

September 27, 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. 2000-010
San Onofre Nuclear Generating Station, Unit 2 & 3

Gentlemen:

This submittal provides a 30-day Licensee Event Report (LER) in accordance with 10CFR50.73(a)(2)(i) describing a condition which potentially affected the seismic qualification of the Control Room Emergency Cleanup System (CREACUS). CREACUS is a shared system between Units 2 and 3. Consequently, a single report for Unit 2 is being submitted in accordance with 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. 2000-010

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

NRC FORM 366 U.S. NUCLEAR REGULATORY COMMISSION (MMM-YYYY) LICENSEE EVENT REPORT (LER) (See reverse for required number of digits/characters for each block)	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, information collection.
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FACILITY NAME (1) San Onofre Nuclear Generating Station (SONGS) Unit 2	Docket Number (2) 05000-361	Page (3) 1 of 4
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TITLE (4): Control Room Emergency Cleanup System Not Seismically Qualified

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
09	01	2000	2000	-- 010	-- 00	09	27	2000	SONGS 3	05000-362
									FACILITY NAME	DOCKET NUMBER

OPERATING MODE	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check One or More) (11)								
POWER LEVEL (10)	100	20.2201(b)	20.2203(a)(2)(v)	<input checked="" type="checkbox"/>	50.73(a)(2)(i)	50.73(a)(2)(viii)				
		20.2203(a)(1)	20.2203(a)(3)(i)		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 Generation	TELEPHONE NUMBER (Include Area Code) 949-368-6255

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)		
Yes (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

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

On 8/31/2000, workers discovered a cracked weld where the electrical power supply conduit coupling is attached to the sheet metal junction box for the CREACUS Train B recirculation fan. On 9/1/2000, Southern California Edison (SCE) determined the cracked weld might fail during a Design Basis Earthquake (DBE), and cause the fan unit to fail by cutting or shorting the wiring. SCE could not determine when the weld failed, but it is likely CREACUS Train B was inoperable (not seismically qualified) longer than the 7-day out-of-service time allowed by TS 3.7.11. Consequently, SCE is providing this report in accordance with 10CFR50.73(a)(2)(i).

Due to the passage of time, SCE did not identify the cause of the cracked weld. CREACUS Train A was inspected for similar weld defects. None were found. The inadequate weld on CREACUS Train B was repaired.

SCE evaluated the safety significance of this condition using site specific criteria, including IPEEE considerations. This condition would not have impacted the ability of the control room operators to take appropriate accident mitigation actions. SCE concludes that there is no increase in calculated Core Damage Frequency or Large Early Release Frequency. This occurrence is categorized "Green" using the latest draft of the Reactor Safety Significance Determination Process (SDP).

(4-95)

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Plant: San Onofre Nuclear Generating Station, Units 2 and 3
Discovery Date: September 1, 2000

	<u>Unit 2</u>	<u>Unit 3</u>
Reactor Vendor	Combustion Engineering	Combustion Engineering
Mode	1 - power operation	1 - power operation
Power (percent)	99.9	99.9

Background:

The Control Room Emergency Air Cleanup System (CREACUS) provides a protected environment from which operators can control the plant following an uncontrolled release of radioactivity or toxic gas. CREACUS consists of two independent, redundant trains (Train A and Train B) that recirculate and filter control room air. However, a single train will pressurize the control room to at least 1/8 inch water gauge, and provides an air exchange rate in excess of 45% per hour. Redundant recirculation trains provide the required filtration should an excessive pressure drop develop across the other filter train. Each train consists of an emergency air conditioning unit, an emergency ventilation air supply unit, emergency isolation dampers, and cooling coils and two cabinet coolers per Unit. Each emergency air conditioning unit includes a prefilter, a high efficiency particulate air (HEPA) filter, an activated carbon adsorber section for removal of gaseous activity (principally iodine), and a fan.

CREACUS is designed to maintain the control room environment for 30 days of continuous occupancy after a Design Basis Accident (DBA) without exceeding a 5-rem whole-body dose. The worst case single active failure of a component of the CREACUS, assuming a loss of offsite power, does not impair the ability of the system to perform its design function. CREACUS satisfies Criterion 3 of the NRC Policy Statement, and is designed in accordance with Seismic Category I requirements.

