



Log # TXX-92251  
 File # 10200  
 Ref. # 10CFR50.73(a)(2)(1)

**TU**ELECTRIC

June 8, 1992

**William J. Cahill, Jr.**  
 Group Vice President

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)  
 DOCKET NO. 50-445  
 CONDITION PROHIBITED BY TECHNICAL SPECIFICATIONS  
 LICENSEE EVENT REPORT 92-010-00

Gentlemen:

Enclosed is Licensee Event Report 92-010-00 for Comanche Peak Steam Electric Station Unit 1, "Violation of Technical Specifications Due to Personnel Error in Not Performing a Conditional Surveillance Prior to Reactor Startup".

Sincerely,

William J. Cahill, Jr.

JET/tg

c - Mr. R. D. Martin, Region IV  
 Resident Inspectors, CPSES (2)

100007

*Handwritten initials/signature*

NRC FORM 306		U.S. NUCLEAR REGULATORY COMMISSION		APPROVED OMB NO. 3150-0104 EXPIRES 4/30/92	
<b>LICENSEE EVENT REPORT (LER)</b>				ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.	
Facility Name (1) <b>COMANCHE PEAK-UNIT 1</b>			Docket Number (2) <b>05000445</b>		Page (3) <b>1 of 107</b>
Title (4) <b>VIOLATION OF TECHNICAL SPECIFICATIONS DUE TO PERSONNEL ERROR IN NOT PERFORMING A CONDITIONAL SURVEILLANCE PRIOR TO REACTOR STARTUP</b>					
Event Date (5)		LER Number (6)		Report Date (7)	
Day	Year	Year	Sequential Number	Revision Number	Month Day Year
09	92	92	010	010	06 08 92
Other Facilities Involved (8)		Facility Name		Docket Number	
N/A		N/A		050000	
This report is submitted pursuant to the requirements of 10 CFR § (Check one or more of the following): (11)					
<input type="checkbox"/> 20.402(b) <input type="checkbox"/> 20.405(a)(1)(i) <input type="checkbox"/> 20.405(a)(1)(ii) <input type="checkbox"/> 20.405(a)(1)(iii) <input type="checkbox"/> 20.405(a)(1)(iv)		<input type="checkbox"/> 20.405(c) <input type="checkbox"/> 50.36(c)(1) <input type="checkbox"/> 50.36(c)(2) <input checked="" type="checkbox"/> 50.73(a)(2)(i) <input type="checkbox"/> 50.73(a)(2)(ii)		<input type="checkbox"/> 50.73(a)(2)(iv) <input type="checkbox"/> 50.73(a)(2)(v) <input type="checkbox"/> 50.73(a)(2)(vi) <input type="checkbox"/> 50.73(a)(2)(vii)(A) <input type="checkbox"/> 50.73(a)(2)(vii)(B) <input type="checkbox"/> 50.73(a)(2)(ix)	
<input type="checkbox"/> 73.71(b) <input type="checkbox"/> 73.71(c)		<input type="checkbox"/> Other (Specify in Abstract below and in Text NRC Form 366A)			
Licensee Contact For The LER (12)					
Name <b>D. E. BUSCHBAUM, COMPLIANCE SUPERVISOR</b>				Area Code Telephone Number <b>817 897-5851</b>	
Complete One Line For Each Component Failure Described in This Report (13)					
Cause	System	Component	Manufacturer	Reportable To NPRDS	Reportable To NPRDS
				N	
Supplemental Report Expected (14)				Expected Submission Date (15)	
<input type="checkbox"/> Yes (If yes, specify Submission Date)				<input checked="" type="checkbox"/> No	
Abstract (Limit to 1,000 characters, approximately fifteen single-space typewritten lines) (16)					
<p>Technical Specifications requires an Analog Channel Operational Test (ACOT) be performed prior to each reactor startup to verify the power range neutron flux low setpoint of each power range nuclear instrument. The Instrumentation and Control (I&amp;C) surveillance coordinator incorrectly assumed that a quarterly surveillance, performed within the previous 31 days, satisfied the ACOT for the neutron flux low setpoint of one of the nuclear instruments. As a result, only three of four power range instruments were tested, and the Technical Specification requirement, as specified by section 4.0.4, was not met.</p> <p>Root causes were a lack of attention by the I&amp;C surveillance coordinator in that he did not adequately determine surveillance requirements prior to Unit 1 reactor startup and supervisory oversight was less than adequate in that the I&amp;C surveillance test coordinator had no second check. The appropriate action per the TU Electric Discipline Program was implemented for the individuals involved. A task team was formed to review the surveillance test process at Comanche Peak Steam Electric Station.</p>					

