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SCE

May 17, 1985

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

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

Dear Sir:

Subject: Docket No. 50-206
IE Inspection Report 50-206/85-09
Response to Notice of Violation
San Onofre Nuclear Generating Station, Unit 1

Your letter of April 19, 1985, forwarded a Notice of Violation resulting from the special inspection conducted during the period of February 14 through March 20, by Messrs. F. R. Huey, A. D'Angelo, J. P. Stewart, and J. E. Tatum. The enclosure to this letter provides the Southern California Edison Company response to the Notice of Violation contained in the enclosure of your letter of April 19.

I trust the enclosure responds adequately to all aspects of the violation.

If you have any questions or if we can provide additional information, please let me know.

Sincerely,

Kenneth P Baskin

Enclosure

cc: F. R. Huey (USNRC Senior Resident Inspector, Units 1, 2 and 3)
A. J. D'Angelo (USNRC Resident Inspector, Unit 1)

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ENCLOSURE

Response to the Notice of Violation contained in the Enclosure to Mr. J. B. Martin's letter of April 19, 1985.

ITEM 1

Item 1 of the Enclosure to Mr. J. B. Martin's letter of April 19, 1985, states:

"I. Technical Specification 1.5 states in part:

'1.5 Containment Integrity shall exist when: ...

(3) At least one door in each personnel airlock is properly closed....'

Technical Specification 3.6.1 states in part:

'B. Access to Containment:

(1) Containment integrity shall not be violated unless the reactor coolant system is below 500 psig and a shutdown margin greater than one percent $\Delta k/k$ with all rods inserted is maintained for the most reactive temperature....'

"Contrary to the above, on February 13, 1985 with Unit 1 in Mode 3 and the reactor coolant system pressure at 2085 psig, both doors of the personnel escape airlock were opened at 8:12 a.m. Both airlock doors remained open until 5:46 a.m. on February 14, 1985, at which time the plant was still in Mode 3 with reactor coolant pressure at 610 psig.

"This is a Severity Level III Violation (Supplement I)."

RESPONSE

1. ADMISSION OF THE VIOLATION

SCE admits the violation as stated. This event was reported in Licensee Event Report 85-006 (Docket No. 50-206).

2. REASONS FOR THE VIOLATION

On February 13, maintenance was being performed that included the requirement for containment entry. Because the reactor plant was at normal temperature and pressure, containment integrity was required.

The Shift Superintendent authorized and requested the Security Division to unlock both the normal and the emergency accesses. In accordance with normal practice, this was done by a telephone call to the Security Officer Supervisor who then assigned a Security Officer to remove the locks and to post a watchman as required. Control Room personnel were aware of the planned containment entries as a result of their morning briefing.

The designated Security Officer removed the lock from the emergency access, or Escape Hatch (EH) and posted the watchman, as instructed. However, in the course of removing the lock, he also manipulated the EH operating mechanism such that both the inner and the outer doors were opened simultaneously. This manipulation of plant equipment was not included in, or required by, his instructions to remove the lock and was contrary to explicit training provided all plant personnel permitted unescorted access to the Protected Area.

Both the normal and emergency accesses to containment include mechanical interlock devices, as part of their operating mechanisms, which are designed to prevent simultaneous opening of the inner and outer doors. These devices are of different design at each access. The EH interlock failed during the unauthorized manipulation on February 13, and this contributed to the resulting loss of containment integrity. Failure was due to a key, which secures one of the interlock cams to its shaft, becoming displaced such that the cam did not perform its interlock function.

In summary, containment integrity was not maintained as required by Technical Specification 3.6.1 as a result of unauthorized manipulation of the EH operating mechanism contrary to general instructions, and as a result of failure of the mechanical interlock provided to prevent such an occurrence.

3. CORRECTIVE STEPS TAKEN AND THE RESULTS ACHIEVED

The following corrective actions have been or will be taken in response to causes of this incident:

- Appropriate disciplinary action has been taken.

  A program has been initiated such that all personnel in areas such as Security, Maintenance, Operations and Health Physics have reviewed this incident in detail with management in order to ensure that:

- The policy is understood that manipulation under any circumstances of any plant equipment by unauthorized personnel is strictly forbidden, except in cases of emergency to protect life or the health and safety of the public. Failure to comply with this policy is grounds for disciplinary action.

- The policy is understood that inadvertent manipulation of plant equipment, or any question as to the proper status of plant equipment, must be immediately reported to supervision and/or to the Control Room. Failure to comply with this policy is grounds for severe disciplinary action.

o The above program has been initiated for review with all other personnel with unescorted access to the Protected Area. The existing material in the training/retraining program for personnel with such access has been highlighted and reinforced.

o The necessity for strict attention to detail and, among other things, the obligation to promptly report any discrepancies which occur, has been included in a video tape presentation from the Edison Chairman and CEO to all personnel with unescorted access to the Protected Area.

o Repair of the Unit 1 EH interlock has included modification to reduce the possibility of mechanical failure. Existing set screws have been tightened and staked and other set screws added. In addition, a program to upgrade the operating mechanism, including the interlock, through modification by the vendor is being accelerated in order to be completed during the next refueling outage.

o Operations Division procedures have been developed and implemented with respect to formalizing the authorization and request to the Security Division to unlock and post containment access points and to operate containment access doors. The communication in this incident was clear and effective, but improved formality is appropriate.

o A policy has been implemented requiring that application and removal of security locks at the containment accesses must only be done under direct local control by Operations personnel who are cognizant of containment integrity requirements.

