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July 9, 1990

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

Subject: Docket No. 50-206
30-Day Report
Licensee Event Report No. 90-013
San Onofre Nuclear Generating Station, Unit 1

Pursuant to 10 CFR 50.73(d), this submittal provides the required 30-day written Licensee Event Report (LER) for an occurrence involving the Hydrazine Addition System. Neither the health and safety of plant personnel or the public was affected by this occurrence.

If you require any additional information, please so advise.

Sincerely,

H. E. Morgan

Enclosure: LER No. 90-013

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)

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LICENSEE EVENT REPORT (LER)

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

VOLUNTARY ENTRY INTO TECHNICAL SPECIFICATION 3.0.3 DUE TO HYDRAZINE TANK LEVEL INDICATOR FAILURE

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)
0	6	0	9	9	0	0	7	0	NONE		0 5 0 0 0

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)									
1		20.402(b)		20.405(c)		50.73(a)(2)(iv)		73.71(b)			
POWER LEVEL (10)		20.405(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)		73.71(c)			
0 9 2		20.405(a)(1)(ii)		X 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			
H. E. Morgan, Vice President and Site Manager				AREA CODE			
				7 1 4 3 6 8 - 9 4 7 0			

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
X	B E	I L	S 1 8 5	YES					

SUPPLEMENTAL REPORT EXPECTED (14)

<input type="checkbox"/> Yes (If yes, complete EXPECTED SUBMISSION DATE)			<input checked="" type="checkbox"/> NO			Expected Submission Date (15)			Month Day Year		
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

At 0200 on June 9, 1990, with Unit 1 at 92% power, a Train "A" Hydrazine Storage Tank (HST) low level alarm was received in the Control Room. After verifying adequate HST level via the Train "B" indication, the Train "A" hydrazine pump G-200A was declared inoperable since its auto-start capability is blocked by the HST low level signal. The Technical Specification (TS) 72-hour action statement was entered for one inoperable hydrazine pump.

At 1443 on June 9, 1990, prior to performance of troubleshooting and maintenance on the Train "A" level indicator, the Train "B" hydrazine pump was tested in accordance with TS 3.3.1.C. Since performance of the test rendered the pump inoperable, TS 3.0.3 was entered because both hydrazine pumps were inoperable. At 1519, following satisfactory testing of the Train "B" pump, the pump was returned to service and TS 3.0.3 was exited.

The cause of the Train "A" HST level indicator failing low was failure of the power supply circuit for Level Indicator Switch LIS-500A. The voltage regulator had failed which caused the power supply circuit to fail and the indicator switch to activate the low level block of hydrazine pump G-200A. The inoperable switch was replaced and the circuit tested satisfactorily.

The cause of the TS 3.0.3 entry is the absence of appropriate action statements. SCE has recognized the potential for entering TS 3.0.3 due to the requirements of TS 3.3.1.C. Preparation of a proposed change to TS 3.3.1 to correct this deficiency is currently underway (see LERs 90-005, 89-018, and 89-024, Docket No. 50-206).

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Plant: San Onofre Nuclear Generating Station
Unit: One
Reactor Vendor: Westinghouse
Event Date: 6-9-90

A. CONDITIONS AT TIME OF THE EVENT:

Mode: 1, 92% Power Operation

B. BACKGROUND INFORMATION:

The Hydrazine Addition System (HAS) provides for injection of hydrazine into the Containment Spray System (CSS) [BE] to absorb and facilitate removal of airborne fission products from the containment atmosphere following a Loss of Coolant Accident (LOCA). The HAS is comprised of redundant positive displacement pumps [P] G-200A and G-200B, which take suction from one Hydrazine Storage Tank (HST) [TK] D-200. HST level indication [IL] is provided by Level Indicator Switches LIS-500A for Train "A" and by LIS-500B for Train "B", each of which contains a low level block of the associated hydrazine pump auto-start signal to protect the pump from damage after the contents of the HST have been discharged. If a Level Indicator Switch fails low it activates the block of the associated hydrazine pump auto-start and thus, renders the pump inoperable. Technical Specification (TS) 4.1.1.H, Table 4.1.3, Item 9 requires a monthly channel test of the HST level instrumentation and a calibration at each refueling shutdown.

TS 3.3.1.A(2) requires the CSS, including the two hydrazine pumps, to be operable before the reactor [RCT] may be made or maintained critical. TS 3.3.1.B allows maintenance of either hydrazine pump for a period not to exceed 72 hours. TS 3.3.1.C requires the redundant component be tested to demonstrate its availability prior to initiating maintenance. This is achieved by performing the monthly flow test pursuant to TS 4.2.1.II.A.

C. DESCRIPTION OF THE EVENT:

1. Event:

At 0200 on June 9, 1990, a Train "A" HST low level alarm was received in the Control Room. After verifying adequate HST level via the Train "B" indication, the Train "A" hydrazine pump G-200A was declared inoperable since its auto-start capability is blocked by the HST low level signal. The TS 72-hour action statement was entered for one inoperable hydrazine pump.

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At 1443 on June 9, 1990, prior to performance of troubleshooting and maintenance on the Train "A" level indicator, the Train "B" hydrazine pump was tested in accordance with TS 3.3.1.C. Since performance of the test rendered the pump inoperable, TS 3.0.3 was entered because both hydrazine pumps were inoperable.