NRC FORM 366A U.S. NUCLEAR REGULATORY COMMISSION <b>LICENSEE EVENT REPORT (LER)                  TEXT CONTINUATION</b>		APPROVED OMB NO. 3150-0104 EXPIRES: 4/30/92 ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC, 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.			
Facility Name (1)	Docket Number (2)	LER Number (6)		Page (3)	
COMANCHE PEAK-UNIT 1	05000445	Year	Sequential Number	Revision Number	
		92	-010	-00	02 of 07

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

**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 EVENT**

On May 9, 1992, Comanche Peak Steam Electric Station (CPSES) Unit 1 was in Mode 3, Hot Standby, making preparations to startup the reactor after recovering from a reactor trip that occurred at 2309 on May 8, 1992 (reported in Licensee Event Report (LER) 92-009-00).

**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 TIMES**

CPSES Unit 1 experienced a reactor trip at 2309 on May 8, 1992. Technical Specification surveillance 4.3.1.1.2b requires an Analog Channel Operational Test (ACOT) be performed prior to each reactor startup to verify the power range neutron flux low setpoint. The surveillance is applicable for Mode 2 and Mode 1 below P-10 (approximately 10 percent reactor power).

At 0700 on May 9, 1992, the Instrumentation and Control (I&C) surveillance test coordinator (utility, non-licensed) was requested by his supervisor (utility, non-licensed) to verify that the surveillance tests he had scheduled would meet Technical Specification requirements for the reactor startup. One of the required tests was an Analog Channel Operational Test (ACOT) on the power range nuclear instrument (EIS:(DET)(JL)) neutron flux low setpoint. The surveillance test frequency is within 31 days prior to the reactor startup. The I&C surveillance test coordinator incorrectly determined that the quarterly surveillance for power range channel N41, which had been performed within the past 31 days, performed an ACOT on the neutron flux low setpoint. In actuality, the surveillance only tested the high setpoint. As a result, the I&C surveillance test coordinator reported that only three of four power range nuclear instruments needed to be tested and power range nuclear instrument N41 was not

NRC FORM 399A		U.S. NUCLEAR REGULATORY COMMISSION		APPROVED OMB NO. 3150-0104 EXPIRES 4/30/92	
<b>LICENSEE EVENT REPORT (LER) TEXT CONTINUATION</b>				ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HOURS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC, 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104) OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.	
Facility Name (1)		DocId Number (2)		LER Number (6)	
COMANCHE PEAK-UNIT 1		0 5 0 0 0 4 4 5		Page (3)	
				Year	
				Sequential Number	
				Revision Number	
				0 3 OF 0 7	

Text (if more space is required, use additional NRC Form 399A's) (17)

tested. When the identified surveillance tests had been performed, the I&C supervisor reported to the Operations Shift Supervisor (utility, licensed) that all required surveillance tests had been performed satisfactorily.

CPSES Unit 1 entered Mode 2, Startup, at 2258 on May 9, 1992, Mode 1, Power Operation, at 0402 on May 10, 1992, and reached 10 percent reactor power (above P-10, the Low Setpoint Power Range Neutron Flux Interlock) at 0420 on May 10, 1992, without having performed the required startup surveillance test on power range nuclear instrument N41. This violated Technical Specification section 4.0.4 which requires surveillance requirements associated with a Limiting Condition for Operation (LCO) be performed prior to entry into the Operational Mode.

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

At 1400, on Monday, May 11, 1992, the I&C surveillance test coordinator determined that the neutron flux low setpoint is not tested when reactor power is above 25 percent. The surveillance coordinator located the power range N41 ACOT test package that had been taken credit for, confirmed that the neutron flux low setpoint had not been tested, and reported the situation to his supervisor and the Operations Shift Supervisor

### II. COMPONENT OR SYSTEM FAILURES

#### A. FAILURE MODE, MECHANISM, AND EFFECT OF EACH FAILED COMPONENT

No failed components contributed to this event.

#### B. CAUSE OF EACH COMPONENT OR SYSTEM FAILURE

No failed components contributed to this event.

