



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION V

1450 MARIA LANE  
WALNUT CREEK, CALIFORNIA 94596-5368

March 7, 1994

Docket Nos. 50-361/362

Southern California Edison Company  
Irvine Operations Center  
23 Parker Street  
Irvine, California 92718

Attention: Mr. Harold B. Ray  
Senior Vice President, Nuclear

SUBJECT: REQUALIFICATION PROGRAM EVALUATION AT THE SAN ONOFRE NUCLEAR  
GENERATING STATION UNITS 2 AND 3, EXAMINATION REPORT 50-  
361/362/OL-94-01

The NRC administered a requalification program evaluation at your San Onofre Nuclear Generating Station Units 2 and 3 facility during the weeks of January 3 - 7, January 17 - 21, and January 31 - February 3, 1994. The examination results were that 13 of the 15 operators examined passed their individual examinations. All three crews examined were evaluated as satisfactory. Therefore, the results satisfied the requirements of NUREG-1021, "Examiner Standards," ES-601, "Administration of NRC Requalification Program Evaluations," for a satisfactory program rating.

During the simulator examinations the NRC examination team observed significant variations in crew communication practices. The NRC examiners saw inconsistent efforts to initiate warnings or make announcements outside the Control Room. Our concern is that the operators may not make appropriate announcements during actual plant events, potentially jeopardizing personnel safety. Your acknowledgement of the above concern and commitment to enhance training in this area was provided to the NRC examiners during the exit meeting. Your staff's commitment to enhance training in the area of communications with simulated personnel outside the control room appears adequate.

The NRC administered an initial license operating examination to one senior reactor operator candidate on January 20, 1994. The candidate passed the examination.

Enclosure 1, Examination Report 50-361/362/OL-94-01, provides the details of the current program evaluation, crew evaluations, and individual operator requalification examination results. In accordance with 10 CFR 2.790 of the Commission's regulations, a copy of this letter and Enclosures 1 and 2 will be placed in the NRC Public Document Room.

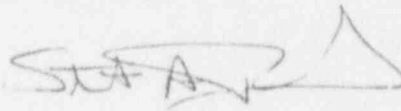
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March 7, 1994

Should you have any questions concerning this examination, please contact Mr. Philip Morrill of my staff at (510) 975-0293.

Sincerely,



S. A. Richards, Acting Director  
Division of Reactor Safety and Projects

Enclosures:

1. Examination Report Nos. 50-361/362-OL-94-01
2. Simulation Facility Report

cc w/enclosures (1) and (2):

Mr. Edwin A. Guiles, Vice President Engineering & Operations, San Diego Gas and Electric Co.  
T. E. Oubre, Esq., Southern California Edison Company  
Chairman, Board of Supervisors, County of San Diego  
Mr. Sherwin Harris, Resource Project Manager, Public Utilities Department  
Mr. Charles B. Brinkman, Manager, ABB Combustion Engineering Nuclear Power  
Mr. R. W. Krieger, Vice President, Southern California Edison Company  
Mr. Don J. Womeldorf, Chief, Environmental Management Branch  
Mr. Thomas E. Bostrom, Project Manager, Bechtel Power Corporation  
Mr. Robert G. Lacy, Manager Nuclear Department  
Mr. Steve Hsu, Radiologic Health Branch  
Mayor, City of San Clemente

March 7, 1994

bcc w/enclosure (1) only:

- K. Perkins, RV
- C. VanDenburgh, RV
- P. Morrill, RV
- H. Wong, RV
- J. Sloan, SRI
- M. Fields, Project Manager, NRR/PD5
- B. Gallo, NRR/HOLB
- M. Jones, EG&G Idaho

bcc w/enclosures (1) and (2):

- J. Bianchi, RV
- G. Johnston, RV
- D. Pereira, RV
- A. Mendiola, NRR/HOLB

bcc w/enclosures (1) and (2):

- PDR
- DCS

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SEND TO DCS	YES / NO
SEND TO PDR	YES / NO

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ENCLOSURE 1

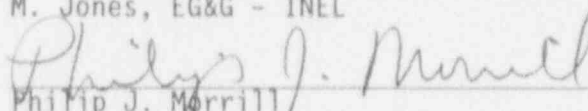
Examination Report No.: 50-361/362-OL-94-01  
Facility: San Onofre Nuclear Generating Station  
Units 2 and 3  
Docket Nos.: 50-361/362

Examinations administered at San Onofre Nuclear Generating Station,  
San Clemente, California.

