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SUBJECT: LER 90-004-01:on 900501,fuel movement performed within spent fuel storage pool w/o concurrent operation of PACU unit.
W/9 ltr.

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Southern California Edison Company

SAN ONOFRE NUCLEAR GENERATING STATION

P. O. BOX 128

SAN CLEMENTE, CALIFORNIA 92674-0128

R. W. KRIEGER
STATION MANAGER

TELEPHONE
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August 30, 1990

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

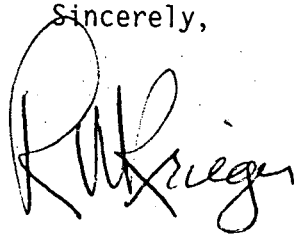
Subject: Docket No. 50-362
Supplemental Report
Licensee Event Report No. 90-004, Revision 1
San Onofre Nuclear Generating Station, Unit 3

Reference: Letter, H. E. Morgan (SCE) to USNRC Document Control Desk, dated May 31, 1990

The referenced letter provided Licensee Event Report (LER) No. 90-004, (Revision 0), for an occurrence involving the Post Accident Cleanup System. A subsequent review of the referenced LER revealed that a mischaracterization of the impact of the PACU cooling capacity on the PACU filtration capability had occurred. The enclosed supplemental LER corrects this mischaracterization. This occurrence had no effect on the health and safety of either plant personnel or the public.

If you require any additional information, please so advise.

Sincerely,



Enclosure: LER No. 90-004, Rev. 1

cc: C. W. Caldwell (USNRC Senior Resident Inspector, Units 1, 2 and 3)
J. B. Martin (Regional Administrator, USNRC Region V)
Institute of Nuclear Power Operations (INPO)

IE22
1/1

LICENSEE EVENT REPORT (LER)

Facility Name (1)	Docket Number (2)	Page (3)
SAN ONOFRE NUCLEAR GENERATING STATION, UNIT 3	0 5 0 0 0 3 6 2	1 of 0 5

Title (4)

FUEL MOVEMENT PERFORMED WITHIN THE SPENT FUEL STORAGE POOL WITHOUT CONCURRENT OPERATION OF POST ACCIDENT CLEANUP UNIT AS REQUIRED BY TECHNICAL SPECIFICATIONS DUE TO PERSONNEL ERROR

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
Month	Day	Year	Year	/// Sequential Number	/// Revision Number	Month	Day	Year	Facility Names	Docket Number(s)
									NONE	0 5 0 0 0
0 5	0 1	9 0	9 0	0 0 4	0 1					0 5 0 0 0

OPERATING MODE (9)	6
POWER LEVEL (10)	0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)

___ 20.402(b)	___ 20.405(c)	___ 50.73(a)(2)(iv)	___ 73.71(b)
___ 20.405(a)(1)(i)	___ 50.36(c)(1)	___ 50.73(a)(2)(v)	___ 73.71(c)
___ 20.405(a)(1)(ii)	___ 50.36(c)(2)	___ 50.73(a)(2)(vii)	___ Other (Specify in Abstract below and in text)
___ 20.405(a)(1)(iii)	X 50.73(a)(2)(i)	___ 50.73(a)(2)(viii)(A)	
___ 20.405(a)(1)(iv)	___ 50.73(a)(2)(ii)	___ 50.73(a)(2)(viii)(B)	
___ 20.405(a)(1)(v)	___ 50.73(a)(2)(iii)	___ 50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

Name	TELEPHONE NUMBER
R. W. Krieger, Station Manager	AREA CODE 7 1 4 3 6 8 - 6 2 5 5

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)

	Expected Submission Date (15)	Month	Day	Year
___ Yes (If yes, complete EXPECTED SUBMISSION DATE) XX NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

At 0355 on May 1, 1990, with Unit 3 in Mode 6 and with movement of irradiated fuel occurring in the spent fuel storage pool (SFP), Train A saltwater cooling (SWC) and component cooling water (CCW) systems were declared inoperable in order to perform work on a SWC valve, rendering the Train A post-accident cleanup unit (PACU) (E-370) inoperable. Technical Specification (TS) 3.9.12 requires that with one PACU inoperable, fuel movement within the SFP may proceed provided the other PACU is operable and in operation. Since the Train B PACU (E-371) was not placed in operation and movement of fuel in the SFP was continuing, this represents an operation prohibited by TS 3.9.12. At 1720 on May 1, E-371 was placed in operation when the Control Room Coordinator (CRC) (utility, licensed), who coordinates outage activities on a shutdown unit, recognized that E-371 was required to be in operation in accordance with TS 3.9.12.

Although the work package for the SWC valve contained the requirement to place E-371 in operation during the movement of fuel in the SFP, this requirement was overlooked by both the control room operators (utility, licensed) and the CRC due to inadequate attention to detail.

Appropriate disciplinary action has been administered to the personnel involved. This event has been reviewed with licensed operators, stressing the requirement for SWC/CCW operability to support PACU operability. Appropriate information from this event will be included in the licensed operator requalification program.

There is no safety significance to this event since the Train B PACU unit, E-371, was capable of proper operation if it had been required.

