



TU ELECTRIC

Log # TXX-92224
File # 10200
910.4
Ref. # 10CFR50.73(a)(2)(iv)

May 6, 1992

William J. Cahill, Jr.
Group Vice President

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NO. 50-445
MANUAL OR AUTOMATIC ACTUATION OF ANY ENGINEERED SAFETY FEATURE
LICENSEE EVENT REPORT 92-008-00

Gentlemen:

Enclosed is the Licensee Event Report 92-008-00 for Comanche Peak Steam Electric Station Unit 1, "Personnel Error Leads to Inadvertent Actuation of Control Room Air Conditioning Engineered Safety Feature due to Spurious Radiation Monitor Signal".

Sincerely,

William J. Cahill Jr.

William J. Cahill, Jr.

By: *Roger D. Walker*
R. D. Walker
Manager of Nuclear Licensing

OB/tg
Attachment

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

9205120271 920506
PDR ADDCK 05000445
S PDR

P. O. Box 1002 Glen Rose, Texas 76043-1002

IF 22
11

NRC FORM 306		U.S. NUCLEAR REGULATORY COMMISSION		APPROVED OMB NO. 3150-0104 EXPIRES: 4/30/92	
LICENSEE EVENT REPORT (LER)				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-500), 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) COMANCHE PEAK-UNIT 1			DocId Number (2) 051000445		Page (3) 1 of 107
Title (4) PERSONNEL ERROR LEADS TO INADVERTENT ACTUATION OF CONTROL ROOM AIR CONDITIONING ENGINEERED SAFETY FEATURE DUE TO SPURIOUS RADIATION MONITOR SIGNAL					
Event Date (5)		LER Number (6)		Report Date (7)	
Month	Day	Year	Year	Sequence Number	Revision Number
04	06	92	92	008	00
Other Facilities Involved (8)		Facility Name		DocId Number	
N/A		N/A		051000	
Operating Mode (9)		This report is submitted pursuant to the requirements of 10 CFR 50.73(a)(2)(vii)(A) (Check one or more of the following) (11)			
1		20.402(b)		<input checked="" type="checkbox"/> 50.73(a)(2)(v)	
Power Level (10)		20.405(a)(1)(i)		50.73(a)(2)(v)	
100		20.405(a)(1)(ii)		50.73(a)(2)(vi)	
		20.405(a)(1)(iii)		50.73(a)(2)(vii)(A)	
		20.405(a)(1)(iv)		50.73(a)(2)(vii)(B)	
		20.405(a)(1)(v)		50.73(a)(2)(viii)	
		20.405(a)(1)(vi)		50.73(a)(2)(ix)	
		20.405(a)(1)(vii)		73.71(b)	
		20.405(a)(1)(viii)		73.71(c)	
		20.405(a)(1)(ix)		Other (Specify in Abstract below and in Text NRC Form 365A)	
Licensee Contact For This LER (12)					
Name D. E. BUSCHBAUM, COMPLIANCE SUPERVISOR				Area Code Telephone Number 817 897-5851	
Complete One Line For Each Component Failure Described in This Report (13)					
Cause	System	Component	Manufacturer	Reportable To NRCDS	Reportable To NRCDS
Supplemental Report Expected (14)				Expected Submission Date (15)	
<input type="checkbox"/> Yes (If yes, complete Expected Submission Date)				<input checked="" type="checkbox"/> No	
Abstract (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)					
<p>At 1410 on April 6, 1992, with work complete on the Control Room South Intake Radiation Monitor (XRE-5896B), an Auxiliary Operator (AO) was to remove all tags and restore components per a clearance release. At 1435 the clearance release was completed and the XRE-5896B sample pump started to verify proper operation. At 1437 loss of flow to XRE-5896B caused the Control Room Heating Ventilation, and Air Conditioning (HVAC) system to realigned to emergency recirculation mode. At 1445 the AO found the XRE-5896B outlet isolation valve closed, contrary to the clearance release.</p> <p>Root cause of this event was personnel error. A contributing factor was placing XRE-5896B in-service prior to independent verification of the clearance release. Corrective actions include counselling the AO and a Lessons Learned package for Operations personnel review.</p>					

