TUELECTRIC

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July 22, 1997

C. Lance Terry
Group Vice President

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NOS. 50-445 AND 50-446
OPERATION OR CONDITION PROHIBITED BY TECHNICAL SPECIFICATIONS
LICENSEE EVENT REPORT 445/97-004-00

Enclosed is Licensee Event Report (LER) 97-004-00 for Comanche Peak Steam Electric Station Units 1 and 2, "Technical Specification Surveillance Associated With Solid State Protection System P-11 Permissive Logic Not Adequately Performed."

Sincerely,

C. L. Terry

By: Roger D. Walker
Roger D. Walker
Regulatory Affairs Manager

GLM:glm
Enclosure

cc: Mr. E. W. Merschoff, Region IV
Mr. J. I. Tapia, Region IV
Resident Inspectors, CPSES

IE22 1/1

Enclosure to TXX- 97164

NRC FORM 366 (4-95) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 4/30/98

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 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.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

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Title (4)

TECHNICAL SPECIFICATION SURVEILLANCE ASSOCIATED WITH SOLID STATE PROTECTION SYSTEM P-11 PERMISSIVE LOGIC NOT ADEQUATELY PERFORMED

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 Numbers
06	24	97	97	004	00	07	22	97	CPSES UNIT 2	05000446
									N/A	05000

Operating Mode (9)	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)	X 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	Telephone Number (Include Area Code)
STEVE L. ELLIS - I & C MANAGER	(254)897-8422

Complete One Line For Each Component Failure Described in This Report (13)

Cause	System	Component	Manufacturer	Reportable To NPRDS		Cause	System	Component	Manufacturer	Reportable To NPRDS
				N						

Supplemental Report Expected (14)			Month	Day	Year
YES (If yes, completed EXPECTED SUBMISSION DATE)	X	NO	EXPECTED SUBMISSION DATE (15)		

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

On June 24, 1997, at approximately 11:00 a.m., during a review of surveillance procedures involving testing of safety-related logic circuits, it was determined that plant surveillance procedures did not adequately test, on a quarterly basis, the Solid State Protection System (SSPS) P-11 input relays during Analog Channel Operational Tests (ACOTs). The cause of this condition is attributed to an incorrect previous interpretation of the Licensing Basis requirements related to testing for the SSPS P-11 input relays. Corrective actions taken include declaring the P-11 interlock inoperable, revising procedures to perform the quarterly surveillances, and performing all of the SSPS P-11 quarterly surveillances required by the Technical Specifications.

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I. DESCRIPTION OF THE REPORTABLE EVENT

A. REPORTABLE EVENT CLASSIFICATION

Any operation or condition prohibited by the plant's Technical Specifications.

B. PLANT OPERATING CONDITIONS PRIOR TO THE EVENTS

On June 24, 1997 at approximately 11:00 a.m., Comanche Peak Steam Electric Station (CPSES) Units 1 and 2 were both in Mode 1, Power Operation, at approximately 100% power.

C. STATUS OF STRUCTURES, SYSTEMS, OR COMPONENTS THAT WERE INOPERABLE AT THE START OF THE EVENT AND THAT CONTRIBUTED TO THE EVENT

Not applicable - No structures, systems, or components were inoperable that contributed to the identified condition.

D. NARRATIVE SUMMARY OF THE EVENT, INCLUDING DATES AND APPROXIMATE TIMES

On June 24, 1997 at approximately 11:00 a.m., during a review of surveillance procedures involving testing of safety-related logic circuits conducted in accordance with NRC Generic Letter 96-01 and during review of Operating Experience reports which describe incomplete quarterly surveillance testing of Solid State Protection System (SSPS) (EIIS:(JG)) P-11 permissive logic, I&C personnel (utility, non-licensed) determined that plant surveillance procedures had not adequately tested, on a quarterly basis, the SSPS P-11 input relays (EIIS:(RLY)(JG)) during Analog Channel Operational Tests (ACOTs). The P-11 interlock (EIIS:(IEL)(JG)) (1960 psig pressurizer pressure setpoint) permits a normal unit cooldown and depressurization without actuation of Safety Injection (SI) or Main Steam (MS) line isolation by permitting a manual block of these signals. Above the P-11 setpoint, Pressurizer Pressure-Low SI and Steamline Pressure-Low SI are automatically enabled.

