

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report Nos. 50-206/92-25, 50-361/92-25, and 50-362/92-25
License Nos. DPR-13, NPF-10, and NPF-15
Licensee: Southern California Edison Company (SCE)
Irvine Operations Center
23 Parker Street
Irvine, California 92718
Facility Name: San Onofre Nuclear Generating Station (SONGS), Units 1, 2,
and 3
Inspection at: San Onofre Site, San Diego County, California
Inspection Conducted: August 17 - 21, 1992
Inspector: Robert J. Pate for 9/4/92
A. D. McQueen, Emergency Preparedness Analyst Date Signed
Approved by: Robert J. Pate 9/4/92
Robert J. Pate, Chief Date Signed
Safeguards, Emergency Preparedness, and
Non-Power Reactor Branch

SUMMARY:

Areas Inspected: Routine inspection to address Emergency Detection and Classification, Protective Action Decision Making, Notifications and Communications, the Public Information Program, the Operational Status of the Emergency Preparedness Program, and Onsite Follow-up of Events at Operating Power Reactors. Inspection procedures 82201, 82202, 82203, 82209, 82701, 92701, and 93702 were used as guidance.

Results: The results of this inspection indicated that the licensee was maintaining its emergency preparedness program. Emergency preparedness staffing remains a strength, and staff members continued to display a conscientious attitude toward the accomplishment of their assigned duties. One non-cited violation of reporting requirements was identified as discussed in Section 4.b.

DETAILS

1. Persons Contacted

Licensee Personnel

- *C. Anderson, Supervisor, Emergency Planning (EP)
- *K. Bellis, Manager, Nuclear Affairs and Emergency Planning (NA&EP)
 - D. Bennette, Nuclear Training Department
 - D. Brevig, Manager, Onsite Nuclear Licensing (ONL)
 - M. Brooks, Health Physics (HP) Engineer, SONGS
 - B. Culverhouse, Emergency Planning Specialist
 - K. de Lancey, Senior Engineer (Consultant)
- *R. Erickson, Site Representative, San Diego Gas and Electric Company
 - K. Fowler, Engineering Aide
 - R. Garcia, Emergency Planning Engineer
- *G. Hammond, Supervisor, ONL
- *B. Katz, Manager, Nuclear Oversight
- *H. Morgan, Vice President and Site Manager
 - R. Park, Facilities Manager, SCE
- *J. Wallace, NA&EP
- *R. Warnock, Superintendent, HP Support
- *H. Wood, Quality Assurance (QA) Engineer
- *M. Zenker, Lead Engineer, Emergency Planning
- *W. Zintl, Manager, Site Emergency Preparedness (SEP)

NRC Personnel

- C. Caldwell, Senior Resident Inspector, NRC
- *A. McQueen, Emergency Preparedness Analyst, NRC
- *C. Townsend, Resident Inspector, NRC

The above individuals denoted with an asterisk were present during the August 21, 1992, exit interview. The inspector also contacted other members of the licensee's emergency preparedness, administrative, and technical staff during the course of the inspection.

2. Functional or Program Areas Inspected

The licensee seemed to be maintaining their previous level of performance in the following areas and their program appeared adequate to accomplish their objectives.

The inspector toured and inspected emergency preparedness facilities which included the Control Room, the Technical Support Center (TSC), the Operations Support Center (OSC), and the Emergency Operations Facility (EOF).

a. Emergency Detection and Classification (MC 82201)

The emergency detection and classification system appears appropriately proceduralized and properly implemented. The emergency plan implementing procedure (EPIP) pertaining to event classification contains measurable and observable emergency action

levels (EALs) based on in-plant conditions, onsite and offsite radiological monitoring results, and offsite dose projections. These EALs are reviewed annually with State and local authorities. Emergency procedures and the site organization insure that there is one individual on site at all times who understands that he or she has the authority and responsibility to immediately and unilaterally classify events and initiate any emergency actions, including recommending protective measures to offsite officials.

b. Protective Action Decision Making (MC 82202)

