

Log # TXX-91008
File # 10200
Ref. # 50.73(a)(2)(1)

TU ELECTRIC

January 11, 1991

William J. Cahill, Jr.
Executive 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
OPERATION PROHIBITED BY TECHNICAL SPECIFICATIONS
LICENSEE EVENT REPORT 90-044-00

Gentlemen:

Enclosed is Licensee Event Report 90-044-00 for Comanche Peak Steam Electric Station Unit 1, "Surveillance Testing Performed on The Wrong Train Due to Procedural Inadequacy."

Sincerely,

William J. Cahill, Jr.
William J. Cahill, Jr.

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

JAA/daj

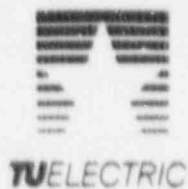
Enclosure

c - Mr. R. D. Martin, Region IV
Resident Inspectors, CPSES (3)

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Austin B. Scott, Jr.
Vice President

CPSES-9100605
January 10, 1991

No Response Required

TO: J. W. Beck - ST 24

SUBJECT: LICENSEE EVENT REPORT 50-445/90-044-00
SURVEILLANCE TESTING PERFORMED ON THE WRONG TRAIN DUE TO
PROCEDURAL INADEQUACY

Attached is Licensee Event Report (LER) 50-445/90-044-00 which has been prepared in accordance with 10CFR50.73(d). This LER has been reviewed by SORC (Meeting No. 91-002) and recommended for approval. Additionally, I have reviewed and approved the LER and find it acceptable for submittal to the NRC (required by January 11, 1991). Comments or questions should be directed to Tim Hope at extension 6370.

A handwritten signature in black ink, appearing to read 'A. B. Scott, Jr.', is positioned above the typed name.

A. B. Scott, Jr. O10

GGD:aki

Attachment

cc: CCS
R. D. Waller

E06
ST-24

| | |
|--|--|
| NRC FORM 366, U.S. NUCLEAR REGULATORY COMMISSION <h2 style="text-align: center;">LICENSEE EVENT REPORT (LER)</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. |
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| | | |
|--|---|---------------------|
| Facility Name (1) COMANCHE PEAK - UNIT 1 | Docket Number (2) 0151010101415 | Page (3) 1 of 17 |
|--|---|---------------------|

Title (4)
SURVEILLANCE TESTING PERFORMED ON THE WRONG TRAIN DUE TO PROCEDURAL INADEQUACY

| 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 Numbers |
| 11 | 30 | 90 | 90 | 044 | 0 | 01 | 11 | 91 | N/A | 015101010111 |
| | | | | | | | | | N/A | 015101010111 |

Operating Mode (9) **1**
 This report is submitted pursuant to the requirements of 10 CFR § (Check one or more of the following) (11)

| | | | | |
|----------------------------------|--|---|--|--|
| Power Level (10) 01815 | <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(a)(1)(v) | <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)(iii) | <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)(v) | <input type="checkbox"/> 73.71(b) <input type="checkbox"/> 73.71(c) Other (Specify in Abstract below and in Text, NRC Form 366A) |
|----------------------------------|--|---|--|--|

Licensee Contact For This LER (12)

| | | |
|---------------------------|--------------------------|--|
| Name T. A. HOPE | Area Code 8117 | Telephone Number 819171-16131710 |
|---------------------------|--------------------------|--|

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 |
|-------|--------|-----------|--------------|---------------------|-------|--------|-----------|--------------|---------------------|
| | | | | | | | | | |
| | | | | | | | | | |

Supplemental Report Expected (14)

| | | | |
|--|--|-------------------------------|--------------------|
| <input type="checkbox"/> Yes (If yes, complete Expected Submission Date) | <input checked="" type="checkbox"/> No | Expected Submission Date (15) | Month Day Year |
|--|--|-------------------------------|--------------------|

Abstract (Limit to 1400 spaces, i.e., approximately 18,000 single-space typewritten lines) (16)