Plant: San Onofre Nuclear Generating Station
Unit: Three
Reactor Vendor: Combustion Engineering
Event Date: 05-01-90
Time: 0355

A. CONDITIONS AT TIME OF THE EVENT:

Mode: 6, Refueling

B. BACKGROUND INFORMATION:

1. Fuel Handling Building (FHB) Post-Accident Cleanup Unit (PACU) Filter Systems:

Two PACUs [VG] are provided, one per train of Engineered Safety Features (ESF), to ensure that radioactive material released in the FHB as a result of a fuel handling accident will be minimized. The PACUs recirculate FHB [ND] atmosphere through HEPA filters [FLT] and a charcoal adsorber [ADS] to reduce the particulate and iodine activity levels in the FHB following the event. In addition, the PACUs provide cooling to the FHB to maintain the ambient FHB temperature at a level that permits continuous personnel access and equipment operation. The cooling coil [CLR] provided for this purpose is cooled by component cooling water (CCW) [CC], which is, in turn, cooled by the saltwater cooling (SWC) [BS] system.

2. PACU Technical Specification (TS) Requirements:

TS 3.9.12 requires that with one PACU inoperable, fuel movement within the spent fuel storage pool (SFP) (located in the FHB) or operation of the fuel handling machine over the SFP may proceed provided the other PACU is operable and in operation. With no PACU operable, all operations involving movement of fuel within the SFP must be suspended.

3. Administrative Requirements:

a. Limiting Condition for Operation Action Requirement (LCOAR) and Equipment Deficiency Mode Restraint (EDMR):

Inoperable equipment which is required by a TS Limiting Condition for Operation (LCO) to be operable is documented by a LCOAR. Inoperable equipment which is required by a TS Limiting Condition for Operation (LCO) to be operable in a mode other than the current plant mode is documented by an EDMR. Specifically, the LCOAR or EDMR identifies the nature of equipment degradation (inoperability), the associated LCO and applicable modes.

b. Work Authorization Records (WARs):

Work plan requirements, including those related to TS action requirements for removal of a piece of equipment or system from service, are identified in the Work Authorization Record (WAR), LCOAR, and EDMR documents. A work package, which includes the WAR, LCOAR, and EDMR, receives several reviews by responsible personnel (utility, licensed) to verify the accuracy and completeness of these documents. The control room operators (utility, licensed), who perform the final review, are responsible for implementation of the required TS actions.

C. DESCRIPTION OF THE EVENT:

1. Event:

At 0355 on May 1, 1990, with Unit 3 in Mode 6 and with movement of irradiated fuel occurring in the SFP, Train A SWC and CCW systems were declared inoperable in order to perform work in accordance with a WAR on a SWC valve, rendering the Train A PACU (E-370) inoperable. Since the Train B PACU (E-371) was not placed in operation at that time and movement of fuel in the SFP was continuing, this represents an operation prohibited by TS 3.9.12. At 1720, E-371 was placed in operation when the Control Room Coordinator (CRC) (utility, licensed), who coordinates outage activities on a shutdown unit, recognized that E-371 was required to be in operation in accordance with TS 3.9.12.

2. Inoperable Structures, Systems or Components that Contributed to the Event:

Not applicable

3. Sequence of Events:

TIME	ACTION
0355	E-370 became inoperable when Train A CCW and SWC declared inoperable in order to perform work on SWC valve; fuel movement in SFP was continuing.
1720	E-371 is placed in operation to comply with requirements of TS 3.9.12.

4. Method of Discovery:

Upon review of a (different) WAR which also referenced the requirements of TS 3.9.12, in conjunction with review of plant status in preparation for shift turnover, the CRC recognized that Train A PACU E-370 was inoperable and that Train B PACU E-371 was required to be in operation during movement of fuel in the SFP.

5. Personnel Actions and Analysis of Actions:

Upon recognition that E-371 was required to be in operation to support fuel movement in the SFP, the CRC properly directed that E-371 be promptly started.

6. Safety System Responses:

Not applicable

D. CAUSE OF THE EVENT:

1. Root Cause:

Although the WAR on the SWC valve contained the requirement to place E-371 in operation during the movement of fuel in the SFP, this requirement was overlooked by both the control room operators (utility, licensed) and the CRC due to inadequate attention to detail.

2. Contributing Causes:

a. The EDMR associated with the above WAR did not include TS 3.9.12 as an affected LCO. Had this information been included in the EDMR, the requirement to place E-371 in operation may have been identified.

b. The filtration capability of the PACU is affected by the PACU capacity for cooling the FHB. However, the dependence of PACU operability upon SWC system operability was not clear to several control room operators. As a result, these operators, who knew that the Train A SWC and CCW systems were inoperable, did not recognize the resultant inoperability of the associated PACU, and thus did not identify the requirement for the operation of E-371 during fuel movement in the SFP.

E. CORRECTIVE ACTIONS:

1. Corrective Actions Taken:

Upon recognition that E-371 was required to be placed in operation during fuel movement in the SFP, E-371 was promptly started, and proper operation was verified.

Appropriate disciplinary action has been administered to the personnel involved.

This event has been reviewed with licensed operators, stressing the requirement for SWC/CCW operability to support PACU operability.

2. Planned Corrective Actions:

Appropriate information from this event will be included in the licensed operator requalification program.

F. SAFETY SIGNIFICANCE OF THE EVENT:

There is no safety significance to this event since the Train B PACU, E-371, was capable of proper operation if it had been required, as evidenced by its proper operation in response to a manual start signal at 1720.

In addition, even if E-371 had failed to start, there would have been no safety significance to this event. There would have been sufficient time to implement necessary corrective action due to the following: 1) the SFP was at a temperature significantly below its design limit; 2) the FHB was at a temperature significantly below its design limit; and 3) although the CCW system was not in operation, it was never disabled; thus, it remained available to the PACU and could have provided some cooling.

G. ADDITIONAL INFORMATION:

1. Component Failure Information:

Not applicable

2. Previous LERs for Similar Events:

None

3. Results of NPRDS Search:

Not applicable