Authorities and responsibilities appear appropriately assigned by the licensee to assess events or conditions and to make recommendations for protective actions. EIPs appear to clearly reflect these authorities and responsibilities and they appear consistent with the emergency plan. Criteria and methodology for making offsite protective action decisions appear clearly reflected in the implementing procedures, to include protective actions for nonessential onsite personnel.

c. Notifications and Communications

The licensee's notification procedures appeared consistent with the emergency classification and action level scheme and provisions for verifying messages appeared appropriate. The scheme is tested at least monthly and documentation for the past two month's tests were inspected, verifying that all results were satisfactory. It was verified that the appropriate communications equipment and procedures existed in the emergency facilities and appeared consistent with the needs for communication within the licensee's organization, for offsite support, and with the State and local authorities as required.

d. Public Information Program (MC 82209)

Information for the public has been developed and describes appropriate emergency planning information. It is updated and coordinated with offsite officials annually and is redistributed as appropriate. Teachers' education packets are developed annually and provided for use in schools within the emergency planning zone. These include handouts for students, photographs, posters, student project materials, and instructional materials in english and spanish. Local telephone directories also contain public emergency response information and directions. Printed emergency instructions are provided to identify where the public may acquire additional information.

e. Operational Status of the Emergency Preparedness Program (MC 82701)

- (1) Emergency Facilities, Equipment, Instrumentation, and Supplies

An inspection tour was made of each of the emergency response facilities (ERFs), which included spot checking of items of equipment, instrumentation, and supplies. ERFs appeared well maintained and ready for emergency use.

(2) Training

It was verified that the licensee was implementing its EP training program in accordance with emergency plan requirements. The Nuclear Training Division conducts initial and annual emergency preparedness training, primarily through a self-paced computer-based program for all personnel. Additionally, the Site Emergency Preparedness (SEP) group conducts quarterly drills, annual exercises, and tabletop training exercises in emergency preparedness and response for the various organizations, shifts and groups at the site and corporate support elements.

4. Onsite Follow-up of Events at Operating Power Reactors (Inspection Procedure 93702)

Two licensee events which had occurred since the last routine inspection were reviewed during this inspection. In one, the licensee had declared an emergency unusual event (UE) and the other was an event which apparently was required to be reported to the NRC within one hour of identification.

- a. The licensee declared an unusual event on June 28, 1992, at 5:02 p.m. (PDT) after a seismic monitor tripped during an earthquake. The licensee initiated system walkdowns and called in personnel to evaluate information from their seismic instrumentation. There were no reports of damages or problems. At 10:35 p.m. (PDT), the UE was terminated after completion of system walkdowns. No damage was observed. (NRC Headquarters Operations Officer (HOO) Event Number 23750) A review of this event and documentation pertaining thereto indicated that the event classification appeared appropriate and that timely notifications and follow-up notifications were made to the county, state, and the NRC in accordance with approved procedures.
- b. At 10:52 p.m. (PDT) on July 30, 1992, the licensee's Telecommunications Control Center (TCC) received a loss of power alarm for three community alert sirens. Power was restored to the sirens by 2:20 a.m. (PDT) on July 31, 1992. Two other sirens were out of service at the time due to unrelated repair activities. The total of five inoperable sirens for a period of three hours and eighteen minutes met the licensee's reporting criteria of five inoperable sirens for greater than one hour. The condition was not reported to operations personnel until after the power had been restored to the three de-energized sirens. At that time, the licensee determined that the event was reportable. (HOO Event

Number 23980)

Licensee inquiry into the event developed a timetable indicating the following (all dates are 1992 and all times are Pacific Daylight Time):