There are two operational modes:

1. The emergency mode isolates and pressurizes the control room to protect operational personnel from radioactive exposure during any one of the postulated limiting faults discussed in UFSAR Chapter 15. Outside air is added to the air being recirculated from the control room. Pressurization of the control room prevents infiltration of unfiltered air from the surrounding areas of the building. Dose calculations only take credit for the HEPA filters and charcoal adsorbers of the emergency recirculation air conditioning unit. The emergency ventilation supply unit is credited only with contributing to the pressurization of the control room to 1/8 inch water gauge positive pressure (minimum) to prevent unfiltered in-leakage.
2. The isolation mode isolates the control room to protect operational personnel from toxic gasses and smoke. Analysis demonstrates that the toxicity limits are not exceeded in the control room following a toxic chemical release. The actions of the isolation mode are more restrictive, and will override the actions of the emergency mode of operation. However, toxic gas and radiation events are not considered to occur concurrently.

Technical Specification 3.7.11, Control Room Emergency Air Cleanup System (CREACUS), requires two trains of CREACUS to be operable:

1. In Modes 1, 2, 3, and 4 to limit operator exposure during and following a DBA.
2. In Modes 5 and 6, to cope with the release from a rupture of a waste gas tank.

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3. During movement of irradiated fuel assemblies to cope with the release from a fuel handling accident.

With one train inoperable, action must be taken to restore operable status within 7 days.

The toxic gas functions are controlled by Licensee Controlled Specification (LCS) 3.3.101, Toxic Gas Isolation Signal (TGIS). LCS 3.3.101 requires two trains of Toxic Gas Isolation (TGIS) to be operable in Modes 1 through 6. TGIS is designed to automatically terminate the supply of outside air to the control room and to initiate operation of the emergency HVAC system to minimize operator exposure, if a toxic hazard is detected. (Prior to SCE's implementation of its Technical Specification Improvement Program (TSIP) in August, 1996, TGIS was included with CREACUS in TS 3/4.7.5, Control Room Emergency Air Cleanup System.)

Description of the Event:

On August 31, 2000, while performing routine maintenance, workers (utility, non-licensed) discovered a cracked weld where the electrical power supply conduit coupling is attached to the sheet metal junction box for the CREACUS Train B recirculation fan (AR000801751). Upon further investigation, on September 1, 2000, SCE determined the cracked weld might fail during a Design Basis Earthquake (DBE), and cause the fan unit to fail by cutting or shorting the wiring. SCE could not determine when the weld failed, but it is likely CREACUS Train B was inoperable (not seismically qualified) longer than the 7-day out-of-service time allowed by TS 3.7.11. Consequently, SCE is providing this report in accordance with 10CFR50.73(a)(2)(i).

Cause of the Event:

Due to the passage of time, SCE did not identify the cause of the cracked weld, nor was it possible to determine whether the weld failed mechanically (e.g., someone stepping on the junction box) or from vibration induced fatigue.

Corrective Actions:

CREACUS Train A was inspected for similar weld defects. None were found. SCE also inspected other similar fan units, and determined those fans have molded junction boxes with no corresponding welded connections.

The inadequate weld on CREACUS Train B was repaired.

Safety Significance:

While CREACUS Train B may not have met the seismic design requirement, SCE believes CREACUS was capable of performing its intended safety function based on the following:

1. This condition would not have precluded control room personnel from performing their assumed safety functions. Only the control room recirculation air flow would have been affected. For seismic plus toxic gas events, TGIS would have been able to isolate the control room boundary. For seismic plus radiological events, CREACUS Train A would have been capable of pressurizing the envelop to minimize unfiltered in-leakage (except for periods when it was removed from service in accordance with the TS allowed outage time). In addition, self-contained breathing apparatus (SCBA) is provided for control room operators to minimize exposure to toxic gas and airborne radiation. Therefore, this condition did not result in a Safety System Functional Failure (SSFF).
2. SCE evaluated the safety significance of this condition using site specific criteria, including IPEEE considerations. This condition would not have impacted the ability of the control room operators to

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take appropriate accident mitigation actions. SCE concludes that there is no increase in calculated Core Damage Frequency or Large Early Release Frequency. This occurrence is categorized "Green" using the latest draft of the Reactor Safety Significance Determination Process (SDP).

Additional Information

In the past three years, SCE has submitted three other LERs on CREACUS:

1. LER 2-98-013, Rev. 1, "FSAR Assumptions Not Evaluated In The Control Room Post LOCA Dose Calculation Due To Personnel Error Placed Plant Outside its Design Basis"
2. LER 2-98-024, "Inadequate CREACUS Boundary Control During HVAC Component Maintenance"
3. LER 2-2000-003, "CREACUS Boundary Inleakage - Outside Design Basis"

Due to the types of errors and the times of their occurrence, corrective actions for these three LERs could not have prevented the condition identified in this report. There have been no LERs related to inadequate welding of electrical junction boxes causing components to be inoperable.