On November 30, 1990, with Comanche Peak Steam Electric Station Unit 1 at 85 percent power, surveillance testing was performed to satisfy certain ASME Section XI testing requirements for check valves in the charging system. The surveillance work order used by the reactor operator to perform the test contained incomplete information, and as a result, the reactor operator performed the test on the wrong train of the charging system. Subsequent reviews failed to identify the error prior to expiration of the maximum allowable extension of the surveillance interval. The cause of the event is less than adequate equipment identification on the surveillance work order. Corrective actions included review of results for previously performed tests and enhancement of test information on work orders.

| 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: 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 | | 015101010141415 | | Year | Sequential Number | Revision Number | |
| | | | | 910 | 0144 | 010 | 012 OF 017 |
| <small>Text (If more space is required, use additional NRC Form 366A's) (17)</small> | | | | | | | |
| I. <u>DESCRIPTION OF THE REPORTABLE EVENT</u> | | | | | | | |
| A. REPORTABLE EVENT CLASSIFICATION | | | | | | | |
| Any operation or condition prohibited by the plant's Technical Specifications. | | | | | | | |
| B. PLANT OPERATING CONDITIONS PRIOR TO THE EVENT | | | | | | | |
| On November 30, 1990, (Event date) Comanche Peak Steam Electric Station (CPSES) Unit 1 was in Mode 1, Power Operations, with reactor power at approximately 85 percent. | | | | | | | |
| On December 12, 1990, at 1600 CST (Discovery date) CPSES Unit 1 was in Mode 1 with reactor power at approximately 79 percent. | | | | | | | |
| 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 | | | | | | | |
| On November 30, 1990, at approximately 0730 CST a reactor operator (utility, licensed) was assigned responsibility for performing surveillance testing of selected components in the Chemical and Volume Control System (CVCS) (EHS:(CB)). The test satisfies part of the surveillance requirements of CPSES Technical Specification 4.1.2.2.c by demonstrating the operability of specified boron injection flow paths and portions of CPSES Technical Specification 4.0.5 for inservice testing of ASME Code Class 1, 2, and 3 components. Technical Specification 4.1.2.2.c has a surveillance frequency of 18 months; however, this test was being performed to satisfy portions of Technical Specification 4.0.5 quarterly surveillance test requirements as follows: | | | | | | | |

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|---|--|------------------------------------|--|--|-------------------|-----------------|------------|
| 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: 50.0 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. | | | |
| Facility Name (1) | | Docket Number (2) | | LER Number (5) | | | Page (3) |
| COMANCHE PEAK - UNIT 1 | | 0151010104415 | | Year | Sequential Number | Revision Number | |
| | | | | 910 | 0144 | 010 | 013 OF 017 |
| Text (If more space is required, use additional NRC Form 366A's) (17) | | | | | | | |

verify that Train A charging pump discharge check valve (EIIS:(CB)(V)) 1-8481A (Figure 1) and normal charging check valve 1-8381 are open by verifying flow through the valves;

verify that Train B charging pump discharge check valve 1-8481B, Train B charging pump recirculation check valve 1CS-8480B, and positive displacement pump discharge check valve 1-8497 are closed by verifying that pump flowrate is not below that required for emergency core cooling system (EIIS:(BQ)) performance.