- During the afternoon of July 30, Community Alert Sirens SJ02, DP02 and DP04 had been visually checked by a licensee technician. It was concluded after the event that power breakers to these units were opened at that time for the servicing and were likely left open upon departure of the technician, leaving these units without power.
- At about 6:11 p.m., July 30, licensee Telecommunications Control Center (TCC) had been notified that two sirens (CP01 and CP03) on the Camp Pendleton U.S. Marine Corps (USMC) Base were declared inoperable. They were not reported as returned to operability until about 8:12 p.m. on July 31.
- At about 10:52 p.m. on July 30, Orange County Communications contacted the TCC and notified them of "Siren Power Fail" alarms from sirens SJ02, DP02 and DP04. By procedure and based on experience, the licensee indicated that these alarms are considered to be trouble lights pertaining to that siren circuit, and not necessarily that the siren is in fact inoperative. By procedure, a TCC technician is dispatched to the particular siren sites to verify that there is a problem, to identify it, and to return the siren to service. This occurred in the case of these three sirens. Upon arriving at these three sirens, each in turn, it was discovered that the power breakers were open. Upon closure of the breakers, the sirens were again operable. The first of the three sirens to be returned to operability was SJ02 at 12:40 a.m., July 31. The last of the three sirens to be returned to service was DP02, which was at 1:30 a.m., July 31. At about 2:10 a.m., "Technicians reported to the TCC that they had found power was off to DP02, DP04, & SJ02. Power was restored and the sirens were operable." This had left no doubt that the three sirens had been out of service for the period from 10:52 p.m. on July 30 to 12:40 a.m. on July 31. With CP01 and CP03 already inoperable, this made a total of five sirens inoperable for a period of over one hour.
- Section 6.2 (Events Requiring Immediate One-Hour Telephone Notification) of licensee Operations Division Procedure SO123-O-14 (Notification and Reporting of Significant Events) requires that the NRC be notified of "Any event that results in a MAJOR LOSS OF: Offsite response capability (e.g., EMERGENCY NOTIFICATION SYSTEM):Five or more community alert sirens inoperable; i.e., loss of power or

loss of remote activation capability, for greater than one hour (Ref. NUREG-1022, Supplement No. 1)"

- Licensee notification of this five inoperable siren event was made to the NRC at 2:16 p.m. on July 31. It was indicated that it was a delayed one-hour notification.

During the exit interview, the SEP manager indicated actions already taken to preclude recurrence of this type event. The licensee promulgated requirements for reporting of inoperable sirens to the TCC and from the TCC to the Unit 1 Shift Superintendent, or if not reachable, to the Unit 1 Control Room Supervisor or the Unit 1 superintendent backup (San Onofre Siren Procedures, Procedure #5000). The licensee further indicated "The TCC has begun a new Siren Log sheet that will effectively capture status of siren problems. Communication between the TCC and the Shift Superintendent have been clearly defined as a change in siren status notification. ...we will be going to the TCC on August 31 to ensure the above corrective actions are being implemented as intended." It was also indicated that the Nuclear Oversight Division (Site Quality Assurance (QA)) is conducting a QA surveillance of this event and will initiate appropriate Corrective Action Requests (CAR) upon completion of the surveillance to insure additional appropriate corrective action to preclude recurrence. The licensee-identified violation is not being cited because the criteria specified in Section V.G of the Enforcement Policy were satisfied. Licensee corrective actions will be reviewed in a future routine inspection. (92-25-01)

5. Action on Previous Inspection Findings

(Open) Follow-up Item (91-12-02) Verification of Augmentation Time to be performed with 1992 Exercise

During a previous routine EP inspection (Inspection Report Number 91-12), the inspectors reviewed Emergency Preparedness Implementing Procedure (EPIP) S0123-VIII-0.202, Assignment of Emergency Response Personnel, and discussed with licensee personnel the means of augmenting the onshift staff during an emergency. The licensee utilized a pager system and telephone. The licensee periodically verifies by airing their system that the augmentation staff can be contacted. The licensee has provided emergency response personnel with specifically marked site badges, so that the California Highway Patrol will allow access during an event. The procedure appeared adequate to meet augmentation time requirements and training goals. The licensee had not performed an augmentation time verification since 1985. The licensee stated that the time verification would be performed with the 1992 exercise which is scheduled for the week of October 19, 1992. The licensee conducted a drill on July 30, 1992, during the evening hours and concluded that objectives to verify augmentation time had been met. This drill was unannounced and took place outside normal working hours. The OSC was

staffed within 41 minutes of the alert declaration, the TSC was activated within 51 minutes, and the EOF was activated within 60 minutes. The item will be reviewed for closure during the 1992 annual exercise.