TXX-92224

NRC FORM 306A

U.S. NUCLEAR REGULATORY COMMISSION

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.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

Facility Name (1)

Docket Number (2)

COMANCHE PEAK-UNIT 1

05000445

LER Number (3)			Page (3)	
Year	Sequential Number	Revision Number		
92	008	00	02	OF 07

Text (if more space is required, use additional NRC Form 306A's) (17)

I. DESCRIPTION OF THE REPORTABLE EVENT

A. REPORTABLE EVENT CLASSIFICATION

Any event or condition that resulted in an automatic actuation of any Engineered Safety Feature (ESF).

B. PLANT OPERATING CONDITIONS PRIOR TO THE EVENT

On April 6, 1992, Comanche Peak Steam Electric Station (CPSES) Unit 1 was in Mode 1, Power Operation, operating at 100 percent power.

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

On April 6, 1992, the Control Room South Intake Radiation Monitor (XRE-5896B) (EIS:(MON)(IL)) was taken out of service for planned maintenance.

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

At 1410 on April 6, 1992, with work complete on XRE-5896B, the Balance of Plant (BOP) Operator (utility, licensed) completed preparations for the release of the clearance on XRE-5896B. The Unit Supervisor (utility, licensed) and the BOP Operator discussed the clearance release and the restoration procedure for XRE-5896B and briefed the Electrical Control Building (ECB) Auxiliary Operator (AO) (utility, nonlicensed) on the specifics. The ECB AO was instructed to remove all clearance tags and restore all components as directed by the clearance release. At 1435 on April 6, 1992, the ECB AO informed the BOP Operator that all components had been restored and clearance tags removed. The BOP Operator then started the XRE-5896B sample pump, as directed by procedure, and verified proper operation of XRE-5896B and associated equipment. The ECB AO locally verified proper vacuum, flow, and operation of XRE-5896B and then returned to the Control Room to give the clearance to another AO (utility, nonlicensed) for independent verification.

NRC FORM 386A U.S. NUCLEAR REGULATORY COMMISSION LICENSEE EVENT REPORT (LER) TEXT CONTINUATION		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) COMANCHE PEAK-UNIT 1	Docket Number (2) 0 5 0 0 0 4 4 5	LER Number (6)		Page (3)	
		Year	Sequential Number	Revision Number	
		92	- 008	- 000	03 OF 07

Text (if more space is required, use additional NRC Form 386A's) (17)

At 1437 on April 6, 1992, low vacuum, alert limit, loss of sample flow, and channel loss of flow alarms were received in the Control Room for XRE-5896B. Furthermore, the Control Room Heating, Ventilation, and Air Conditioning (HVAC) system (EISS:(VI)) automatically realigned to the emergency recirculation mode due to a high radiation signal from XRE-5896B. The ECB AO was immediately dispatched to XRE-5896B to investigate the cause of the alarms. At 1438, the Unit Supervisor recognized that both Train A and Train B Control Room HVAC had automatically realigned to the emergency recirculation mode. With no actual increase in radiation levels this actuation was determined to be spurious. The spurious ESF actuation was the result of a momentary High-Radiation signal (spike). The High-Radiation signal was caused by a flow switch internal to XRE-5896B, which automatically repositioned due to loss of flow/vacuum.

At 1445 on April 6, 1992, the ECB AO found the XRE-5896B outlet isolation valve (XRM-0008) (EISS:(VLV))(IL)) closed, contrary to the requirements of the clearance release. The Unit Supervisor instructed the ECB AO to place XRE-5896B in "Block", open XRM-0008, and to restore XRE-5896B to service. At 1456, with XRE-5896B removed from "Block", two unsuccessful attempts to start the XRE-5896B sample pump were made. At 1500, upon further investigation, the ECB AO found the XRE-5896B sample pump supply breaker thermal overloads tripped, and reset them. At 1503, the XRE-5896B sample pump was successfully started and XRE-5896B returned to service. At 1525 on April 6, 1992, the Control Room HVAC system was restored to original configuration.

