



Log # TXX-96122
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Ref. # 10CFR50.73(a)(2)(iv)

April 22, 1996

C. Lance Terry
Group Vice President

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NOS. 50-445 AND 50-446
ACTUATION OF REACTOR PROTECTION SYSTEM
LICENSEE EVENT REPORT 446/96-004-00

Gentlemen:

Enclosed is Licensee Event Report (LER) 96-004-00 for Comanche Peak Steam Electric Station Unit 2. "Opening of a Fuse Drawer Caused Unit 2 Blackout Sequencer Actuation."

Sincerely,

A handwritten signature in cursive script, appearing to read "C. L. Terry".

C. L. Terry

OB:ob
Enclosure

cc: Mr. L. J. Callan, Region IV
Mr. W. D. Johnson, Region IV
Resident Inspectors, CPSES

9604290345 960422
PDR ADOCK 05000446
S PDR

290102

Handwritten initials, possibly "LE" or "LL", with a vertical line through them.

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

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THE 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 (7-6 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.

Facility Name (1)

COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2

Docket Number (2)

05000446

Page (3)

1 OF 5

Title (4)

OPENING OF A FUSE DRAWER CAUSED UNIT 2 BLACKOUT SEQUENCER ACTUATION

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
									CPSES UNIT 1	0 5 0 0 0 4 4 5
0	3	2 8 9 6	9 6	- 0 0 4	- 0 0	0	4	2 2 9 6	N/A	0 5 0 0 0

Operating Mode (9)		6		This report is submitted pursuant to the requirements of 10 CFR 5. (Check one or more) (11)									
Power Level (10)	0	20.2201 (b)		20.2203 (a) (2) (v)		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)	X	50.73 (a) (2) (iv)		OTHER					
		20.2203 (a) (2) (iii)		50.36 (c) (1)		50.73 (a) (2) (v)		Specify in Abstract below					
		20.2203 (a) (2) (iv)		50.36 (c) (2)		50.73 (a) (2) (vii)		or in NRC Form 366A					

Licensee Contact For This LER (12)

Name: _____

David C. Kross - Operations Support Manager

Telephone Number (include Area Code)

(817)897-8603

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

Cause	System	Component	Manufacturer	Reportable To NPRDS
				N

Supplemental Report Expected (14)

YES
(If yes, completed EXPECTED SUBMISSION DATE)

X	NO
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EXPECTED
SUBMISSION
DATE (15)

Month	Day	Year

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

On March 28, 1996 at approximately 5:30 a.m., during the restoration of potential transformer fuses, Electrical Maintenance personnel inadvertently opened an energized fuse drawer. This caused an undervoltage signal to be sent to the Blackout Sequencer which started Train A Emergency Diesel Generator, and placed the control room HVAC in emergency recirculation lineup.

The cause of the event was deemed to be a personnel error, where self verification techniques among the crews performing the fuse restoration was less than adequate. Corrective actions were to reset the Blackout sequencer and return the Emergency Diesel Generator to an auto start status. Additionally, TU Electric has established a task team to investigate personnel errors with respect to this event, and provide recommendations regarding self verification and communications among crews.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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COMANCHE PEAK STEAM ELECTRIC STATION UNIT 2	05000446	Year		Sequential Number		Revision Number					
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Text (if more space is required, use additional copies of NRC Form 366A) (17)

I. DESCRIPTION OF THE REPORTABLE EVENT

A. REPORTABLE EVENT CLASSIFICATION

Any event or condition that resulted in a manual or automatic actuation of an Engineered Safety Feature (ESF)(EIIS:(JG)).

B. PLANT OPERATING CONDITIONS PRIOR TO THE EVENT

On March 28, 1996, prior to the event, Comanche Peak Steam Electric Station Unit 2 was in Mode 6, Refueling.

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

There were no inoperable structures, systems, or components that contributed to the event.

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

On March 28, 1996, at approximately 5:30 a.m., CST with Unit 2 in Mode 6, Refueling, Electrical Maintenance personnel (utility, non-licensed) were restoring Potential Transformer (PT) fuses (EIIS:(FU)(FD)) for the Startup Transformer (XST1) (EIIS:(XMER)(EB)) on Electrical Bus 2EA1 (train A). The Electrical Maintenance personnel inadvertently opened the Startup Transformer (XST2) (EIIS:(XMER)(EB)) fuse drawer. When the XST2 PT fuse drawer was opened, the bus sensed an undervoltage condition and caused the Train A Blackout Sequencer (BOS) (EIIS:(34)(EA)) to actuate.

The BOS resulted in the following equipment actuation:

Train A Emergency Diesel Generator auto started
Train A Control Room HVAC shifted to emergency recirculation

An event or condition that results in an automatic actuation of any ESF, including the RPS, is reportable within 4 hours pursuant to the requirements of 10CFR50.72(b)(2)(ii). At approximately 6:36 a.m., on March 28, 1996, the Nuclear Regulatory Commission Operations Center was notified of the event via Emergency Notification System.

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

Alarms in the control room indicated that the Train A Control Room HVAC shifted to emergency recirculation and Train A Emergency Diesel Generator started.

II. COMPONENT OR SYSTEM FAILURES

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Text (if more space is required, use additional copies of NRC Form 366A) (17)

III. ANALYSIS OF THE EVENT

A. SAFETY SYSTEM RESPONSES THAT OCCURRED

The appropriate safety systems actuated automatically as a result of the event. Components operated as designed upon receipt of the Blackout Sequencer signal.

The BOS resulted in the following equipment actuation:

Train A Emergency Diesel Generator auto started
Train A Control Room HVAC shifted to emergency recirculation

B. DURATION OF SAFETY SYSTEM TRAIN INOPERABILITY

Not applicable - no safety system trains were declared inoperable.

C. SAFETY CONSEQUENCES AND IMPLICATIONS OF THE EVENT

Operability of the Engineered Safety Features Actuation System (ESF) (EIIS:(JE)) is required to provide the overall reliability, redundancy, and diversity assumed available in the facility design, for the protection and mitigation of accident and transient conditions. The blackout sequencer (BOS) functions to reload the associated 6.9kv safeguards bus in a pre-established sequence following an undervoltage condition on the bus after the bus has been re-energized from the alternate power source or the emergency diesel generator. During the actuation occurring on March 28, 1996, no actual loss of power occurred and all components functioned as described in the FSAR, providing assurance that if the event had occurred at a more severe set of initial conditions, a source of power would have been available to all required safety systems.

On the basis that: (1) the BOS was not required to mitigate the consequences of an actual loss of power, and (2) all components operated as designed, the BOS actuation posed no threat to the health and safety of the public.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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Text (if more space is required, use additional copies of NRC Form 365A) (17)

IV. CAUSE OF THE EVENT

The subject event was caused due to inadvertent opening of the fuse drawer. TU Electric has concluded that self verification, direction and communication among the crews performing the fuse restoration was less than adequate, which resulted in opening an energized fuse drawer and subsequent BOS actuation.

V. CORRECTIVE ACTION

Immediate actions were to reset Train A BOS and return Emergency Diesel Generator to auto start status. TU Electric has established a task team to investigate the event with respect to personnel errors, and to develop and provide recommendations to minimize such errors.

VI. PREVIOUS SIMILAR EVENTS

There have been other CPSES Licensee Event Reports involving the BOS actuation. However, details/causes of the previously reported events are sufficiently different from the event described in this LER such that the previous corrective actions could not have prevented this event.