Other corrective actions which were identified during review of this incident include:

- A formal training program has existed to train Security Division personnel assigned to operate containment access doors during high traffic periods. In the case of this incident, neither the Security Officer nor the watchman posted at the emergency access had received such training as operation of the EH was not intended. The training includes procedures which, if followed, will not challenge the interlock or result in a loss of containment integrity. Nevertheless, recognition of conditions which constitute a loss of integrity, and the appropriate response to such conditions, is now included in this formal training program.

- Operator training programs already include emphasis on alertness to annunciators and the need for frequent inquiry concerning the status of conditions resulting in continuously actuated annunciators. These programs, and informal training activities as well, reference this incident as an example of where inquiry did lead to discovery of an improper condition and of where earlier inquiry could have further mitigated the condition.

- A Control Room annunciator will be installed prior to February 1988, which is only actuated when there is indication of a breach of containment integrity due to improper operation of the access doors or equalizing valves. As Units 2 and 3 do not have any existing Control Room annunciation of containment access, this will be done for Unit 1 only.

- Improved signage and procedures have been installed at each containment access for all units to describe more precisely how to operate the mechanism without challenging the interlock or causing a loss of containment integrity. In addition, a locked sign has been installed, which can be changed under the control of Operations personnel, to clearly indicate whether or not containment integrity is required to be maintained.

The effectiveness of these corrective actions will continue to be monitored during future containment access door operations.

4. CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

No additional actions, beyond those cited in (3) above, will be required.

5. DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance was achieved on 0545 on February 14, 1985.

ITEM 2

Item 2 of the Enclosure to J. B. Martin's letter of April 19, 1985, states:

"II. 10 CFR Part 50, Appendix B requires the licensee to establish a quality assurance program. Criterion II of Appendix B states in part that 'This program shall be documented by written policies, procedures, or instructions and shall be carried out throughout plant life in accordance with those policies, procedures, or instructions.'

"Section 17.2.2 and Table 17.2-1 of Southern California Edison Topical Report SCE-1-A, 'Quality Assurance Program,' incorporate into the licensee's Quality Assurance Program and require compliance with Regulatory Guide 1.33 and ANSI N18.7-1976.

"Paragraph 5.2.6 of ANSI N18.7-1976 states in part that, 'When equipment is ready to be returned to service, operating personnel shall place the equipment in operation and verify and document its functional acceptability.'

"Contrary to the above, the functional acceptability of the interlock associated with the Unit 1 containment personnel escape airlock was not verified following the performance of maintenance affecting the interlock system on November 4, 1984.

"This is a Severity Level IV Violation (Supplement I)."

RESPONSE

1. ADMISSION OR DENIAL OF VIOLATION

SCE admits the violation as stated. This event was reported in Licensee Event Report 85-006 (Docket No. 50-206).

2. REASONS FOR THE VIOLATION

Considerable difficulty was experienced with the EH operating mechanism in October and November 1984 in that the doors would not open, or would not open fully. Maintenance was performed under documented work orders on three occasions. Based on earlier problems with the normal access interlock (ref. LER 81-016, Docket No. 50-206), a preventive maintenance procedure had been implemented for refueling intervals which includes conducting a documented test of the mechanical interlock following preventive maintenance. This procedure is generally referenced in work orders where corrective maintenance is performed requiring retest. For the last work done on the EH prior to the February 13 opening, however, only a local leakrate test was specified. Accordingly, although the craftsman performing the maintenance recalls having verified locally the operability of the mechanical interlock, no formal test was done using the operating handwheels to challenge the interlock following maintenance.

Recollections of those responsible for specifying and approving retest are not clear as to why the formal challenge test of the interlock was not specified for the last maintenance order in November 1984, even though it had been specified for the work performed only a few days earlier, however it is probable that it was because the reactor had moved from Mode 5 into Mode 4 in the interim and a caution had been provided by Operations to the effect that both doors must not be opened simultaneously under any circumstances. Notwithstanding this caution, procedures would have specified a challenge to the interlock following similar work on Units 2 and 3. The reason for this difference has been traced to the fact that the Technical Specifications prescribe a semiannual surveillance of such interlocks for Units 2 and 3, whereas there is no such requirement for Unit 1.

3. CORRECTIVE STEPS TAKEN AND THE RESULTS ACHIEVED

The following corrective actions have been or will be taken in response to the causes of this incident:

- The Unit 1 EH was repaired, properly tested, and returned to service on February 25, 1985.
- Maintenance retest requirements at Unit 1 were revised to require challenge of the interlock following corrective maintenance, whenever appropriate, regardless of plant mode, as at Units 2 and 3.

- o A procedure will be implemented prior to August 19, 1985 for reassembly of the access mechanisms, or for alignment and check-out following corrective maintenance, which will include appropriate steps and sign-offs that ensure that the interlock mechanism is correctly returned to service.

The following corrective action was identified during review of this incident:

- o Direction to maintenance planners already provides that work instructions must include sufficient detail to properly control critical work and to document that it has been done correctly. However, this leaves a good deal of latitude that is needed in order to accommodate investigative and corrective maintenance.

  In the case of this incident, neither the restoration nor the inspection steps specified were in sufficient detail. Therefore, a formal program will be developed and implemented prior to June 15, 1985 to provide additional guidance to these planners concerning provision of this required detail.

4. CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

No additional actions, beyond those cited in (3) above, will be required.

5. DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance was achieved on February 25, 1985.

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