#### C. SYSTEMS OR SECONDARY FUNCTIONS THAT WERE AFFECTED BY FAILURE OF COMPONENTS WITH MULTIPLE FUNCTIONS

No failed components contributed to this event.

#### D. FAILED COMPONENT INFORMATION

NRC FORM 366A		U.S. NUCLEAR REGULATORY COMMISSION		APPROVED OMB NO. 3150-0104 EXPIRES: 4/30/92				
<b>LICENSEE EVENT REPORT (LER)</b> <b>TEXT CONTINUATION</b>		ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC, 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC, 20503.						
		Facility Name (1)		Docket Number (2)		LER Number (6)		Page (3)
COMANCHE PEAK-UNIT 1		05000445		Year	Sequential Number	Revision Number		
				92	- 0110	- 000	04	of 07

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

No failed components contributed to this event.

### III. ANALYSIS OF THE EVENT

#### A. SAFETY SYSTEM RESPONSES THAT OCCURRED

No safety systems responded, or were expected to respond, during this event.

#### B. DURATION OF SAFETY SYSTEM TRAIN INOPERABILITY

No safety system trains were inoperable as a result of this event.

#### C. SAFETY CONSEQUENCES AND IMPLICATIONS OF THE EVENT

The power range neutron flux low setpoint trip provides protection during subcritical and low power operations to mitigate the consequences of a power excursion beginning from low power. The low setpoint trip is manually blocked above P-10 (approximately 10 percent reactor power) and is automatically reinstated below the P-10 setpoint. The minimum channels required to be operable by the Technical Specifications is three. The surveillance was satisfactorily performed on the other three power range nuclear instruments. Coincidence logic requires two out of four channels to trip. The Technical Specifications establishes an allowed outage time of 6 hours to place the inoperable channel in trip. Placing N41 in trip would reduce the logic to trip from two out of four channels to a more conservative one out of three. The Unit was in the applicable modes (Mode 2 and Mode 1 below P-10) for 5 hours and 22 minutes, less than the allowed outage time; therefore, this event did not increase the risk of an accident or decrease the ability of the Unit to mitigate an accident. This event did not adversely affect the safe operation of CP&ES Unit 1 or the health and safety of the public.

### IV. CAUSE OF THE EVENT

#### ROOT CAUSE

1. Lack of attention by the I&C surveillance test coordinator in that he did not adequately determine surveillance requirements prior to Unit 1 reactor startup.
2. Supervisory oversight was less than adequate in that the I&C surveillance test

<p>NRC FORM 366A</p> <p style="text-align: center;"><b>LICENSEE EVENT REPORT (LER) TEXT CONTINUATION</b></p>	<p style="text-align: center;">U.S. NUCLEAR REGULATORY COMMISSION</p> <p style="text-align: right;">APPROVED OMR NO. 3150-0104 EXPIRES: 4/30/92</p> <p>ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 90.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-630), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC, 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.</p>																			
<p>Facility Name (1) <b>COMANCHE PEAK-UNIT 1</b></p>	<p>Docket Number (2) <b>0 5 0 0 0 4 4 5</b></p>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="3">LER Number (6)</th> <th colspan="3">Page (3)</th> </tr> <tr> <th>Year</th> <th>Sequential Number</th> <th>Revision Number</th> <th></th> <th></th> <th></th> </tr> <tr> <td style="text-align: center;"><b>92</b></td> <td style="text-align: center;"><b>- 010</b></td> <td style="text-align: center;"><b>- 000</b></td> <td style="text-align: center;"><b>05</b></td> <td style="text-align: center;"><b>of</b></td> <td style="text-align: center;"><b>07</b></td> </tr> </table>	LER Number (6)			Page (3)			Year	Sequential Number	Revision Number				<b>92</b>	<b>- 010</b>	<b>- 000</b>	<b>05</b>	<b>of</b>	<b>07</b>
LER Number (6)			Page (3)																	
Year	Sequential Number	Revision Number																		
<b>92</b>	<b>- 010</b>	<b>- 000</b>	<b>05</b>	<b>of</b>	<b>07</b>															

Text (If more space is required, use additional NRC Form 366A's) (17)

coordinator had no second check. Supervisory oversight consisted of verbal reports from the I&C surveillance test coordinator to management on the status of the surveillance test requirements.

