onsite power).

d. The coordination between the EOF and TSC staffs, with respect to the decision making process used for recommending offsite protective actions, should be reviewed. After the declaration of the "general emergency", protective action recommendations were issued from the TSC in accordance with procedures, which included obtaining concurrence from the EOF prior to making the recommendation to the offsite authorities. Because part of the function of the EOF is to interface with the offsite authorities, several discussions regarding the utility's protective action recommendation were held at the EOF. During those discussions, the offsite authorities reported to the utility staff that they had decided not to implement the protective action recommended by the utility. This decision was partially formulated from information that indicated plant conditions were improving; a situation that appeared to be due, in part, to the fast pace of the scenario. The utility's EOF staff expressed agreement with this decision with no apparent coordination with the TSC staff. Since there is the possibility that this situation could be construed to mean that the utility had changed the recommended protective action, the licensee should consider the potential consequences of appearing inconsistent. The Region intends to follow-up on the licensee's review of this matter and considers this to be an "open" item (85-24-02).

10. Operational Support Center

The following aspects of OSC operations were observed: activation, functional capabilities and disposition of various inplant teams. The following NRC observation was made in the OSC.

a. Radiation survey results obtained by inplant teams were not recorded on plant survey maps, but were transmitted orally to the Health Physics (HP) communicator in the OSC. Had survey maps been used, a clearer picture of radiological conditions would have been obtained and trending of data would have been more straightforward. It should be noted that radiation levels are recorded on plant survey maps located in the TSC.

11. Emergency Operations Facility

The following aspects of EOF operations were observed: activation, functional capabilities, offsite dose assessment and interface with offsite officials. The following NRC observations were made in the EOF.

a. Plant status boards were not consistently updated.

b. Security personnel updated the event status cards, which are located throughout the EOF, before the formal notification of a "general emergency" was issued. The change in classification, based on the event cards, was passed from Offsite Dose Assessment Center (ODAC) personnel to the counties' emergency facilities during one of ODAC's regular briefings. This resulted in a number of telephone calls from the counties to obtain specific details which would have been provided to them through the normal notification process.

12. Critiques

Immediately following the exercise, critiques were held in each of the ERFs. Players completed critique sheets and submitted them to the lead controller at the facility. A formal critique involving site and management personnel was conducted on August 8, 1985. The purpose of the formal critique was to summarize the earlier critique sessions and to discuss weaknesses or deficiencies identified by licensee personnel during the exercise. The following represent the types of comments made at this meeting.

a. Nuclear Emergency Response Team (NERT) members need more familiarity with the operations of all ERFs, in addition to their own facility.

b. The company pager recall system did not appear to work properly.

c. Shift Communicator personnel seemed unsure of proper yellow telephone usage.

d. It appeared that too many objectives were expected to be completed in too short an exercise time.

e. Operations did not follow procedure requirements to request CR radiation surveys from HP during the time that the gaseous release was in progress.

f. There appeared to be very little feedback to the CR from the TSC (i.e., CR was not always aware of what actions were going on outside the CR).

g. Communications flow between the TSC and EOF technical groups was a problem.

13. Exercise Summary

FEMA representatives held a debriefing on August 8, 1985 to present their preliminary findings and to describe their reporting process to the offsite agencies involved in the exercise. During this meeting, the offsite agencies were informed that FEMA's draft report would be issued in approximately 30 days and the results of their observations would be presented at that time. The NRC Team Leader was invited to make a presentation of the NRC's preliminary findings, however, the invitation was declined because the team had not finished their discussions and because the utility had not yet been briefed on the NRC's findings.

14. Exit Interview

An exit interview was held on August 9, 1985. The attachment to this report identifies some of the licensee personnel present at the meeting. The NRC was represented by four (4) evaluator team members and resident inspectors A. D'Angelo, R. C. Tang and J. E. Tatum. The licensee was informed that no significant deficiencies or violations of NRC requirements were identified during the inspection. The observations described in Detail Sections 2, 3, 4, 8, 9, 10 and 11 were mentioned.

The licensee was informed that some NRC observations were not being presented because they had been identified during the licensee's critique process. The extent of simulation used during this exercise and related changes for the next exercise were also discussed. With respect to the "open" item on the process used for making protective action recommendations, the licensee agreed that there would be "great" value in reviewing their methods. The NRC also expressed concerns over the number of communication flow problems. Examples such as 8.a, 8.b, 8.d, 9.a and 11.b in Detail Sections 8, 9 and 11 were cited. In order to track the resolution of this issue, the Region considers this to be an "open" item (85-24-03). None of the NRC observations were considered to be significant.

ATTACHMENT

EXIT INTERVIEW ATTENDEES

D. Bennette, Supervisor, Station Emergency Preparedness
J. Curran, Manager, Quality Assurance
P. Dooley, Supervisor, Nuclear Affairs and Emergency Planning
F. Eller, Manager, Station Security
R. Erickson, Representative, San Diego Gas and Electric
F. Jackley, Manager, Nuclear Affairs and Emergency Planning
P. King, Supervisor, Operations Quality Assurance
P. Knapp, Manager, Health Physics
R. Krieger, Manager, Operations
H. Morgan, Station Manager
D. Peacor, Manager, Station Emergency Preparedness
H. Ray, Vice President/Site Manager
R. Rosenblum, Manager, Nuclear Safety
M. Wharton, Deputy Station Manager
W. Zintl, Manager, Compliance

(A total of 31 licensee and licensee contractor representatives were present).