(Open) Follow-up Item (91-22-01) Followup Licensee Training of Emergency Response Staff-Effectiveness

During a previous routine EP inspection, the inspector reviewed the computer based training program required to maintain annual emergency response requalification. The training essentially consisted of a computer challenge test which certifies that the person has the knowledge which meets the minimum NRC requirements. The inspector reviewed the findings from the annual exercise in 1990 and the licensee's April and June exercises. The exercises were challenging to plant and emergency response personnel and appeared effective in helping the licensee train the staff. The licensee appeared in the June exercise, to do a thorough job in self-evaluating the exercise. The inspector noted that the licensee had identified a significant number of problems which appeared to be related to personnel training. The inspector noted that the licensee is taking corrective actions in this area, including the conduct of tabletop drills to improve personnel performance. It was indicated that this item would be reviewed during the next annual exercise (October 1992).

(Open) Follow-up Item (91-27-01) Health Physics Exercise Weaknesses

During the 1991 annual emergency exercise, an inspector observing activities in the Operations Support Center (OSC) documented weaknesses in health physics response activities during the exercise. Specifically, seven observations for improvement were documented and indicated in the inspection report for follow-up. This item was not reviewed during this inspection, but will be reviewed during the 1992 annual emergency exercise in October 1992.

(Closed) Follow-up Item (92-10-01) Release Info not included in Initial Notification

In the last routine inspection (Inspection Report Number 92-10), during a review of Emergency Preparedness Implementing Procedure (EPIP) S0123-VIII-30.5, "Shift Communicator Duties," the inspector observed that the initial, 15-minute verbal notification did not include information about whether a release was in progress. NUREG-0654, evaluation criterion E-3, states that this information should be included in initial emergency messages. The inspector discussed this matter with Federal Emergency Management Agency (FEMA) and licensee NA&EP representatives. The FEMA representatives agreed that it was appropriate to include this information in initial notifications to offsite authorities. The NA&EP representative indicated that there was a concern about including this information in the initial notification, because the mention of a release could panic the individual receiving the message. The NA&EP representative stated that the matter would be discussed with the

offsite authorities. It was indicated that the results of the discussions with the offsite authorities would be reviewed in a future inspection. A review of this item during this inspection indicated that the licensee had discussed this issue with offsite authorities at an Interjurisdictional Planning Committee (IPC) meeting on April 22, 1992. Also, EPIP S0123-VIII-30.5 was revised to include a statement of whether or not a release was made in the initial notification. This item is closed.

(Closed) Follow-up Item (92-10-02) S0123-VIII-30.5 does not include 50.72(A)(3) Requirements

During the last routine inspection, the inspector also observed that EPIP S0123-VIII-30.5 did not address the requirements of 10 CFR 50.72(a)(3). This paragraph states that, "The licensee shall notify the NRC immediately after notification of the appropriate State or local agencies and not later than one hour after the time the licensee declares one of the Emergency Classes." The SEP manager and supervisor acknowledged that S0123-VIII-30.5 only addressed the 60-minute element of this requirement. In response, SEP management committed to modify (revise/TCN) S0123-VIII-30.5 to capture the 50.72(a)(3) requirements. In addition, SEP identified the need to make similar modifications to S0123-VIII-10, "Emergency Coordinator Duties" (Emergency Advisor section); and S0123-VIII-30.1, "Emergency Planning Coordinator Duties." It was indicated that verification of the procedural modifications would be reviewed in a future inspection. Review of this item during this inspection indicated that S0123-VIII-30.5 (Revision 3, dated June 5, 1992) and S0123-VIII-30.1 (Revision 9, dated June 30, 1992) were changed to incorporate the 50.72(a)(3) requirement. This item is closed.

