

Southern California Edison Company

P. O. BOX 800

2244 WALNUT GROVE AVENUE
ROSEMEAD, CALIFORNIA 91770

KENNETH P. BASKIN
VICE PRESIDENT

TELEPHONE
818-302-1401

October 28, 1987

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

Attention: Mr. J. B. Martin, Regional Administrator

Dear Sir:

Subject: Systematic Assessment of Licensee Performance (SALP)
San Onofre Nuclear Generating Station, Units 1, 2, and 3

- References: A) Letter, J. B. Martin (NRC) to D. J. Fogarty
(SCE), same subject, dated August 7, 1986
- B) Letter, M. O. Medford (SCE) to NRC (Document
Control Desk), Docket Nos. 50-206, 50-361,
50-362, dated October 16, 1987

By copy of Reference A, the results of the previous SALP period were forwarded to the Southern California Edison Company (SCE). Now that the most recent SALP period has been concluded, SCE has reflected on its performance during this latter period to gauge the effectiveness of efforts to achieve excellence in facility operation and safety.

We have noted improved performance in a number of areas, especially plant operations and maintenance. As our operating staff gains experience, we have had a corresponding positive increase in those parameters that are indicative of unit capacity. At the same time, we have noted a reduction in the number of plant trips and other occurrences which require Nuclear Regulatory Commission notification. Maintenance activities are being completed in a more

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timely manner. Refueling outage periods are being shortened, while maintenance activity completed during these same periods is increasing. These accomplishments are particularly gratifying because we have continued to reduce the size of our site population, and, with very few exceptions, overtime has been lowered significantly. These improvements have been confirmed by the Institute of Nuclear Power Operations.

As you know, we have encountered areas where our performance is in need of additional improvement. The health physics area is of particular management concern with our emphasis foremost on dealing with "hot particles" and the labeling of radioactive materials.

The enclosure to this letter contains specific information about each of the SALP evaluation areas. This information has assisted us in measuring our performance during the most recent SALP period, and in determining where future attention should be focused.

Should you have any questions or need additional information, please call me.

Very truly yours,

Winneth P. Berber

Enclosures (1) SALP Performance Summary
(2) Letter, M. O. Medford (SCE) to NRC (Document Control Desk), dated October 16, 1987

cc: F. R. Huey, NRC Senior Resident Inspector, San Onofre Units 1, 2, and 3

ENCLOSURE 1

SALP Performance Summary

I. Plant Operations

The NRC SALP Board recommended in Reference A that SCE correct weaknesses in operator attentiveness and use of procedures. As evidenced by the significant reduction in NRC reportable occurrences during the just-completed SALP period, SCE's efforts to achieve improved operator performance have had a great measure of success. Additionally, no citations attributable to our operations staff were received in this period. Improvement on the part of SCE's plant operators was also reflected in notable increases in unit capacity factors, a decrease in unplanned safety system actuations, and a decrease in unplanned automatic reactor trips. These trends should continue as a result of ongoing SCE efforts, maturity of the plant operating staff, and the overall improvement of support furnished by other site organizations.

The correction of deficiencies in housekeeping and material plant condition was recommended by the Board. Largely as a result of extensive resources being applied to these areas early in the SALP period, plant appearance and material condition are greatly improved.

The Board also advised that telephonic communications between the control room and the NRC be improved. SCE has initiated training improvements, as well as implemented a procedure revision, to facilitate formal, telephonic communications.

II. Radiological Controls

The Board suggested that SCE continue its support of the radiation protection program and continue to reduce liquid radioactive waste releases. The program to reduce the level of radioactive materials contained in liquid effluents, as discussed in the last SALP report, was highly successful and has been continued. The amount of radioactive material released in liquid effluents was reduced in the present SALP period by over ninety percent from that released in the previous SALP period. Similarly, efforts to produce smaller amounts of compacted solid radioactive waste resulted in a decrease of well over 40 percent. Overall personnel radiation exposure has been in a steep decline over the past two SALP periods. The continued reduction in personnel radiation exposure has been a long-term management goal for SCE. During the past SALP period, personnel exposure (as measured by person-REM) declined by over 60 percent.

The program to deal with "hot particles" represents SCE's greatest ongoing challenge. Although SCE has implemented a wide range of corrective actions involving administrative, technical, and personnel measures, the extent of the problem and the scope of measures necessary to deal with it were not fully appreciated at the outset. SCE remains sensitive to the continuing potential for worker exposure from these particles and the need to constantly seek methods to improve radiation control processes. SCE's performance in the area

of radioactive material labeling has fallen short of our objectives. Despite additional attention and resources being devoted to this area, further improvement is required. SCE will continue to monitor performance in this area and take additional steps, as necessary.

