

February 16, 2000

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

Subject: **Docket Nos. 50-361 and 50-362**
30-Day Report
Licensee Event Report No. 2000-002
San Onofre Nuclear Generating Station, Units 2 and 3

Gentlemen:

This submittal provides a 30-day Licensee Event Report (LER) describing Loss of Regulatory Guide 1.75 Separation. While this occurrence is applicable to both Units 2 and 3, a single report for Unit 3 (the most affected unit) is being submitted in accordance with Section 5.2.3(8) of NUREG-1022, Rev. 1. Neither the health nor the safety of plant personnel or the public was affected by this occurrence.

Any actions listed are intended to ensure continued compliance with existing commitments as discussed in applicable licensing documents; this LER contains no new commitments. If you require any additional information, please so advise.

Sincerely,



LER No. 2000-002

cc: **E. W. Merschoff, Regional Administrator, NRC Region IV**
J. A. Sloan, NRC Senior Resident Inspector, San Onofre Units 2 & 3

NRC FORM 366 (MM-YYYY)	U.S. NUCLEAR REGULATORY COMMISSION	APPROVED BY OMB NO. 3150-0104 EXPIRES MM/DD/YYYY Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Information and Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0104), Office of Management and Budget, Washington, DC 20503. If a document used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.
LICENSEE EVENT REPORT (LER) (See reverse for required number of digits/characters for each block)		

FACILITY NAME (1) San Onofre Nuclear Generation Station (SONGS) Unit 2	DOCKET NUMBER (2) 05000-361	PAGE (3) 1 of 3
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TITLE (4)
Loss of Regulatory Guide 1.75 Separation – Outside Design Basis

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 NAME	DOCKET NUMBER
01	27	2000	2000	-- 002 --	00	02	16	2000	SONGS Unit 3	05000-362
									FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
		20.2201(b)		20.2203(a)(2)(v)		50.73(a)(2)(i)		50.73(a)(2)(viii)	
POWER LEVEL (10)	100	20.2203(a)(1)		20.2203(a)(3)(i)	<input checked="" type="checkbox"/>	50.73(a)(2)(ii)		50.73(a)(2)(x)	
		20.2203(a)(2)(i)		20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71	
		20.2203(a)(2)(ii)		20.2203(a)(4)		50.73(a)(2)(iv)		OTHER	
		20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)		Specify in Abstract below or in NRC Form 366A	
		20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)			

LICENSEE CONTACT FOR THIS LER (12)

NAME R. W. Krieger, Vice President, Nuclear Operations	TELEPHONE NUMBER (Include Area Code) 949-368-6255
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED SUBMISSION DATE (15)		
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE).	<input checked="" type="checkbox"/> X	<input type="checkbox"/> NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

The SONGS Units 2 and 3 UFSAR states, in part, "Non-Class 1E circuits and devices shall be electrically isolated from Class 1E circuits." During a review of elementary drawings, SCE observed that the Class 1E control circuits for Boric Acid Makeup Pumps (P174 and P175) contained unisolated contact inputs from non-Class 1E components. A follow up review identified other Class 1E circuits with unisolated inputs from non-Class 1E circuits and devices as follows: a) 2/3V0227B Volume Control Tank Outlet Valve; b) 2/3V0227C Refueling Water Storage Tank Outlet to Charging Pump Suction Valve, and c) Units 2 and 3 Loss of Voltage Signal (one of four channels on both Trains A and B). SCE concluded that this deviation was reportable as a condition "outside the design basis of the plant." On 1/27/2000, at 1613 PDT, SCE reported this condition in accordance with 10CFR50.72(b)(1)(ii)(B). SCE is providing this 30-day follow-up report in accordance with 10CFR50.73(a)(2)(ii)(B). Due to the passage of time, SCE was not able to determine the cause of this occurrence.

SCE will install appropriate isolation devices in the affected circuits to restore the design basis requirements described in the UFSAR. Because there are no credible initiators of non-Class 1E circuit faults which could affect the Class 1E circuits, the safety significance of this condition is minimal.

