LICENSEE EVENT REPORT (LER)

Facility Name (1)	Docket Number (2)	Page (3)
SAN ONOFRE NUCLEAR GENERATING STATION (SONGS), Unit 2	0|5|0|0|0|3|6|1	1 of 0|4

Title (4)

Missed Technical Specification Surveillance Due to Lack of an Alarm

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)
											SONGS Unit 3	0|5|0|0|0|3|6|2
0|8	1|3	9|5	9|5	---	0|1|4	---	0|0	0|9	1|5	9|5		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)			
		___ 20.402(b)	___ 20.405(c)	___ 50.73(a)(2)(iv)	___ 73.71(b)
POWER LEVEL (10) 0|9|9		___ 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)	___ 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	
	AREA CODE	
R. W. Krieger, Vice President, Nuclear Generation	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) xx NO				

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

At 0450 on 8/13/95, operators (utility, licensed) started Unit 3 salt water cooling (SWC) pump 3P114 in accordance with the system operating instruction. Edison had recently modified the electrical system logic such that this action caused a breaker in the Unit 2 second source of offsite power to shift to MANUAL control. Edison conservatively considers the second source of offsite power inoperable when in MANUAL.

No audible alarm for the change in control status was provided. Therefore, the operators were not aware that Unit 2 had entered Technical Specification (TS) 3.8.1.1 Action a1. Thus, the required surveillance was not accomplished within one hour. Edison is reporting this event in accordance with 10CFR50.73(a)(2)(i).

This event occurred because the original plant design did not provide an alarm.

Control of the breaker was returned to AUTOMATIC at 1410 on 8/13/95. Edison has installed audible and visual control room alarms to annunciate whenever a bus crosstie breaker is in MANUAL. The alarm response procedure and the SWC pump operating instruction were updated. Edison will review the TS for other instances where a change in equipment operability would place a Unit in a one hour action statement and verify that appropriate alarms are provided.

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DESCRIPTION OF THE EVENT

Plant: San Onofre Nuclear Generating Station (SONGS), Units 2 & 3
Reactor Vendor: Combustion Engineering
Discovery Date: August 13, 1995
Unit 2:   Mode 1, 99% power
Unit 3:   defueled

On 8/13/95, SONGS Unit 3 was in a refueling outage with the its outfall structure [NN] de-watered for maintenance. Operators were preparing to start salt water cooling (SWC) pump 3P114 [BI][P] following outage maintenance. Because the normal SWC discharge path would reflood the outfall, normal SWC system discharge valve 3HV6495 was closed, with discharge directed to the beach.

The start circuit for SWC pumps is interlocked with the normal system discharge valve to prevent pump start with the valve closed; thus, the procedure provides methods to start a SWC pump when aligned to the beach discharge. The preferred method is to actuate a safety injection actuation signal (SIAS) [JE] subgroup relay (i.e., K-103B) [RLY] which bypasses the interlock. At 0450, operators (utility, licensed) started pump 3P114 by the preferred method - actuating SIAS subgroup relay K-103B.

During this outage, Edison had modified the electrical system logic to enhance plant safety in the event a SIAS occurs during degraded grid voltage conditions. Because all offsite sources would be similarly affected, the modified logic now transfers each 4.16 KV engineered safety feature bus [EB] directly to its emergency diesel generator (EDG) [EK] under these conditions. This is accomplished, in part, by using SIAS subgroup relays, such as K-103B, to cause the Unit crosstie breakers to shift from AUTOMATIC to MANUAL control. This would prevent automatic closure of the crosstie breakers, and thus facilitates the EDG connecting to the bus. (See Figure 1.) The change in crosstie breaker status to MANUAL was not alarmed. Consequently, when operators actuated relay K-103B to start pump 3P114, the control of breaker 3A0603, the second source of offsite power to Unit 2, shifted to MANUAL silently, with only a change in a status light. Edison conservatively considers the second source of offsite power inoperable when its control is in MANUAL.

The absence of an audible or visual flashing alarm for the change in breaker control status was the principal cause for the operators not being aware that the long standing, preferred alternate method for starting the SWC pump now caused entery into Technical Specification (TS) 3.8.1.1 Action a1; thus, the required surveillance was not accomplished within one hour. Edison is reporting this event in accordance with 10CFR50.73(a)(2)(i).

CAUSE OF THE EVENT

This event occurred because the original plant design did not meet Edison's current design philosophy that would include an alarm for a change in equipment status that placed the Unit in a one hour action statement when such an alarm is feasible. This original design weakness was revealed by the improvement to the plant's degraded grid voltage design accomplished this outage.

CORRECTIVE ACTIONS

Control of the breaker was returned to AUTOMATIC at 1410 on 8/13/95. Edison has installed audible and visual control room alarms to annunciate whenever a bus crosstie breaker is in MANUAL. The alarm response procedure and the SWC pump operating instruction were updated. Edison will review the TS for other instances where a change in equipment operability would place a Unit in a one hour action statement and verify that appropriate alarms are provided.