III. Maintenance

The Board advocated that SCE increase management involvement in Unit 1 maintenance activities and that SCE continue its efforts to implement those maintenance programs at Unit 1 proven successful at Units 2 and 3. SCE made a number of management changes at Unit 1 to provide additional experience and expertise in this organization. A number of other organization changes were made, including placing a common general foreman in charge of the Instrument and Controls and Electrical Test groups. Sixteen maintenance procedures that were previously unit specific have been converted to encompass all three units.

The Board further indicated that SCE should continue its emphasis on maintenance training, and that management and engineering personnel increase their involvement in the performance of routine maintenance, and seek to improve equipment reliability. SCE has increased the training requirements for craft personnel and first line foremen. Work assignments are now closely regulated to ensure that they are performed only by properly qualified personnel. In addition to these increased training requirements, the maintenance bonus incentive has been increased by fifty percent to provide incentive not only to participate in the program, but to do well in it.

The above measures have helped to achieve notable improvement in the following maintenance-related performance indicators during the just-completed SALP period: a reduction in the number of overdue preventive maintenance items (down by over 20%), a reduction in the unit forced outage rate, a decrease in the refueling outage length, a reduction in the number of overtime hours worked, a reduction in the number of maintenance order discrepancies, and a reduction in the number of maintenance error reports.

The Board also recommended that SCE place increased emphasis on housekeeping. SCE believes significant improvement has been demonstrated in this area as a result of corrective actions initiated site-wide subsequent to the Unit 1 water hammer event, including maintaining three dedicated housekeeping inspectors full time, and using enhanced communications techniques to notify responsible supervisors of deficiencies. Not only has plant safety and appearance been enhanced, but NRC enforcement action for housekeeping has been reduced.

The specific achievements noted above have been tempered by the receipt of three notices of violation late in the SALP period. Although SCE does not consider them to be indicative of programmatic deficiencies, they serve to remind SCE of the close and continuous attention required to all phases of maintenance and construction activity.

IV. Surveillance

Emphasis on continued IST program improvements was requested by the Board. During this SALP period, SCE has focused considerable attention on the application of computer technology to the scheduling, tracking, and trending of IST program data. Seat leakage test requirements have been added to a number of valves in the Unit 1 main and auxiliary feedwater systems in the aftermath of the water hammer event. In addition to a major effort currently in progress to revise and enhance IST procedures, the IST program has been closely scrutinized by SCE's quality assurance organization, which included performing two audits and 12 field surveillances during the SALP period.

The Board suggested that SCE should provide more attention to surveillances performed by groups other than operations, and to communications and procedure compliance by all surveillance personnel. SCE's continuing attention to these areas is evidenced by the reduction of over 50 percent in missed surveillances (as reported to the NRC in licensee event reports) and in surveillance-related deficiencies noted by NRC inspectors that resulted in citations. Formal communications and procedure compliance have been emphasized in training programs conducted by and for operations and maintenance personnel.

V. Fire Protection

The Board advised SCE to continue to devote management resources to this area, especially employee training and the proper implementation of fire protection programs that are properly integrated with all aspects of plant operations. SCE has upgraded several key components of fire protection training including that portion presented to all new employees. Additionally, a new skills oriented class was initiated for electricians, mechanics, welders, and machinists to qualify them as fire watches. Improved performance in the area of fire protection is particularly evident by the 90% decrease in the number of technical specification fire doors reported blocked open, and the 50% decrease in the number of technical specification compensatory fire watch hours required for the last SALP period. This latter statistic indicates a significant increase in fire protection equipment operability.

VI. Emergency Preparedness

The Emergency Preparedness Bulletin Program (EPBP) was developed in response to the Board recommendation to keep workers informed of the impact of plant activities on emergency response. As a result of implementing the EPBP, SCE has improved the awareness of working level personnel to all emergency preparedness programs. In addition, the establishment of an electronic mail network has assisted in providing another mechanism for the timely notification of the site population of any changes in emergency response.

A major revision to the SONGS Emergency Plan was completed in May of 1987 which shifted the emergency coordinator function to the Emergency Operations Facility, when activated, in order to provide for improved continuity of protective action recommendations and interface with offsite jurisdictions. SCE's interaction with the offsite jurisdictions through the

Interjurisdictional Planning Committee continues to be very effective. Performance of offsite jurisdictions in the August 1987 Annual Emergency Plan Exercise received complimentary remarks from FEMA.

SCE has continued to improve the medical training and response efforts for local support hospitals by scheduling semi-annual training and contaminated injury drills in lieu of annual drills. The training is provided by SCE medical personnel who have been trained at the United Oak Ridge Universities. The semi-annual training and drills have allowed more hospital personnel to be trained in contaminated injury techniques and provided refresher training.

The 1986 and 1987 annual siren tests, which were evaluated by FEMA and exceeded the FEMA requirements both years. The siren test and maintenance programs are provided by SCE who also coordinated the annual test with the offsite jurisdictions.

