

March 28, 2008

U.S. Nuclear Regulatory Commission  
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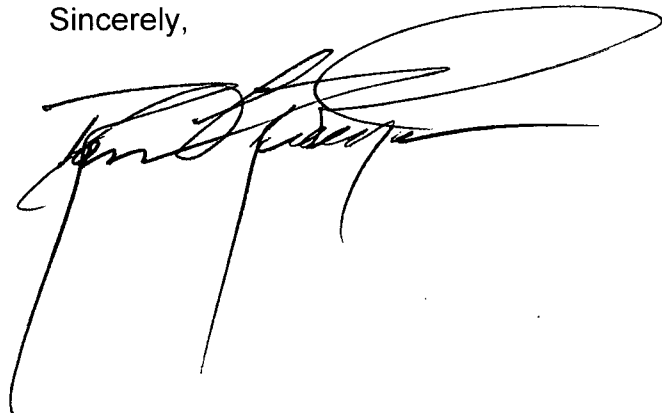
Subject: **Docket Nos. 50-361 and 50-562**  
**Licensee Event Report No. 2006-004**  
**San Onofre Nuclear Generating Station, Units 2 and 3**

Dear Sir or Madam:

In compliance with 10CFR50.73(a)(2)(i)(B), this submittal provides Licensee Event Report (LER) 2006-004 to report an entry into a Mode without all applicable Surveillances being current. Neither the health nor the safety of plant personnel or the public was affected by this occurrence.

If you require any additional information, please contact me.

Sincerely,



Units 2 and 3 LER No. 2006-004

cc: E. E. Collins, NRC Regional Administrator, Region IV  
C. C. Osterholtz, NRC Senior Resident Inspector, San Onofre Units 2 & 3

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NRR

**LICENSEE EVENT REPORT (LER)**  
 (See reverse for required number of digits/characters for each block)

<b>1. FACILITY NAME</b> San Onofre Nuclear Generating Station Unit 2	<b>2. DOCKET NUMBER</b> 05000361	<b>3. PAGE</b> 1 OF 4
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**4. TITLE**  
Late surveillances on Loss of Voltage Relays results in SR 3.0.4 violation

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
03	24	2006	2006	004-00		03	28	2008	San Onofre Unit 3	05000362
									FACILITY NAME	DOCKET NUMBER

<b>9. OPERATING MODE</b> 4	<b>10. POWER LEVEL</b> n/a	<b>11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR '': (Check all that apply)</b>			
		20.2201(b)	20.2203(a)(3)(ii)	50.73(a)(2)(ii)(B)	50.73(a)(2)(ix)(A)
		20.2201(d)	20.2203(a)(4)	50.73(a)(2)(iii)	50.73(a)(2)(x)
		20.2203(a)(1)	50.36(c)(1)(i)(A)	50.73(a)(2)(iv)(A)	73.71(a)(4)
		20.2203(a)(2)(i)	50.36(c)(1)(ii)(A)	50.73(a)(2)(v)(A)	73.71(a)(5)
		20.2203(a)(2)(ii)	50.36(c)(2)	50.73(a)(2)(v)(B)	<b>OTHER</b> Specify in Abstract below or in NRC Form 366A
		20.2203(a)(2)(iii)	50.46(a)(3)(ii)	50.73(a)(2)(v)(C)	
		20.2203(a)(2)(iv)	50.73(a)(2)(i)(A)	50.73(a)(2)(v)(D)	
		20.2203(a)(2)(v)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	50.73(a)(2)(vii)	
		20.2203(a)(2)(vi)	50.73(a)(2)(i)(C)	50.73(a)(2)(viii)(A)	
		20.2203(a)(3)(i)	50.73(a)(2)(ii)(A)	50.73(a)(2)(viii)(B)	

**12. LICENSEE CONTACT FOR THIS LER**

<b>NAME</b> Ross Ridenoure, VP and Site Manager	<b>TELEPHONE NUMBER (Include Area Code)</b> 949-368-6255
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**13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT**

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

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

On 1/29/2008, Southern California Edison (SCE) discovered Loss of Voltage (LOVS) undervoltage relays and sequenced load relays on San Onofre Nuclear Generating Station (SONGS) Units 2 and 3 had not been tested per Surveillance Requirement (SR) 3.3.7.2, SR 3.3.7.3 and SR 3.8.1.18 within the required Frequency. This resulted from a change in the process used to schedule and track the completion of the LOVS relays surveillances. In 2000, SCE changed from refueling outage testing to on-line testing. The revised testing program for scheduling and tracking inadvertently allowed some individual components to exceed the SR Frequency.

SCE reviewed the three year period preceding the discovery date, 1/29/2005 through 1/29/2008. On 3/24/2006, SONGS Unit 2 changed Mode without current SRs on the LOVS sequential loading relays. The on-line surveillance tracking program was common to both Units 2 and 3. Consequently, similar mode changes were made on both units over the same period ending on 1/29/2008. SR 3.0.4 prohibits entry into a Mode without the applicable SRs having been met within their specified Frequency. SCE is reporting this occurrence in compliance with 10 CFR 73(a)(2)(i)(B).