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OPERATOR RESPONSE TO THE EVENT

At 0450 on 8/13/95, operators started pump 3P114 by the preferred method – actuating SIAS subgroup relay K-103B – silently transferring crosstie breaker 3A0603 to MANUAL. At 0930, the Shutdown Nuclear Safety Coordinator (utility, non-licensed) observed the breaker in MANUAL during a routine control board walkdown. The CRS (utility, licensed) was informed but did not recognize that Unit 2 was in a one hour TS action statement. At 1410, the Shift Superintendent (utility, licensed) was informed, immediately recognized that the Unit was in an action statement, and directed the CRS to place the breaker in AUTOMATIC. The response to this event was delayed because the CRS did not recognize the second source of offsite power was inoperable (cognitive error). This event was reviewed with licensed plant operators. The CRS involved was appropriately disciplined.

SAFETY SIGNIFICANCE OF THE EVENT

One offsite circuit was available and was providing power to Unit 2. The second offsite circuit was available and operators could have manually closed it in sufficient time to assure fuel and reactor pressure boundary design conditions were not exceeded. Breaker control for the second source of offsite power does not need to be in AUTOMATIC for mitigating the consequences of a SIAS event. Therefore, this event had no safety significance.

ADDITION INFORMATION

In the past three years, Edison has not submitted any other LERs regarding the availability of offsite power sources.

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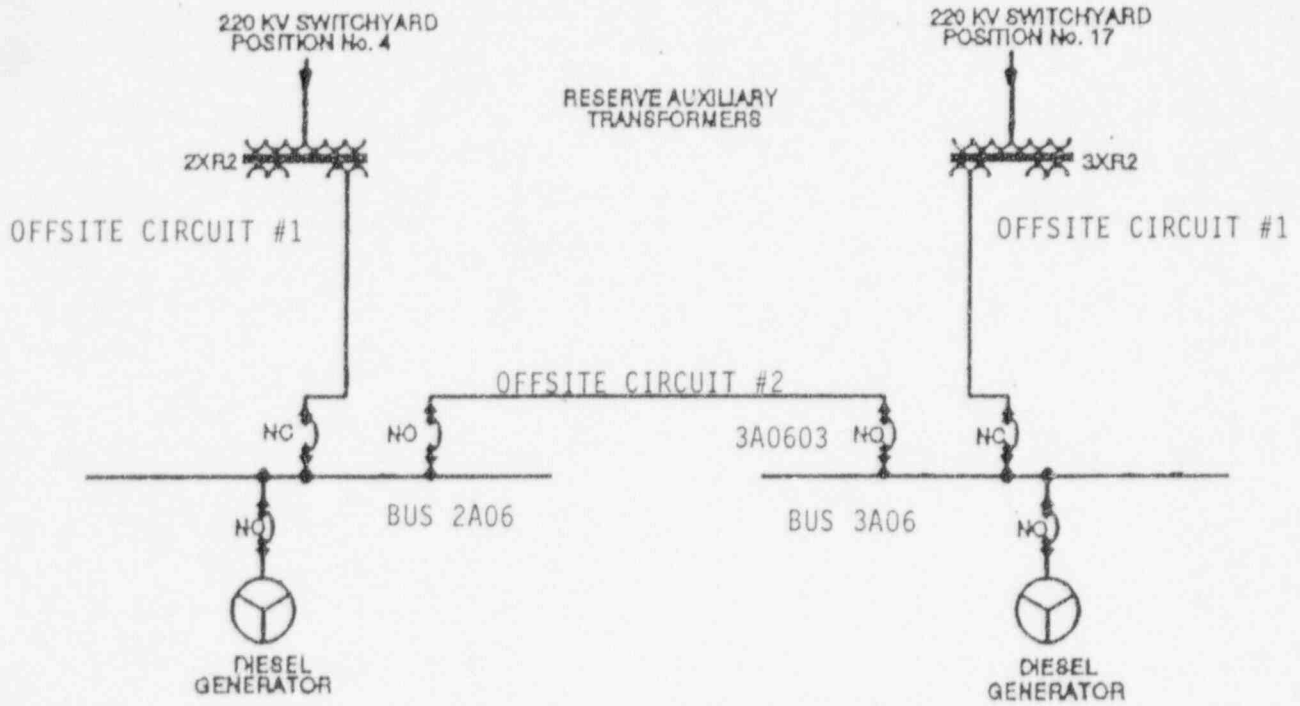
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UNIT 2　　　　　　　　　　　　　　　　　UNIT 3

220 KV SWITCHYARD
POSITION No. 4

RESERVE AUXILIARY
TRANSFORMERS

220 KV SWITCHYARD
POSITION No. 17

2XR2　　　　　　　　　　　　　　　　　　　　　　3XR2

OFFSITE CIRCUIT #1　　　　　　　　　　　OFFSITE CIRCUIT #1

OFFSITE CIRCUIT #2

NC　　NO　　　　　　　3A0603　NO　　NC

BUS 2A06　　　　　　　　BUS 3A06

NO　　　　　　　　　　　　　　　　　　　　NO

DIESEL
GENERATOR

DIESEL
GENERATOR

NO = normally open
NC = normally closed

Figure 1