SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

R. W. Krieger
Vice President
Nuclear Generation

April 19, 1996

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

Subject: Docket No. 50-361
30-Day Report
Licensee Event Report No. 96-003
San Onofre Nuclear Generating Station, Unit 2

This submittal provides a voluntary 30-day written Licensee Event Report (LER) for an event involving a computer data entry error for Unit 2. Neither the health nor the safety of plant personnel or the public was affected by this occurrence.

If you require any additional information, please so advise.

Sincerely,

Enclosure: LER No. 96-003

cc: L. J. Callan, Regional Administrator, NRC Region IV
T. P. Gwynn, Director of Reactor Safety, Region IV
K. E. Perkins, Jr., Director, Walnut Creek Field Office, NRC Region IV
J. A. Sloan, USNRC Senior Resident Inspector, Units 2 and 3
M. B. Fields, NRC Project Manager, San Onofre Units 2 & 3
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LICENSEE EVENT REPORT (LER)

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

Title (4)

Computer Date Entry 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 2	1 2	9 6	9 6	0 0 3	0 0	0 4	1 9	9 6		0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)					
POWER LEVEL (10)	1 0 0	___ 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)	X Other (Specify in Abstract below and in text)		
//////////////////////		___ 20.405(a)(1)(iii)	___ 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)			

Voluntary Report

LICENSEE CONTACT FOR THIS LER (12)

Name	TELEPHONE NUMBER
R. W. Krieger, Vice President, Nuclear Generation	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	MANUFAC-TURER	REPORTABLE TO NPRDS	///////	CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS	///////
					///////						///////
					///////						///////

SUPPLEMENTAL REPORT EXPECTED (14)

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

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

On 02/12/96 at 1432, while returning the Unit 2 Core Operating Limit Supervisory System (COLSS) computer to service, a computer technician (utility maintenance personnel) erroneously entered 12/02/96 for the date. The error was discovered by Computer Engineering supervision while monitoring remote displays, and by Control Room operators while monitoring Control Room displays. At 1735 a Computer Engineering supervisor informed the Control Room operators of the date error. After discussion, the Control Room Supervisor declared COLSS inoperable.

Technical Specifications require action within 15 minutes when COLSS is not in service and operating limits are not being maintained. Operating limits were maintained during this event, although COLSS operated for about 155 minutes with an incorrect core burnup value. Edison is providing this voluntary report due to potential NRC and industry interest.

This event was caused by inattention to detail (cognitive personnel error). Further, the technician failed to observe and respond to an out-of-range COLSS display of time-out-of-service after entering the incorrect date.

The COLSS computer was restarted with the correct date, and returned to service at 1950. Management held a group meeting to remind computer technicians of expectations for attention to detail. Edison will enhance software and the operating procedure to reduce the likelihood of recurrence. Edison plans to make a hardware change such that the COLSS computers will retain the date and time when shut down.

DESCRIPTION OF THE EVENT:

Plant: San Onofre Nuclear Generating Station, Unit 2
Reactor Vendor: Combustion Engineering
Discovery Date: February 12, 1996
Mode: Mode 1, Power Operation
Power: 100%

The Core Operating Limit Supervisory System (COLSS) [ID][CPU] is a computer system which provides continuously updated indications to the Control Room operators during normal plant operation and provides alarms when operating limits are exceeded. Operators use the information to regulate appropriate plant parameters to maintain the reactor core within specified operating limits on: 1) departure from nucleate boiling ratio (DNBR), 2) peak linear heat rate, 3) azimuthal tilt, 4) licensed power, and 5) axial shape index (ASI). COLSS computes and uses core burnup to update incore nuclear instrument sensitivities and local fuel burnup data. Instrument sensitivity and local fuel burnup are used to calculate power distributions, which, in turn, are used to calculate the margins to the operating limits on DNBR and peak linear heat rate, and the values for azimuthal tilt and ASI (the "COLSS parameters").

On February 12, 1996, the Unit 2 COLSS was being returned to service after scheduled maintenance. The computer technician (utility maintenance personnel) who restarted the computer at 1432 erroneously entered 12/02/96 (instead of 02/12/96) for the date. COLSS was returned to service at 1500 containing the wrong date. The date error was discovered nearly simultaneously by Computer Engineering supervision while monitoring remote displays, and Control Room operators while monitoring Control Room displays. The Control Room operators noted that the displayed value of effective full power days was 546 instead of the approximately 253 expected. At 1735 a Computer Engineering supervisor informed the Unit 2 Control Room operators of the date error in COLSS. After discussion, the Control Room Supervisor declared COLSS inoperable due to the then-unknown effect of the erroneous core burnup. The COLSS backup computer system was placed in service.

Technical Specifications 3.2.1 and 3.2.4 require action to be taken within 15 minutes when COLSS is not in service and operating limits are not being maintained. Operating limits were maintained during this event, although COLSS operated for about 155 minutes with the incorrect core burnup value. Even though this event is not reportable in accordance with the criteria of 10CFR50.73, Edison is providing this voluntary report due to potential NRC and industry interest.

CAUSE OF THE EVENT:

This event was caused by inattention to detail on the part of the computer technician (cognitive personnel error). Further, the technician failed to observe and respond to an out-of-range COLSS display of time-out-of-service after entering the incorrect date.

CORRECTIVE ACTIONS:

The Unit 2 COLSS computer was restarted with the correct date, and returned to service at 1950 on 02/12/96. Management held a group meeting to remind computer technicians of expectations for attention to detail. Edison will enhance the software and the operating procedure for the COLSS computers to reduce the likelihood of recurrence. Edison plans to make a hardware change such that the COLSS computers will retain the date and time when shut down.

SAFETY SIGNIFICANCE OF THE EVENT:

Prior to calculating the COLSS parameters, the COLSS computer normalizes local power indication to the actual plant power level based on secondary calorimetric data. This

step allows COLSS to compensate for the normal, expected change in neutron flux as the fuel is depleted during operation. The normalized parameters are then used to calculate the COLSS parameters. Consequently, the majority of the effect of the incorrect date input was effectively removed by this data normalization step An evaluation completed by Edison concluded that the effect of the erroneous core burnup on the calculations COLSS makes for DNBR margin, linear heat rate margin, azimuthal tilt and ASI was very small and was most likely offset by the calculational conservatism inherent in COLSS. This evaluation was accomplished by reproducing the erroneous date entry in an off-line version of COLSS and analyzing the resulting calculations.

COLSS is identified in the Final Safety Analysis Report as not required for plant safety because it does not initiate any direct safety-related functions during anticipated operational occurrences or postulated accidents.

For the above reasons, Edison considers that COLSS was always capable of performing its function during this event, and that there was no safety significance to this event.

ADDITIONAL INFORMATION:

A similar event occurred on Unit 3 on January 18, 1996. In that event, the wrong year was entered, resulting in a 12 month increase in COLSS-computed core burnup. The Edison evaluation concluded that the potential errors in Unit 3 COLSS were also bounded by COLSS conservatisms. As this is the second error of this type on COLSS, Edison elected to voluntarily report the event in this LER and to take the aforementioned actions.