Bypass testing design modifications of the SSPS were implemented at CPSES during the fifth refueling outage for Unit 1 (November 25, 1996) and during the second refueling outage for Unit 2 (May 30,

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1996). With the bypass testing configuration, it was initially determined that the SSPS design and surveillance tests adequately addressed the Technical Specification surveillance requirements for the SSPS P-11 input relays and that only ACOT performances prior to the design modifications were inadequate. However, on July 16, 1997, at approximately 3:30 p.m., it was discovered that current SSPS ACOTs did not adequately address Technical Specification surveillance requirements. Specifically, it was discovered that the Trip Status Light Box windows for P-11 were not being verified in the OFF condition, which is the positive indication of the SSPS input relay functioning. Immediate corrective actions taken included declaring the Engineered Safety Features Actuation System (ESFAS) interlock P-11 on both Units 1 and 2 inoperable on July 16, 1997 at approximately 3:30 p.m.. Interlock P-11 operability was restored for both Units 1 and 2 on July 18, 1997, at approximately 6:00 p.m. by performing the revised ACOT procedures.

The I&C test procedures for the ACOT did not adequately verify overlap from the 7300 channel test card through the SSPS P-11 input relays. This was due to these loops being de-energized at power (above the P-11 setpoint). In this configuration, tripping and/or restoring the instrument loop produced no change of state of the input relay and thus no indication of change on the trip status panel (EIIS:(PL)). Without a change in this indication, positive indication of the input relay operation could not be verified. Revised procedures associated with the bypass testing design modification did exercise the input relay, but did not contain a positive verification of the relay operation.

The ACOT surveillance procedures included verification that the P-11 interlocks were in the required state for the existing plant conditions which is equivalent to Technical Specification 3.3.2, Table 3.3-2, Item 10.a, Action 18. In addition, plant procedures also verified that P-11 properly transitioned to the correct state during plant shutdowns and plant startups.

E. THE METHOD OF DISCOVERY OF EACH COMPONENT OR SYSTEM FAILURE OR PROCEDURAL ERROR

I&C personnel (utility, non-licensed) discovered the period of missed surveillances during a review of surveillance procedures

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involving testing of safety-related logic circuits conducted in accordance with NRC Generic Letter 96-01 and during review of operating experience reports which describe incomplete quarterly surveillance testing of SSPS P-11 permissive logic.

II. ANALYSIS OF THE EVENT

A. SAFETY SYSTEM RESPONSES THAT OCCURRED

Not Applicable - No safety systems responded.

B. DURATION OF SAFETY SYSTEM TRAIN INOPERABILITY

Engineered Safety Features Actuation System (ESFAS) interlock P-11 for both Units 1 and 2 was declared inoperable from July 16, 1997 at approximately 3:30 p.m. to July 18, 1997 at approximately 6:00 p.m.. Because the quarterly surveillance testing of SSPS P-11 permissive logic has never been adequately performed, the P-11 interlock for both Units has been technically inoperable since initial entry into Mode 3 on Units 1 and 2. However, TU Electric believes that the P-11 interlock would have performed its intended safety function during the period of inoperability as discussed in paragraph II.C below.

C. SAFETY CONSEQUENCES AND IMPLICATIONS OF THE EVENT

The identified condition is similar to those examples presented in Generic Letter 96-01 where surveillance testing of the logic circuit was incomplete. In this case, a small portion of the circuit was omitted. The ACOT surveillance procedures in effect during this time period did include verification that the P-11 interlocks were in the required state for the existing plant condition which is equivalent to Technical Specification 3.3.2 Table 3.3-2, Item 10.a, Action 18. In addition, plant procedures also verified that P-11 properly transitioned to the correct state during plant shutdowns and plant startups. Therefore, based on the above considerations, this event did not adversely affect the safety of plant operations or the health and safety of the public.

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III. CAUSE OF THE EVENT

The cause of this condition is attributed to an incorrect previous interpretation of the Licensing Basis requirements related to testing for the SSPS P-11 input relays. The design of these relays, at the time the initial surveillance procedures were developed, did not allow for testing of the relays while the plant was in power operation. Based on this design configuration, and the interpretation at that time of the FSAR testing description, it was not recognized that the strict definition of the Technical Specification ACOT requirement included operation and verification of the SSPS input relays.

IV. CORRECTIVE ACTIONS

Upon discovering that the Trip Status Light Box windows for P-11 were not being verified in the OFF condition, the Engineered Safety Features Actuation System (ESFAS) interlock P-11 for both Units 1 and 2 was declared inoperable on July 16, 1997 at 3:30 p.m.. Interlock P-11 operability was restored for both Units 1 and 2 on July 18, 1997 at approximately 6:00 p.m.. Procedure revisions to perform the quarterly surveillances have been issued and all of the required Technical Specification quarterly surveillances have been performed. Reviews of surveillance procedures which involve testing of safety-related logic circuits are continuing in accordance with NRC Generic Letter 96-01. These reviews provide additional assurance that any similar conditions will be identified.

V. PREVIOUS SIMILAR EVENTS

Including both units, there have been four other missed surveillance events during the previous two years. However, TU Electric has reviewed these previous events and has concluded that they are sufficiently different from this event. TU Electric believes that the corrective actions for the previous events have been generally effective and are not related to this event.