Chief Examiner: G. Johnston, Operator Licensing Examiner

Accompanying  
Personnel: D. Pereira, Operator Licensing Examiner  
M. Jones, EG&G - INEL

Approved:

  
Philip J. Morrill  
Chief, Operations Branch

3-3-94  
Date Signed

Summary:

Examinations on January 3 - 7, January 17 - 21, and January 31 - February 3, 1994 (Report No. 50-361/362-OL-94-01)

The examinations included six Senior Reactor Operators and seven Reactor Operators who required examination prior to the expiration of their six year license terms. Two other Reactor Operators participated in the simulator examinations. Five Senior Reactor Operators and six Reactor Operators successfully passed all portions of the examinations. One Senior Reactor Operator failed the Job Performance Measures examination. One Reactor Operator failed the written examination. One Senior Reactor Operator upgrade candidate was administered an initial license operating examination retake on January 20, 1994. The candidate passed the examination.

Safety Significant Issues:

No safety significant issues were identified.

Requalification Program Issues:

The program demonstrated the licensee's effort to improve control room communications. However, one of the three crews observed demonstrated a significant weakness in ensuring personnel outside the control room were notified of a fire in the Diesel Generator Building. The other two crews also demonstrated a weakness in this area, although to a lesser degree.

The Senior Reactor Operators did not demonstrate an adequate understanding of calculations of shutdown margin, estimated critical position, and the use of cooldown rate curves to determine soak times. The Shift Supervisors and Control Room Supervisors are charged with reviewing and approving the work of other staff members. The performance of the SROs in these areas brings into question their ability to adequately review calculations done by other staff members.

## REPORT DETAILS

### 1. Persons Attending the Exit Meeting

#### Southern California Edison:

T. Vogt, Station Operations Manager  
V. Fisher, Assistant Operations Manager  
J. Reeder, Nuclear Training Manager  
R. Sandstrom, Operations Training Supervisor  
M. Kirby, Operator Licensing Supervisor  
T. James, Simulator Supervisor  
S. Hollinger, Nuclear Training Instructor  
R. Clement, Nuclear Training Instructor  
R. Grabo, Nuclear Training Instructor  
W. Lyke, Nuclear Training Instructor  
K. Rauch, Nuclear Training Instructor  
R. Brown, Licensing Engineer

#### NRC:

G. Johnston, Chief Examiner, Region V  
D. Pereira, Examiner, Region V  
M. Jones, Contract Examiner, EG&G-Idaho  
P. Morrill, Chief, Operations Branch, Region V  
J. Sloan, Senior Resident Inspector

### 2. Written Examination

During each of the three weeks the operators were administered written examinations. Thirteen persons took the NRC administered examinations. The examinations included a Reactor Operator and a Senior Reactor Operator written examination. The results were twelve operators passed the written examinations and one Reactor Operator failed the written examination. No generic weaknesses were identified.

Prior to the preparations week, the NRC identified that changes were required to ensure that there was only one identifiable correct answer among the four choices given. During the preparation week of December 13, 1993, the NRC examiners noted that the licensee had not made all the changes required to the examination question bank questions selected. This resulted in some changes to the proposed examination.

### 3. Job Performance Measures Walkthrough Examination

Thirteen persons took the NRC administered walkthrough examinations. One person failed the examination by failing to adequately perform two of five Job Performance Measures (JPMs). The examiners noted one area of weakness related to the performance of calculations including Estimated Critical Position and Shutdown Margin.

The examiners also observed that the Senior Reactor Operators (SROs) appeared to exhibit a lack of familiarity with the physical layout of the plant and equipment. This was further evidenced by the actual

performance of several SROs during the JPMs. The examiners observed that the SROs often had to re-read the performance steps of the procedures to determine the configuration of the equipment involved in the task. This indicated to the examiners that the SROs have not been spending significant amounts of time in the facility, or have not recently walked down systems.