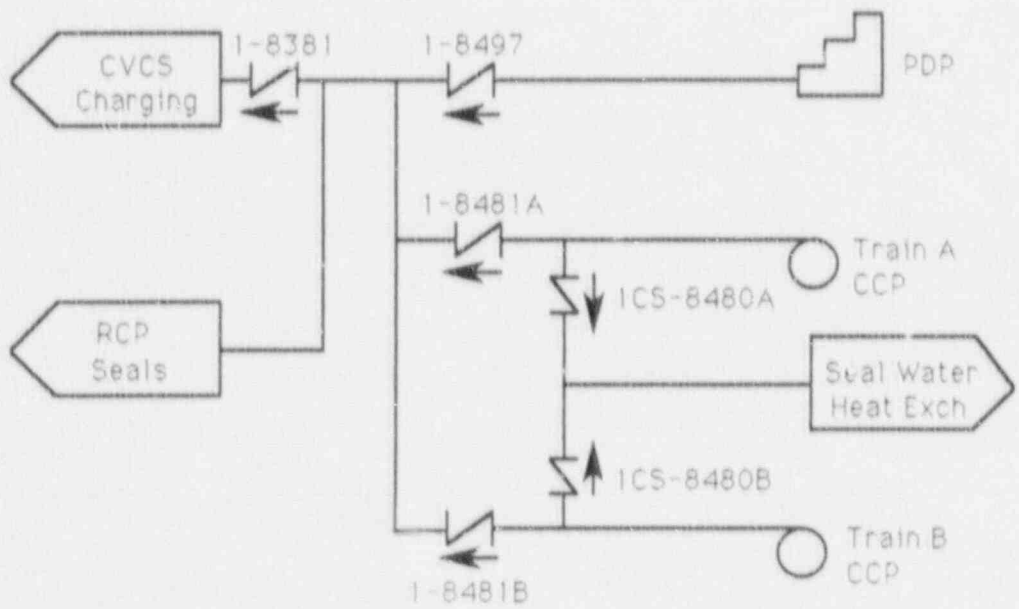


Figure 1

| NRC FORM 366A | | U.S. NUCLEAR REGULATORY COMMISSION | | APPROVED OMB NO. 0150-0104 EXPIRES: 4/30/92 | | | |
|--|--|--|--|--|--|----------------|--|
| LICENSEE EVENT REPORT (LER) TEXT CONTINUATION | | 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 (0150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC, 20503. | | | | | |
| | | Facility Name (1) | | Docket Number (2) | | LER Number (6) | |
| COMANCHE PEAK - UNIT 1 | | 0510101415 | | 910 - 0144 - 010 | | 014 OF 017 | |
| <small>Text (if more space is required, use additional NRC Form 366A's) (17)</small> | | | | | | | |
| <p>The surveillance work order initiating the activity contained a note advising the operator that the testing activity "satisfies the requirements for 1-8481B and 1CS-8480B." Because the note referred to check valves associated with Train B of the charging system, the reactor operator prepared data sheets for Train B of the system and performed the test by running the Train B charging pump (E1IS:(CB)(P)). The referenced valves are actually verified closed by running the Train A charging pump. The completed test procedure and work order were reviewed and approved by the Unit Supervisor (utility, licensed). Subsequent Operations departmental reviews did not reveal the error. The required surveillance interval for testing, including the maximum allowable extension, was exceeded on December 9, 1990.</p> <p>On December 12, 1990, the Technical Support Inservice Test Coordinator (contractor, non-licensed) reviewed the completed surveillance test package and discovered that the wrong train had been tested. The on-duty Shift Supervisor was notified at approximately 1600 CST, and the train was declared inoperable. Testing was successfully completed by 1820 CST on December 12, 1990.</p> <p>E. THE METHOD OF DISCOVERY OF EACH COMPONENT OR SYSTEM FAILURE OR PROCEDURAL OR PERSONNEL ERROR</p> <p>While reviewing completed surveillance test packages associated with the inservice test program for trending data, the program coordinator discovered that the wrong train had been tested.</p> <p>II. COMPONENT OR SYSTEM FAILURES</p> <p>A. FAILURE MODE, MECHANISM, AND EFFECT OF EACH FAILED COMPONENT and CAUSE OF EACH COMPONENT OR SYSTEM FAILURE</p> <p>Not applicable - there were no component failures directly related to this event.</p> | | | | | | | |

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| NRC FORM 366A 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) | LER Number (6) | |
| | | Year | Page (3) |
| | | Sequential Number | Revision Number |
| COMANCHE PEAK - UNIT 1 | | 0151010141415910 | - 0144 - 010 015 OF 017 |

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

B. FAILED COMPONENT INFORMATION

Not applicable - there were no component failures directly related to this event.