The program has been modified and all missed relay surveillances have been completed with all response times within limits designated by TS.

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Plant: San Onofre Nuclear Generating Station (SONGS) Units 2 & 3  
 Event Date: March 24, 2006  
 Reactor Vendor: Combustion Engineering  
 Mode: Mode 4- Hot Shutdown  
 Power: n/a

**Background**

San Onofre Unit 2 4kV class 1E buses [EB] are protected from loss of their supply power by undervoltage relays that generate a Loss of Voltage Signal (LOVS) for complete loss of voltage. The LOVS in conjunction with a Safety Injection Actuation Signal (SIAS) will transfer the 1E bus to the standby power source, the Emergency Diesel Generator (EDG)[EK]. LOVS without SIAS will transfer the 1E bus to the alternate preferred power source, if available. If the alternate preferred power source is not available, it will transfer the 1E bus to the EDG. In compliance with Surveillance Requirement (SR) 3.3.7.2 and SR 3.3.7.3, the LOVS undervoltage relays are to be calibrated and tested every 24 months.

The LOVS Time Delay Auxiliary relays sequentially load the safety related equipment to the 1E bus to prevent sudden loading of the EDG. Surveillance Requirement (SR) 3.8.1.18 requires verifying the timing of these sequenced load relays every 24 months.

The Engineered Safety Feature (ESF) Relays must be tested to verify Response Times under a similar program every 24 months on a Staggered Basis in compliance with SR 3.3.5.6.

**Description of Event**

On January 29, 2008, (discovery date), Southern California Edison (SCE) recognized that approximately 13 LOVS undervoltage relays and sequenced load relays had not been tested within their specified Frequency. SR 3.3.7.2, SR 3.3.7.3 and SR 3.8.1.18 prescribe an interval of 24 months (30 months with the 25 percent extension allowed by SR 3.0.2)

SCE determined this resulted from a change in the process used to schedule and track the completion of the LOVS relays surveillances. Prior to 2000, the undervoltage relays and the sequenced load relays were tested as a group during refueling outages, complying with the 24 month frequency. In 2000, the program was revised to test on-line. The individual component relay tests were distributed throughout the entire two year period ending 2002, ensuring the relays tested in the 2000 refueling outage were retested by 2002.

The on-line testing program was repeated during subsequent surveillance intervals (2002 to 2004 interval, 2004 to 2006 interval and the 2006 to 2008 interval). This program did not individually track the component relays. Consequently, this method of scheduling and tracking inadvertently allowed some individual components to exceed the specified SR Frequency.

SCE also identified that the Engineered Safety Feature (ESF) Relays had not been tested in the required Frequency due to a similar scheduling deficiency.

Surveillance Requirement 3.0.4 prohibits entry into a Mode of a Limiting Condition for

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operation (LCO) Applicability unless the LCO Surveillances have been met within their specified Frequency. To determine compliance of SR 3.0.4, SCE reviewed the three year period preceding the discovery date, January 29, 2005 through January 29, 2008, as required in 10 CFR 50.73(a)(1). SCE discovered that on March 24, 2006 (event date), SONGS Unit 2 entered Mode 4 from Mode 5. LCO 3.8.1 is Applicable in Modes 1, 2, 3 and 4. At that time, four of the LOVS timing relays for the sequential loading had not been verified in accordance with SR 3.8.1.18. SCE is reporting this in compliance with 10 CFR 73(a)(2)(i)(B).

The on-line surveillance tracking program for the LOVS relays and ESF relays was common to both Units 2 and 3. Consequently, similar mode changes were made on both units over the same period ending on January 29, 2008 (discovery date).

### Cause of the Event

This event occurred due to an inadequate assessment of program impacts when moving from outage to on-line surveillance testing. The implementation plan did not have the formality and rigor that would have led to the inclusion of a review by personnel cognizant of surveillance scheduling prior to implementation.

### Corrective Actions

Completed corrective actions are:

- 1) In accordance with SR 3.0.3, SCE completed a risk evaluation that allowed up to 146 days to complete the applicable SRs for the LOVS timing relays.
- 2) On March 10, 2008, SCE completed testing of those LOVS relays that had exceeded 30 months (24 month frequency and the SR 3.0.2 allowed extension period).
- 3) SCE verified that the ESF relays are currently within their specified Frequency.

Planned corrective actions are:

- 4) Cancel the existing Repetitive Maintenance Orders (RMO) used for "master tracking" of the LOVS and ESF relay surveillance testing and create RMOs for each individual relay.
- 5) Review current change management initiatives and reinforce expectations related to the importance of applying rigor and formality to those initiatives as outlined in SONGS procedure, "Change Management Guideline."

### Safety Significance

All missed LOVS and ESF relay surveillance have been completed with all response times within limits designated by TS. Therefore, the relays remained capable of performing their intended safety function. Consequently, there was no safety significance to this event.

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**Additional Information**

Over the last three years, SCE has not reported any other similar incidents of late surveillances due to an inadequate program for scheduling and tracking.