#### 4. Simulator Examinations

Simulator examinations were administered on January 4, January 18, and February 1, 1994. Each crew was given two simulator scenarios. Each crew successfully completed the examinations, and no individuals failed. The examiners observed that the crews were attentive and knowledgeable about Abnormal and Emergency Operating Procedures. The crews were able to properly diagnosis the events in progress and exit to the appropriate procedures.

The crew observed on January 4, 1994, did not properly communicate existing plant conditions to personnel outside the control room. This was demonstrated by the failure of the Shift Supervisor to announce over the station PA system the existence of a fire in the Unit 2 Diesel Generator building. The other two crews demonstrated varying degrees of the same concern. The Control Room Supervisor of the crew on February 1, 1994, directed the start of a Condensate pump without informing the Auxiliary Operator (that was dispatched to check that pump) that a start was imminent.

During followup questioning by the facility evaluators it was determined that several Senior Reactor Operators did not understand the usage of the cooldown rate curves. Specifically the SROs could not adequately explain the process of determining soak time following a cooldown of the reactor coolant system.

The preparation effort for the examination team for the simulator scenario sets revealed that the licensee has not fully implemented all aspects of Revision 7 to NUREG-1021 Examiner Standards. The changes to the standard have imposed significant requirements to ensure that each scenario and scenario set meet specific quantitative requirements. Specifically, the number of crew critical tasks and the number of contingency procedures implemented after EOP entry did not meet the new (Revision 7) requirements. Because of these new requirements, the examination team had to make substitutions for 3 of the 6 scenarios proposed by the facility staff. The examiners did not view these changes as reflecting negatively on the effort of the staff to ensure the quality of the scenarios and scenario sets. The reason is the Chief Examiner determined that the facility staff had instituted a process to review the critical tasks of each of the scenarios in the facility bank. This process is not complete, however, the ongoing effort appeared to be rigorous and involved Operations personnel. Following this review the facility staff stated they would modify the scenarios or indicate which scenarios must be paired in sets.



5. Initial License Examination

The NRC performed one simulator operating examination for a Senior Reactor Operator candidate on January 20, 1994. The candidate passed. The written examination was waived, as well as the walkthrough Job Performance Measures, due to an earlier pass in those areas.

6. Exit Meeting

The exit meeting was held on February 4, 1994 with the persons listed in Paragraph 1. The Chief Examiner conveyed the NRC's preliminary results for the examinations including the program as satisfactory.

The Chief Examiner stated that the facility program has demonstrated significant improvements in control room communications. However, one of the three crews observed demonstrated a significant weakness in ensuring personnel outside the control room were notified of a fire in the Diesel Generator Building. The other two crews also demonstrated a weakness in this area, although to a lesser degree.

The Chief Examiner also noted that the Senior Reactor Operators did not demonstrate an adequate understanding of calculations involving shutdown margin, estimated critical position, and the use of cooldown rate curves to determine soak times. The Shift Supervisors and Control Room Supervisors are charged with reviewing and approving the work of other staff members. The Chief Examiner noted that the performance of the SROs in these areas brings into question their ability to adequately review calculations done by staff members.



## SIMULATION FACILITY REPORT

Facility Licensee: San Onofre Units 2 & 3

Facility Docket N.: 50-361, 50-362

Operating Tests Administered on: 1/4, 1/18, 2/1/94

This report is to be used only to report observations. These observations do not constitute audit or inspection findings and are not, without further verification and review, indicative of noncompliance with 10 CFR 55.45(b). These observations do not affect NRC certification or approval of the simulation facility other than to provide information that may be used in future evaluations. No licensee action is required in response to these observations.

While conducting the simulator portion of the operating tests, the following items were observed (if none, so state):

<u>ITEM</u>	<u>DESCRIPTION</u>
No identifiable problems.	The simulator did not present any identifiable problems. Functionality was very good. Simulator is up to date with plant design.