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LICENSEE EVENT REPORT (LER)				
TEXT CONTINUATION				
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San Onofre Nuclear Generating Station (SONGS) Unit 2	05000-361	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER
		2000	-- 002 --	00
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Plant:	San Onofre Nuclear Generation Station (SONGS) Units 2 and 3	
Discovery Date:	January 27, 2000	
	<u>Unit 2</u>	<u>Unit 3</u>
Reactor Vendor:	Combustion Engineering	Combustion Engineering
Mode:	Mode 1 – Power Operation	Mode 1 – Power Operation
Power:	100 percent	100 percent

Background:

The SONGS Units 2 and 3 Updated Final Safety Analysis Report (UFSAR) Section 8.1.4 contains Design Basis information for onsite power systems. UFSAR subparagraph 8.1.4.3.14, "Regulatory Guide 1.75, Physical Independence of Electric Systems" states, in part, "Non-Class 1E circuits and devices shall be electrically isolated from Class 1E circuits except where analyzed to demonstrate that the associated Class 1E circuits are not degraded below an acceptable level in the event of a failure or fault of the Non-Class 1E circuit or device."

Description of the Event:

During a review of elementary drawings by station engineers (utility, non-licensed), SCE observed that the Class 1E control circuits for Boric Acid Makeup (CB) Pumps (P) (P174 and P175) contained unisolated contact inputs from non-Class 1E components. A follow up review identified other Class 1E circuits with unisolated inputs from non-Class 1E circuits and devices as follows:

- 2/3V0227B Volume Control Tank (VCT) (CB) Outlet Valve (V),
- 2/3V0227C Refueling Water Storage Tank (RWST) (CB) Outlet to Charging Pump Suction Valve (V), and
- Units 2 and 3 Loss of Voltage Signal (LOVS) (EK) (one of four channels on both Trains A and B).

A review of design basis information for these circuits did not identify any information that supported a deviation from the requirements of Regulatory Guide 1.75. SCE concluded that this deviation was reportable as a condition "outside the design basis of the plant." On January 27, 2000, at 1613 PDT, SCE reported this condition in an 1-hour non-emergency notification (Operations Center Log # 36637) in accordance with 10CFR50.72(b)(1)(ii)(B). SCE is providing this 30-day follow-up report in accordance with 10CFR50.73(a)(2)(ii)(B).

Cause of the Event:

Based on SCE's review of design documents, the drawings issued during original construction (circa 1980) show the current design without the isolation described in the UFSAR. While minor drawing changes were made prior to startup (editorial changes for non-Class 1E circuits), the design itself did not change. Due to the passage of time, SCE was not able to determine the cause of the design omissions discussed above.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION					
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Corrective Actions:

SCE is continuing a review of plant records to identify all Class 1E circuits with non-Class 1E inputs for similar occurrences, and will initiate corrective actions if required. SCE will install appropriate isolation devices in the affected circuits to restore the design basis requirements described in the UFSAR.

Safety Significance:

The ongoing review of the non-class 1E raceways for the circuits in question indicates that these raceways carry only control and low power (120VAC or 125VDC) circuits; the low power circuits are protected by 20 amp or smaller circuit breakers. These cables are also located in a mild environment (i.e., control building). Consequently, there are no credible initiators of non-Class 1E circuit faults which could affect the Class 1E circuits. Therefore, the safety significance of this condition is minimal.

Additional Information:

In the early 1990's, the oscillographs (associated with the LOVS circuitry) were replaced with digital fault recorders. It is not known if the Regulatory Guide 1.75 separation issue would have been identified during that design change.

In the last three years, SCE has reported one other instance where a loss of Regulatory Guide 1.75 separation resulted in a condition outside the design basis of the plant: LER 2-1999-005, "Loss of Physical Separation in the Control Room." That LER conservatively reported the events surrounding the replacement of radiation monitors and associated control room instrument cabinets as a condition "outside the design basis of the plant." Because the event described herein pre-dates the condition reported in LER 2-1999-005, the corrective actions for that event would not have prevented this occurrence.