An event or condition that results in an automatic actuation of any ESF is reportable within 4 hours under 10CFR50.72(b)(2)(ii). At 1658 on April 6, 1992, the Nuclear Regulatory Commission Operations Center was notified of the event via the Emergency Notification System.

NRC FORM 306A		U.S. NUCLEAR REGULATORY COMMISSION		APPROVED OMB NO. 3150-0104 EXPIRES: 4/30/92			
LICENSEE EVENT REPORT (LER) TEXT CONTINUATION		ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.8 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)	
COMANCHE PEAK-UNIT 1		05000445		Year	Sequential Number	Revision Number	
				92	-008	-00	04 OF 07
Text (if more space is required, use additional NRC Form 306A's) (17)							
<p>E. <u>THE METHOD OF DISCOVERY OF EACH COMPONENT OR SYSTEM FAILURE, OR PROCEDURAL OR PERSONNEL ERROR</u></p> <p>At 1437 on April 6, 1992, low vacuum and loss of flow for XRE-5896B, and Control Room HVAC system realignment was annunciated by several alarms in the Control Room. The ECB AO was immediately dispatched to XRE-5896B to determine the cause of the alarms. At 1445, the ECB AO found that he had failed to open XRM-0008, as required by the clearance release. After opening XRM-0008, and resetting the XRE-5896B sample pump supply breaker thermal overloads, XRE-5896B was returned to service. At 1525 on April 6, 1992, the Control Room HVAC system was restored to original configuration.</p>							
<p>II. <u>COMPONENT OR SYSTEM FAILURES</u></p> <p>A. <u>FAILURE MODE, MECHANISM, AND EFFECT OF EACH FAILED COMPONENT</u></p> <p>Not applicable - there were no component failures associated with this event.</p> <p>B. <u>CAUSE OF EACH COMPONENT OR SYSTEM FAILURE</u></p> <p>Not applicable - there were no component failures associated with this event.</p> <p>C. <u>SYSTEMS OR SECONDARY FUNCTIONS THAT WERE AFFECTED BY FAILURE OF COMPONENTS WITH MULTIPLE FUNCTIONS</u></p> <p>Not applicable - there were no failed components with multiple functions that affected this event.</p> <p>D. <u>FAILED COMPONENT INFORMATION</u></p> <p>Not applicable - there were no component failures associated with this event.</p>							

<p style="font-size: small;">NRC FORM 366A U.S. NUCLEAR REGULATORY COMMISSION</p> <p style="text-align: center;">LICENSEE EVENT REPORT (LER) TEXT CONTINUATION</p>	<p style="font-size: x-small;">APPROVED OMB NO. 3150-0104 EXPIRES: 4/30/92</p> <p style="font-size: x-small;">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-590), 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>		
Facility Name (1)	Docket Number (2)	LER Number (6)	Page (3)
COMANCHE PEAK-UNIT 1	05000445	92 - 008 - 00	05 of 07
Text (If more space is required, use additional NRC Form 366A's) (17)			

III. ANALYSIS OF THE EVENT

A. SAFETY SYSTEM RESPONSES THAT OCCURRED

The Control Room HVAC system automatically realigned to the emergency recirculation mode; all associated dampers (EHS:(DMP)(VI)) and fans (EHS:(FAN)(VI)) responded as designed.

B. DURATION OF SAFETY SYSTEM TRAIN INOPERABILITY

Not applicable - there were no safety systems which were rendered inoperable due to a failure.

