GL 86-04

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May 16, 1986

Director, Office of Nuclear Reactor Regulation
Attention: Mr. George Knighton, Director
PWR Project Directorate No. 7
Division of PWR Licensing B
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Gentlemen:

Subject: Docket Nos. 50-206, 50-361 and 50-362
San Onofre Nuclear Generating Station
Units 1, 2 and 3

By NRC Generic Letter 86-04 dated February 13, 1986, Southern California Edison (SCE) was provided a copy of the Federal Register notice of the Commission's Policy Statement on Engineering Expertise on Shift. In addition, so that the NRC can be aware of the current status of, and future plans for the separate Shift Technical Advisor (STA) and dual-role programs in the industry, a response to the following three items was requested:

1. The current program for providing engineering expertise on shift.

2. A description of the "equivalency" criteria to an engineering degree if used in the current STA program.

3. A description of any modifications that SCE intends to propose to the current STA program in order to take advantage of the options identified in the Commission's Policy Statement.

SCE responses to Items 1 and 2 are provided in the enclosure to this letter "Current Program for Providing Engineering Expertise On Shift, San Onofre Nuclear Generating Station, Units 1, 2 and 3" dated April 1986. This Program is formally implemented by Station Engineering Procedure SO123-V-5.7. Note that the enclosure describes the current program which is subject to revisions as deemed necessary or appropriate for maintaining engineering expertise on shift.

In response to Item 3, SCE has reviewed the NRC final Policy Statement on Engineering Expertise on Shift, and it has been concluded that there would be no significant advantage to SCE in replacing the current separate STA position with a combined Senior Reactor Operator (SRO)/STA position. Accordingly, SCE

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will continue to use the separate STA position to provide engineering expertise on shift, and SCE does not intend to modify the current STA program as allowed by the Commission's Policy Statement.

If additional information concerning the SCE STA program is needed, please let me know.

Very truly yours,

M. O. Medford

Enclosure

cc: H. Rood, NRC Sr. Project Manager
R. Dudley, NRC Project Manager, San Onofre Unit 1
F. Rowsome, NRC Division of Human Factors Technology
F. Huey, NRC Senior Resident Inspector Units 1, 2 and 3

CURRENT PROGRAM FOR PROVIDING ENGINEERING EXPERTISE ON SHIFT

SAN ONOFRE NUCLEAR GENERATING STATION

UNITS 1, 2 AND 3

April 1986

The education, training, duties, chain of command authority, and schedule requirements of the Shift Technical Advisor (STA) who provides engineering expertise on shift at the San Onofre Nuclear Generating Station, Units 1, 2 and 3 are summarized below.

EDUCATION

Each STA has a Bachelors Degree, or equivalent, in a physical science or engineering discipline. Equivalency criteria to an engineering degree is considered to be either (1) ten (10) years of directly applicable experience or (2) eight (8) years of directly applicable experience with a Professional Engineers (PE) license in a related field obtained by successful completion of the PE examination.

TRAINING

Specific training in plant design and in the response and analysis of the plant for transients and accidents is required. Each STA is instructed in the station training programs for (1) the Senior Reactor Operator (SRO)/Control Room Supervisor and (2) Reactor Operator/Assistant Control Operator (fundamentals portion).

Each STA shall be certified as qualified for a Specific Unit or Units prior to assuming his duties based on successful completion of the Training Program and by successful completion of either SCE administered NRC type SRO written and oral/plant walk through examinations or actual NRC SRO examinations.

The SRO Training Program meets the requirements of 10CFR55, Appendix A, the applicable Final Safety Analysis Report (FSAR), and Technical Specifications including a requalification program on a two year cycle.

ON-SHIFT DUTIES

The principal duties of the on-shift STA shall be:

1. Protection of the public health and safety by enhancing safe operation of the plant. He shall examine plant operations independent of those directly responsible (i.e., the licensed operators), and provide technical assistance to the operating shift complement during normal and abnormal operating conditions.

2. The STA shall provide technical support to the Shift Superintendent in the areas of thermal hydraulics, reactor engineering, and plant analysis with regards to safe operation of the unit.

Duties During Off Normal Conditions

1. Provide technical evaluation of plant conditions and parameters and an independent overview of plant safety.

2. At the request of the Shift Superintendent, assist in either the Control Room or site Technical Support Center.

3. During a transient or accident, compare existing critical parameters (i.e., neutron power level, reactor coolant system level, pressure and temperature, containment pressure, temperature, humidity and radiation level, and plant radiation levels) with those predicted in plant specific analyses to ascertain whether the plant is responding to the incident as predicted.

4. Report any abnormalities to the Shift Superintendent immediately and provide assistance in formulating a plan for corrective action.

5. Make a qualitative assessment of plant parameters during and following an accident in order to ascertain whether core damage has occurred.

6. During emergencies, be observant of critical parameters and ascertain whether there is adequate core cooling, including availability of a heat sink for the coolant system.

7. If critical parameters become unavailable due to instrument failure, determine approximate values for the parameters in question by calculations or other means.

8. Investigate the cause(s) of abnormal or unusual events that occurred on assigned shift and assess any adverse effects therefrom.

9. If an Emergency Action Level (EAL) is reached, the on-shift STA will act as Technical Leader, but only after attending to his principal duties as delineated above in Items 1 and 2 under ON SHIFT DUTIES, and only if conditions permit the STA's attention to be deviated from these primary duties.