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

Not applicable - there were no component failures directly related to this event.

III. ANALYSIS OF THE EVENT

A. SAFETY SYSTEM RESPONSES THAT OCCURRED

Not applicable - there were no safety system responses associated with this event.

B. DURATION OF SAFETY SYSTEM TRAIN INOPERABILITY

Following discovery of the event and notification of Control Room personnel, the train was declared inoperable until completion of the required testing, a period of approximately two hours and twenty minutes. Successful completion of testing demonstrated that the charging system was capable of performing its intended safety function at all times.

C. SAFETY CONSEQUENCES AND IMPLICATIONS OF THE EVENT

The objective of the test is to demonstrate that there is a high probability that the applicable check valves will operate satisfactorily if and when they are called upon to perform their safety related functions. Previous testing of both trains of the charging system and successful completion of testing following discovery of this event demonstrates that the system was at all times capable of performing its intended safety functions. It is concluded that this event did not result in a threat to the safe operation of CPSES Unit 1 or the health and safety of the public.

**LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION**

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.

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|------------------------|-------------------|----------------|-------------------|-----------------|------------|
| Facility Name (1) | Docket Number (2) | LER Number (6) | | | Page (3) |
| COMANCHE PEAK - UNIT 1 | 0151010141415 | Year | Sequential Number | Revision Number | 016 OF 017 |
| | | 910 | 01414 | 010 | |

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

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

The root cause of the event is inadequate equipment identification on the surveillance work order. The surveillance work order used by the reactor operator to perform the surveillance did not contain sufficient information to identify the correct train. The work order contains a field for train information, but the field was left blank. This is not uncommon for multi-train activities or for activities involving non-train related components, such as check valve 1-8497. In this case, a Train A pump must be run to test Train B components, and including train information is not appropriate.

The work order instruction field also did not contain sufficient information to apprise the operator of which pump should be run in order to satisfy the testing requirements. The note appearing in the section contained insufficient information to allow a determination of whether the test was for forward flow or reverse flow testing of the check valves.

B. CONTRIBUTING FACTOR

A contributing factor is considered to be less than adequate supervisory oversight. Reviews of the completed work package conducted by supervisory personnel subsequent to completion of testing activities failed to recognize that the surveillance was performed on the wrong train of components.

V. CORRECTIVE ACTIONS**A. IMMEDIATE**

Immediately following discovery, the Control Room was notified of the event. The train was declared inoperable until successful completion of the test approximately two hours and twenty minutes later.

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|--|-------------------|---|------------|
| NRC FORM 386A 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: 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. | |
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| <small>Text (if more space is required, use additional NRC Form 386A's) (17)</small> | | | |

A review of all previous performances of this testing activity was performed. The review included testing on both trains and revealed that all previous testing had been performed correctly.

B. ACTIONS TO PREVENT RECURRENCE

Root Cause : Inadequate equipment identification on the surveillance work order.

Corrective Action : The surveillance program database has been reviewed to ensure the associated train is clearly identified. All surveillance work orders now clearly define train and there is one work order activity per train. As an enhancement, the surveillance work orders are being reviewed and test descriptions will be added or improved as required to assist the operators.

Contributing Factor : Less than adequate supervisory oversight.

Corrective Action : A Lessons Learned has been issued emphasizing the need for a thorough review of all surveillances to ensure correct equipment and train has been tested in addition to reviewing all acceptance criteria. This Lessons Learned also includes a review of how the train is identified on the surveillance work order.

V. PREVIOUS SIMILAR EVENTS

CPSES Licensee Event Reports (LERs) 90-005-00, 90-010-00, 90-015-00, 90-024-00, 90-026-00, 90-034-00, and 90-040-00 describe reportable events resulting from failure to perform surveillance activities required by plant Technical Specifications. There have been no previous events reported due to performance of activities on the wrong train of equipment.