At 1519, following satisfactory testing of the Train "B" pump, the pump was returned to service and TS 3.0.3 was exited.

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

None.

3. Sequence of Events:

<u>DATE</u>	<u>TIME</u>	<u>ACTION</u>
6/9/90	0200	Train "A" HST level indicator failed low. Train "A" hydrazine pump G-200A inoperable.
6/9/90	1443	Train "B" hydrazine pump tested in accordance with TS 3.3.1.C. TS 3.0.3 entered.
6/9/90	1519	TS 3.0.3 exited following satisfactory testing of Train "B" hydrazine pump.

4. Method of Discovery:

Receipt of a Train "A" HST low level alarm in the Control Room alerted the Operators of the condition.

5. Personnel Actions and Analysis of Actions:

The brief entry into TS 3.0.3 was approved by Station Management in accordance with administrative guidance.

6. Safety System Responses:

None.

D. CAUSE OF THE EVENT:

1. TS 3.0.3 Entry:

The TS 3.0.3 entry was a result of applying the requirements of TS 3.3.1. In the event of a failure of a component which is governed by TS 3.3.1, TS 3.3.1.C requires the redundant component be tested to demonstrate its availability. In the case of the hydrazine

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pumps, performance of the test on the operable component required that the pump be re-aligned (i.e., the discharge valve closed) such that, for a brief period of time, it was incapable of fulfilling its safety function.

2. HST Level Indication:

The cause of the Train "A" HST level indicator failing low was failure of the power supply circuit for Level Indicator Switch LIS-500A. The voltage regulator had failed which caused the power supply circuit to fail and the indicator switch to activate the low level block of hydrazine pump G-200A.

E. CORRECTIVE ACTIONS:

1. Corrective Actions Taken:

The inoperable Level Indicator Switch LIS-500A was replaced and the circuit tested satisfactorily. Using the Nuclear Plant Reliability Data System (NPRDS), a review of industry failures of similar level indicator switches from the same manufacturer (Sigma Instruments, Inc.) was performed. NPRDS revealed no other power supply failures that had been attributed to the voltage regulator. Based on this data, and the length of time which the voltage regulator had been performing satisfactorily (over 7 years), no further action is currently deemed necessary.

2. Planned Corrective Actions:

SCE has recognized the potential for entering TS 3.0.3 due to the requirements of TS 3.3.1.C. Preparation of a proposed change to TS 3.3.1 to correct this deficiency is currently underway (see LERs 90-005, 89-018, and 89-024, Docket No. 50-206).

F. SAFETY SIGNIFICANCE OF THE EVENT:

There was minimal safety significance to this event since the period in which both hydrazine pumps were inoperable was limited to the time it took to test the redundant pump (approximately 36 minutes), which was satisfactorily performed. During this time, there was a low probability of a plant condition which would require operation of the CSS. Additionally, personnel were present at the pump who could have restored it to service if needed.

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G. ADDITIONAL INFORMATION:

1. Component Failure Information:

The inoperable Level Indicator Switch LIS-500A was a Model 9270-11-E-VB manufactured by Sigma Instruments, Inc..

2. Previous LERs for Similar Events:

LER 89-018 (Docket No. 50-206) reported a TS 3.0.3 entry as a result of performing testing on a redundant component in accordance with TS 3.3.1.C.

LER 90-005 (Docket No. 50-206) reported a TS 3.0.3 entry as a result of performing testing on a redundant component in accordance with TS 3.3.1.C.

The corrective action for these LER's, involving the submittal of a proposed change to TS 3.3.1.C, had not been completed at the time of this event.

3. Additional Information:

At approximately 1443 on July 9, 1990, in order to minimize the time the unit was in TS 3.0.3, the Control Room Supervisor (CRS) (utility, Senior Reactor Operator (SRO) licensed) exited the Control Room and assisted the Assistant Control Operator (ACO) (utility, Reactor Operator (RO) licensed) in verifying the valve alignment for the testing of the Train "B" hydrazine pump. The CRS notified the Shift Superintendent (SS) (utility, SRO licensed) prior to exiting the Control Room.

At approximately 1502, after notifying the Control Operator (CO) (utility, RO licensed), the SS exited the Control Room to the adjoining Technical Support Center (TSC) to brief the oncoming shift of the units status and activities. This resulted in no licensed SRO being in the Control Room area, contrary to TS Section 6.2.2. At approximately 1505, after realizing this error, the SS returned to the Control Room.

The cause of this occurrence has been attributed to oversight by the SS. Since the SS had been concentrating on other plant duties, i.e., the TS 3.0.3 entry for the hydrazine pump and briefing the oncoming shift, the SS failed to verify that another SRO was present in the Control Room prior to leaving, as is the normal practice.

For corrective action the SS has been counseled on ensuring that another SRO is present in the Control Room prior to leaving. This event will be reviewed by all Unit 1 operators emphasizing the same.

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There was no safety significance to this occurrence since during the approximate 3 minute period in which the SRO was not present in the Control Room area, he was in the adjoining TSC which shares a common glass wall (for viewing) with the Control Room. If SRO assistance was necessary in the Control Room, this need could have easily been communicated to the SRO who could have been in the Control Room area promptly.