10. The on-shift STA shall document in the form of telephone notes, memos, or log entries any discussions of which the STA has knowledge that influence Station operation during off-normal situations. (Off-normal situations are nonroutine load changes.)

Routine Duties - General

1. Assist the Operations staff in interpreting and applying the requirements of Technical Specifications.

2. Assist the Operations and Compliance staff in determining reportability.

3. Promptly notify the Shift Superintendent, the Cognizant Compliance Engineer, and the appropriate Unit STA Group Leader or STA Supervisor of any reportable or potentially reportable events per 10 CFR 50.72 or 10 CFR 50.73.

4. Perform a review of planned activities for a duty shift to ascertain whether special conditions or precautions are warranted, and make recommendations to the Shift Superintendent.

5. If applicable, review abnormal system lineups.

6. If applicable, review limiting condition of operations action requirements (LCOARs) and equipment deficiency mode restraints (EDMRs).

7. As applicable, assist in Post-Trip Review.

8. Review LCOARs and EDMRs and control boards for mode restraints approximately one shift prior to any anticipated upmode change and then report to the Station Technical Manager (or Duty Supervisor) when ascension for the higher mode is permissible.

Routine Duties - Monitoring

Actively monitor operating evolutions during normal plant operations. The purpose of this monitoring is to ensure that plant configuration of safety related components is acceptable under the Technical Specifications for the existing mode of operation. It is the responsibility of the duty STA to ensure that this monitoring effort is performed; it is not a prerequisite for this effort that the operating crew contact the STA prior to an evolution.

This monitoring should include:

1. Attend all pre-shift briefs and Shift Superintendent's turnovers.

2. Review and approve deviations from operating instructions for safety related equipment made under operating procedures for Control of System Alignments.

3. Review manipulation of safety equipment under a work authorization or realignment of safety related systems such as redundant or third of a kind equipment or common equipment.

4. Perform an independent verification of the major flow path of a safety related system placed into service. These independent flow path verifications should be performed by off duty STAs if performance of the path verification would not allow the duty STA to be in contact with the control room at all times or degrade his ability to return to the control room within 10 minutes.

   If the independent verification will result in greater than 10 mR whole body exposure or entry into an airborne radioactivity area, performance of the verification shall be approved by the STA supervisor.

5. Review any other manipulation of safety related systems which affect basic plant configuration.

Routine Duties - Shift Relief

STAs should make contact with the Shift Superintendent near the beginning of each shift to discuss plant status and activities scheduled during that shift. The STA should be aware of any significant plant evolution or maintenance activity.

1. When coming on-shift the STA shall relieve the STA being replaced in a manner which ensures that the information and status conditions in the following step (No. 2) are understood. A Check-Off List shall be utilized by the oncoming and offgoing STA to facilitate the Watch relief.

2. When coming on-shift, the STA shall review the Shift Superintendent's log for significant events which may have occurred since his last time on duty. If the STA is new to the unit, or pulling his first duty, the logs for the preceding week should be reviewed.

3. Upon beginning a shift, the STA should promptly become aware of the following:

   a. Tests completed.
   b. Testing to be carried over to the oncoming shifts.
   c. Maintenance scheduled to be performed on the oncoming shift.
   d. Maintenance completed or to be carried over to the oncoming shift.
   e. Primary and secondary plant status.
   f. Any unusual conditions or system alignments.
   g. Status of outstanding Radwaste Release permits.

h. Any current administrative reviews, audits (QA and NRC) and directions of the day.
i. Any new Orders, Instructions, Procedures, and Temporary Change Notices.

4. The above steps should be considered a minimum preparation for a normal shift relief. If a plant evolution or abnormal conditions exists, the relief should not be made until the evolution is completed or a logical break point has been reached.

Other Duties

Whether on-or off-shift (if it will not affect performing the On-Shift Duties listed above, the STA may be required to perform the following duties and assignments as directed by the STA Supervisor:

1. Be cognizant of significant event occurrences within the industry through review of appropriate reports available at the plant.

2. Prepare Station Incident Reports.

3. Evaluate the effectiveness of plant procedures in terms of terminating or mitigating accidents and make recommendations to the STA Supervisor when changes need to be made.

4. Prepare special reports when requested by the STA Supervisor.

5. Be readily available to provide appropriate assistance to the normal shift complement.

6. Assist the Compliance staff in the preparation of Licensee Event Reports (LERs).

7. Maintain current STA qualification by participating in STA and/or SRO retraining.

8. Other duties as directed by the STA Supervisor.

CHAIN OF COMMAND AND AUTHORITY

1. The on-shift STA assists the on-shift Shift Superintendent in his routine duties and assignments and reports to the STA Supervisor for engineering or safety analysis duties associated with plant operations.

2. The STA has no authority to direct the activities of licensed operators, but acts only in an advisory role. At the same time, the STA must maintain a degree of independence from operations and, therefore, does not report to the Shift Superintendent either functionally or administratively.

3. The STA reports administratively to the STA Supervisor for shift assignments, job performance and all functions.

SCHEDULE

1. Whenever a Unit's Reactor Coolant System temperature is above 200°F, an STA qualified on that Unit shall be on duty.

2. The on-shift STA shall remain onsite and at all times maintain some form of communication with the Control Room. When not physically in the Control Room, the STA shall be able to report for duty when needed within approximately 10 minutes of being contacted.

3. STAs will stand watch on a rotating duty day basis. During this time, they will be working for a minimum of eight (8) hours and remain on call for the remaining hours depending on the plant status.

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