The Emergency News Center (ENC) was relocated to a new SCE service center. The move required a complete revision to ENC procedures and the retraining of both SCE and offsite jurisdiction personnel in their functioning at the new facility. The FEMA evaluation of the ENC during the 1987 annual exercise indicated a superior operation.

During the most recent emergency planning exercise concern was expressed regarding some inconsistencies in the scenario data and the controlling of scenario implementation. Actions are underway to improve the review of the entire scenario by an independent evaluation group to insure that the scenario events are logical and fully achievable, and that the data to support the events are consistent with the desired results. We are developing a drill controller program description which will establish a drill controller organization which will be separate and distinct from the scenario development groups. The controller group will be headed by the Manager, Station Emergency Preparedness, Manager, Nuclear Affairs and Emergency Planning on alternating years. The lead controller will also participate in the independent review of the scenario. The controller organization includes onsite and offsite sub-groups to insure a consistent and coordinated effort. Members with specific expertise will be dedicated to the controller organization for the entire year, will receive specific controller training, and will participate in all quarterly drills to improve proficiency. A complete review of health physics activities and contamination control problems is underway which will include an intensified training program for health physics technicians and the assignments of fully qualified personnel to the sole responsibility of the emergency response facility contamination control effort. Corrective actions are underway regarding EOF accountability, to include an improved training program for security personnel. We will also be including recovery and reentry measures and revised procedures from the assembly of plant personnel as objectives in our forthcoming quarterly drills.

VII. Security and Safeguards

The Board recommended that SCE continue its efforts to identify, evaluate and report security events and apply lasting corrective measures. As a result of its continuing program of internal audits and self assessment, SCE's site security organization has reduced the number of security event reports to the NRC by almost one-half. In addition, SCE did not receive any citations for events that occurred during the recently completed SALP period.

VIII. Outages

The Board requested SCE to continue the current emphasis on careful outage planning and to seek to minimize the overlap of unit outages. SCE has given careful attention to outage planning techniques during the most recent SALP period. As a result, refueling outage durations for Units 2 and 3 were decreased over the past two SALP periods. In addition, SCE is completing about one-fourth more maintenance orders during the most recent refueling outages when compared to those outages conducted during the SALP period October 1984 through May 1986. SCE's ability to complete refueling outages more quickly, and the continuing use of its five year outage schedule permits early identification of potential overlap conditions. Plans are already in place to address a potential overlap between Units 1 and 3 refuelings in 1988. SCE has established additional supervisory positions effective during all outages to provide more observation of key activities and to enhance compliance. SCE management concern for efficient outages has been further demonstrated by executing refueling evolutions with SCE personnel rather than by contract personnel as was done previously.

IX. Quality Programs and Administrative Controls

The Board asked SCE to evaluate the execution of its quality assurance program to ensure that it was being done in a rigorous manner. SCE's Quality Assurance (QA) organization has instituted a number of program enhancements and has conscientiously pursued program implementation overall. As an example, since June of 1986, QA has conducted two audits and 12 field surveillances of the IST program. Results from these audits were used to enhance the IST program. Before the end of 1987, two additional audits and ten field surveillances will be conducted on the IST program.

More effective means of ensuring quality have been implemented, and as a result, physical (i.e., wrong part, damaged part, etc.) rejection rates at receipt inspection now account for less than one percent of received items, while rejections for paper discrepancies have been cut approximately in half. A performance improvement program to facilitate focusing QA resources on incipient problem areas before they become significant enough to affect overall performance has been implemented. Quality goals have been established for those processes work-sampled by QA (e.g., maintenance orders, procurement documents, and design changes), and quality trends are analyzed jointly by QA and line management teams to establish areas to be targeted for improvement. Increased QA attention is also being directed toward root cause assessments and corrective action follow-through.

A program to perform in-depth, integrated audits was initiated late in the SALP period, and will facilitate more thorough evaluation of inter-organizational performance. An audit now in progress is evaluating the design, construction, 50.59 evaluation, testing, quality control, configuration control, and procurement aspects associated with a selection of design changes to be performed during an upcoming refueling outage. In addition, associated functions such as health physics, clearances, and operations, as they affect these monitored activities, are being evaluated within the same audit.

X. Licensing Activities

Please refer to Enclosure 2

XI. Training

The Board recommended that SCE continue to strengthen its training programs with emphasis on the execution of administrative controls and on ensuring that reactor operator and senior reactor operator examination results are consistent with Region V and national averages. Administrative controls training has been further incorporated into SCE's maintenance and operations training programs. Such training occurs as part of both initial and continuing programs. The average number of hours spent in training by maintenance personnel has increased by ten percent. Continued emphasis on operator qualification has resulted in an approximate ten percent increase in the pass rate during this SALP period as compared to the previous SALP period. SCE has now been accorded full membership status in the National Academy for Nuclear Training, meaning that its ten major training programs have met the accreditation standards for the nuclear industry. This is indicative of the importance SCE attaches to the professionalism of its training programs.

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