(Closed) Follow-up Item (92-10-03) Dosimetry Issued to only one person

During the last routine inspection, the inspector observed that EPIP S0123-VIII-30, "Operations Leader Duties," and EPIP S0123-VIII-40.1, "OSC Coordinator Duties," only required issuing dosimeters to at least one person in the Control Room, TSC, OSC, and EOF. The inspector questioned the appropriateness of relying on one dosimeter, since pocket ionization chambers (PICs) could be malfunctioning and/or ERO personnel could leave their assigned facility. According to SEP personnel, the procedures were changed because issuing dosimeters to all ERF personnel had, on occasion, delayed the activation process. SEP stated that more than one dosimeter was normally issued during drills and exercises. In response to the inspector's comments, SEP management committed to modify the applicable EPIPs to clarify SEP's intentions and proceduralize actual practice. It was indicated that verification of the procedural modifications would be reviewed in a future inspection. Review of this item during this inspection indicated that two procedures had been revised to reflect licensee intentions and procedural responsibilities:

- a. S0123-VIII-30 (Operations Leader Duties) was revised by Temporary Change Notice (TCN) 6-3, dated May 1, 1992, to indicate that Control Room personnel are to be issued dosimetry if "a release

occurs or radiation levels increase above normal."

- b. SO123-VIII-40.1 (OSC Health Physics Leader Duties) was revised by TCN 6-6, dated May 1, 1992, to indicate that dosimetry will be issued to all personnel in the affected area if dose rates exceed 2.5 mrem/hr in the CR, SC, OSC or EOF.

This item is closed.

(Closed) Follow-up Item (92-10-04) Emergency Response Facilities (ERFs) Relocation Criteria and Changes to ERFs

During the previous routine inspection, while touring the ERFs, the inspector questioned SEP personnel about established criteria for relocating ERFs (from primary to backup ERFs). The relocation criteria was found in EPIP SO123-VIII-40, "HP Leader Duties." The EPIP stated that emergency response personnel would be evacuated to alternate response facilities if "radiological conditions occur which may result in internal or external exposures in excess of 10 CFR 20 limits, and existing ventilation systems or controls are deemed inadequate." The inspector commented on the EPIP's vagueness and questioned the appropriateness of this criteria. In response to the inspector's comments, licensee personnel explained that the relocation criteria was addressed more specifically in tabletop training material. The inspector reviewed the tabletop training material and found that the criteria was more specific. The TSC handout stated that the TSC will be evacuated "when it becomes, or will become, a radiation area." The OSC handout stated that the OSC should be evacuated using criteria similar to that used for a station evacuation and that evacuation should occur before exceeding 10 CFR 20 limits. After reviewing and discussing this matter with the inspector, licensee SEP management agreed there was a need to revisit this issue and committed to modify the procedure to be more specific. It was indicated that verification of the procedural modification would be reviewed in a future inspection. A review of this item during this inspection indicated that section 6.4.2.3 of EPIP SO123-VIII-40 was revised by TCN 7-4 to specify criteria for relocation of assembly areas, security guards on post, CR, TSC and OSC. This item is closed.

(Closed) Follow-up Item (92-10-05) Lack of Offsite Relocation Centers

During the last routine EP inspection, the inspector concluded that the licensee did not have a system that would provide for monitoring/decontamination of personnel (and vehicles) evacuated from the site (OCA) if radiological or plant conditions did not permit the use of the existing assembly areas/decontamination facilities. Provisions for a site evacuation process are addressed in NUREG-0654, Planning Standard J, which corresponds to 10 CFR Part 50, Planning Standard 50.47(b)(10). NUREG-0654, evaluation criteria J.2 and 3, provide for: (a) evacuation routes and transportation for onsite individuals to some suitable offsite location, including alternatives for inclement weather, high traffic density, and specific radiological conditions; and (b)

radiological monitoring of people evacuated from the site. The inspector expressed a concern that under certain radiological/plant conditions, the lack of suitable offsite assembly areas for personnel evacuated from the site could represent a health and safety issue. In response to the inspector's concerns, licensee EP management committed to expedite the implementation of the offsite relocation centers (ORC) to May 1, 1992. The inspector determined that the expedited schedule for completion/implementation of the ORCs appeared adequate. It was indicated that verification of the licensee's actions to establish the ORCs would be reviewed in a future inspection. A review of this item during this inspection indicated that the licensee had promulgated and conducted training on a new EPIP S0123-VIII-10.4 (Offsite Relocation Center), dated May 1, 1992. The procedure was reviewed and appeared appropriate; therefore this item is closed.