**GENERIC CONSIDERATIONS**

The potential exists that there are other areas of surveillance compliance where a single person or process is relied upon to perform a function without benefit of a second check.

**V. CORRECTIVE ACTIONS**

**CORRECTIVE ACTIONS TO PREVENT RECURRENCE**

**ROOT CAUSE**

1. Lack of attention by the I&C surveillance test coordinator in that he did not adequately determine surveillance requirements prior to Unit 1 reactor startup.

**CORRECTIVE ACTION**

The appropriate action per the TU Electric Discipline Program was implemented for the individuals involved.

A task team was formed to review the surveillance test process at CPSES. The surveillance task team will standardize the methods each department uses to comply with the surveillance test program, including the responsibility and accountability assigned to each Department's surveillance test coordinator.

2. Supervisory oversight was less than adequate in that the I&C surveillance test coordinator had no second check.

**CORRECTIVE ACTION**

The surveillance task team is performing a review of each Department's surveillance program to identify any areas where a second check is not utilized to ensure surveillances are performed when required. Areas identified will be changed to include a second check in the process.

The surveillance task team is standardizing the methods used by different departments in scheduling, tracking and recording surveillance tests. The

NRC FORM 366A <span style="float: right;">U.S. NUCLEAR REGULATORY COMMISSION</span>		APPROVED OMB NO. 3150-1 EXPIRES: 4/30/92							
<b>LICENSEE EVENT REPORT (LER)                  TEXT CONTINUATION</b>		ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC, 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC, 20503.							
Facility Name (1)	Docket Number (2)	LER Number (6)	Page (3)						
COMANCHE PEAK-UNIT 1	0 5 0 0 0 4 4 5	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width: 10%;">Year</th> <th style="width: 10%;">Sequential Number</th> <th style="width: 10%;">Revision Number</th> </tr> <tr> <td>92</td> <td>- 010</td> <td>- 00</td> </tr> </table>	Year	Sequential Number	Revision Number	92	- 010	- 00	0 6 of 0 7
Year	Sequential Number	Revision Number							
92	- 010	- 00							

Text (2 more space is required, use additional NRC Form 366A's) (17)

maintenance database used to track surveillance tests has been reviewed and changes are in progress to standardize the descriptions and scheduling of the tests. This will allow management to more easily perform an independent review of upcoming surveillance test requirements.

**GENERIC CONSIDERATIONS**

The potential exists that there are other areas of surveillance compliance where a single person or process is relied upon to perform a function without benefit of a second check.

**CORRECTIVE ACTION**

As stated above, the surveillance task team is performing a review of each Department's surveillance program to identify any areas where a second check is not utilized to ensure surveillances are performed when required. Areas identified will be changed to include a second check in the process.

**VI. PREVIOUS SIMILAR EVENTS**

The following LERs have been written to document events caused by cognitive personnel error leading to non-compliance with Technical Specification surveillance tests:

- |            |            |
|------------|------------|
| LER 90-010 | LER 91-017 |
| LER 90-024 | LER 91-028 |
| LER 90-034 | LER 92-002 |
| LER 91-011 | LER 92-006 |

The situations, root causes and corrective actions of these events are sufficiently different from this event to conclude that corrective actions could not be expected to have prevented this event. There is, however, similarities in several of these events including lack of self verification and second checking by the personnel involved. As a result, plant management established a surveillance task team to correct problems experienced with surveillance test compliance. The task team's emphasis is to standardize all departments in the implementation of the surveillance test program and to implement aggressive methods for enforcing self checking by the surveillance coordinators and second checking of activities involving surveillance test compliance. The corrective actions stated in this report are part of the task team's corrective actions.

NRC FORM 366A <span style="float: right;">U.S. NUCLEAR REGULATORY COMMISSION</span>		APPROVED OMB NO. 3150-0104 EXPIRES: 4/30/92		
<b>LICENSEE EVENT REPORT (LER)                  TEXT CONTINUATION</b>		ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAF - WORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.		
Facility Name (1)	Docket Number (2)	LER Number (6)		Page (3)
COMANCHE PEAK-UNIT 1	0 5 0 0 0 4 4 5	Year	Sequential Number	Revision Number
		9 2	- 0 1 0	- 0 0
			0 7	OF 0 7

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

**VII. ADDITIONAL INFORMATION**

The times listed in the report are approximate and Central Daylight Time.