C. SAFETY CONSEQUENCES AND IMPLICATIONS OF THE EVENT

The ESF associated with the Control Room HVAC system is the ability of the system to automatically realign into the emergency recirculation mode in response to a loss of offsite power, a safety injection, or a high radiation condition at any one of four radiation monitors located in the Control Room air intake ducts. This ESF actuation was the result of a spurious signal from XRE-5896B.

During realignment of the Control Room HVAC system to the emergency recirculation mode, all equipment functioned as designed. The operating makeup air supply fan shut down, the Control Room exhaust fan and the kitchen and toilet exhaust fans shut down, the emergency pressurization units started, the emergency filtration units started, and all associated dampers positioned as required. The successful realignment demonstrated that the system would have performed its intended function if the actuation had been in response to one of the accident conditions for which it was designed. It is concluded that the event did not adversely affect the safe operation of CPSES Unit 1 or the health and safety of the public.

NRC FORM 366A		U.S. NUCLEAR REGULATORY COMMISSION		APPROVED OMB NO. 3150-0104 EXPIRES: 4/30/92	
LICENSEE EVENT REPORT (LER) TEXT CONTINUATION				ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 56.0 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)	
COMANCHE PEAK-UNIT 1		0 5 0 0 0 4 4 5		Year	Page (3)
				9 2 - 0 0 8 - 0 0	16 of 0 7
Text (if more space is required, use additional NRC Form 366A's) (17)					

IV. CAUSE OF THE EVENT**ROOT CAUSE**

The root cause of the event was personnel error (less than adequate self checking). The ECB AO performed the clearance release, removing the clearance tags and repositioning the valves as required. However, on valve XRM-0008, the ECB AO removed the clearance tag but failed to reposition the valve. The ECB AO failed to self check his work to ensure it was performed correctly.

CONTRIBUTING FACTOR

The clearance release was not independently verified prior to starting the XRE-5896B sample pump. Although there are no requirements to perform the verification prior to placing equipment in service (and in some cases it would be impractical) the independent verification may have prevented this event.

V. CORRECTIVE ACTIONS**A. CORRECTIVE ACTIONS TO PREVENT RECURRENCE****ROOT CAUSE**

Personnel error.

CORRECTIVE ACTION

The ECB AO has been counselled by two levels of supervision. Additionally, an action plan was developed which involved: 1) A written exam on self checking; 2) A review of several procedures on self checking and manipulation of components, followed by an oral exam; 3) Perform two Job Performance Measures (JPM) satisfactorily. The JPMs displayed use of self checking. All of these items were completed satisfactorily prior to re-assigning the ECB AO to normal duties.

NRC FORM 366A U.S. NUCLEAR REGULATORY COMMISSION <h2 style="text-align: center;">LICENSEE EVENT REPORT (LER) TEXT CONTINUATION</h2>	APPROVED OMB NO. 3150-0104 EXPIRES: 4/30/92 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-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) COMA****E PEAK-UNIT 1	Docket Number (2) 0 5 0 0 0 4 4 5
LER Number (6)	
Year 92	Sequential Number - 008
Revision Number - 00	Page (3) 017 of 017

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

CONTRIBUTING FACTOR

Independent verification performed after placing system in service.

CORRECTIVE ACTION

A Lessons Learned package has been issued for Operations personnel review, emphasizing the need to independently verify the position of key components when releasing a clearance. The importance of performing the verification prior to placing equipment in service (when possible) is stressed.

VI. PREVIOUS SIMILAR EVENTS

LER 90-007-00 and LER 91-001-00 describe events in which the Control Room HVAC system automatically realigned to the emergency recirculation mode as a result of a loss of power to one of the radiation monitors in the Control Room air intake. LER 91-015-00 describes an event in which the Control Room HVAC system automatically realigned to the emergency recirculation mode as the result of an electromagnetically induced spike. The details of these events and the resultant corrective actions are sufficiently different from the details of this event to conclude that the previous corrective actions could not have been expected to prevent the actuation described in this report. Therefore, no previous similar events have been reported pursuant to 10CFR50.73.

VII. ADDITIONAL INFORMATION

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