(Closed) Follow-up Item (92-10-06) Two Issues from 3/13/92 UE

During the last routine EP inspection, a licensee reported unusual event (UE) which had occurred on March 13, 1992, at Unit 2 was reviewed. The UE was declared at 11:20 a.m. (PST) when the licensee initiated a shutdown of Unit 2 (from 100% power), pursuant to Technical Specifications (TS), when the Unit 2 minimum (mini) flow recirculation valves in the safety injection (SI) and containment spray systems were declared inoperable. The actual status of the valves was indeterminate, since the problem was identified by testing Unit 3, pursuant to Generic Letter 89-10, "Safety-Related Motor-Operated Valve Testing and Surveillance." Based on the Unit 3 problem, the licensee determined that it was possible for the Unit 2 mini-flow valves to fail to fully close under similar conditions. The licensee terminated the event at 3:28 p.m. (PST), while the plant was still in Mode 1, at 40% power. The licensee terminated the event based on criteria in Section 6.10 of EPIP S0123-VIII-10, "Emergency Coordinator Duties." Section 6.10 provides for event closeout "when the emergency criteria established in S01(23)-VIII-1 are no longer met, OR EOI (Critical) Safety Functions are satisfied and one of the following three conditions are met." The following was one of the three conditions: "Controlled power reduction has been initiated (reactor power is below level at which emergency declaration was made)." In reviewing the circumstances of this event, the inspector identified two issues that warranted further attention. The first issue involved what appeared to be the transmission of inconsistent information regarding when the event would be terminated. During one of the telephone conversations between the licensee and the NRC headquarters operations officer (HOO), the licensee's representative on the telephone stated that the event would be terminated when the unit reached Mode 3. During a subsequent conversation, the licensee reported that the event had been terminated, while still in Mode 1, based on the criteria in S0123-VIII-10. Although the event was not considered significant, the inconsistent information prompted several questions.

After discussing this issue with the inspector, SEP management agreed that there was a need to provide event closeout criteria to the individual on the telephone with the NRC. SEP management committed to

make applicable procedural modifications.

The second issue involved the closeout criteria in Section 6.10 of S0123-VIII-10. After reviewing the criteria, and the manner in which it was applied, the inspector questioned the appropriateness of applying the criteria to events classified as Alerts or higher. The EPIP stated that the closeout criteria was applicable for all event classification levels, including Alerts, SAEs, and GEs. When the event was terminated, the criteria established in S023-VIII-1, Tab D1-2, was still met because the unit was still in Mode 1 (Tab D1-2 was applicable for Modes 1 and 2); however, the criteria in Section 6.10 was also met because the critical safety function requirements had been satisfied and the reactor power had been reduced.

After discussing this issue with the inspector, licensee EP management agreed to delete the applicability of the 6.10 criteria to events classified as Alerts or higher. In addition, licensee EP management agreed to evaluate whether the 6.10 criteria should only apply to TS shutdown UEs. It was indicated that verification of the licensee's actions to address the two issues from the March 13, 1992, UE would be reviewed in a future inspection. Review of these issues with the licensee during this inspection indicated that four EPIPs were revised and appeared to appropriately address the agreements indicated above.

- a. S0123-0-14 (Notification and Reporting of Significant Events) was revised by TCN 1-18, dated July 16, 1992, to indicate that emergency classification termination criteria should be determined prior to initiating a "Red Phone" (NRC Emergency Notification System) report of an event.
- b. S0123-VIII-10 (Emergency Coordinator Duties) was revised by TCN 5-6, dated May 1, 1992; S0123-VIII-10.1 (Station Emergency Director Duties) was revised by TCN 1-5, dated May 1, 1992; and S0123-VIII-10.2 (Corporate Emergency Director Duties) was revised by TCN 0-3; dated May 1, 1992, to indicate that criteria for event closeout with the Unusual Event specifically addressed at sections 6.10.2.

This item is closed.

6. Exit Interview

On August 21, 1992, at the conclusion of the site visit, the inspector met with the licensee representatives identified in paragraph 1 above to summarize the scope and the preliminary results of this inspection. The licensee was informed that one apparent reporting violation of NRC requirements was identified (Section 4.b above).