TU ELECTRIC

Log # TXX-91224
File # 10200

Ref. # 50.73
50.73(a)(2)(i)

William J. Cahill, Jr.
Executive Vice President

April 15, 1991

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION
DOCKET NO. 50-445
CONDITION PROHIBITED BY THE PLANT'S TECHNICAL SPECIFICATIONS
LICENSEE EVENT REPORT 91-007-00

Gentlemen:

Enclosed is Licensee Event Report 91-007-00 for Comanche Peak Steam Electric Station Unit 1, "Less Than Adequate Procedure Review Leading to the Failure to Fully Satisfy ASME Section XI Testing Requirements."

Sincerely,

William J. Cahill, Jr.

JAA/bm

Enclosure

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

IE22
1/1

Enclosure to TXX-91133

NRC FORM 366 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)

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Title (4)

LESS THAN ADEQUATE PROCEDURE REVIEW LEADING TO THE FAILURE TO FULLY SATISFY ASME SECTION XI TESTING REQUIREMENTS

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
0 3	1 5	9 1	9 1	- 0 0 7	- 0 0	0 4	1 5	9 1	N/A	0 5 0 0 0
									N/A	0 5 0 0 0

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)	0 9 6	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	Other (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

Licensee Contact For This LER (12)

Name	Telephone Number: Area Code
T. A. HOPE COMPLIANCE SUPERVISOR	8 1 7 8 9 7 1 - 1 6 3 7 0

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)

	Expected Submission Date (15)	Month	Day	Year
Yes (If yes, complete Expected Submission Date)				
X No				

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

On March 15 and 27, 1991, the Inservice Test Program Coordinator documented examples of incorrect acceptance criteria in Section XI testing requirements for check valves in the auxiliary feedwater system. This condition constitutes a failure to demonstrate operability in accordance with a Technical Specification Limiting Condition for Operation. The cause of the event was determined to be inadequate technical review during or following document revision. Corrective actions include procedure revision and verification of adequacy of similar test procedures.

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

I. DESCRIPTION OF THE REPORTABLE EVENT

A. EVENT CLASSIFICATION

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

B. PLANT OPERATING CONDITIONS BEFORE THE EVENT

On March 15, 1991, at approximately 1200 CST, Comanche Peak Steam Electric Station (CPSES) Unit 1 was in Mode 1, Power Operation, with the reactor at approximately 96 percent of rated thermal power.

On March 27, 1991, at approximately 1200 CST, CPSES Unit 1 was in Mode 5, Cold Shutdown, with the Reactor Coolant System at a temperature of 126 degrees F and pressure of approximately 325 psig.

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 January 9, 1991, the Inservice Test (IST) Program Coordinator (contractor, non-licensed) was performing a review of a revision to the test procedure for the Unit 1 Auxiliary Feedwater (AFW) System (EIIS:(BA)). The IST Coordinator questioned the acceptance criteria used to demonstrate full stroke open performance of the suction discharge and miniflow check valves on the AFW System. Engineering was requested to confirm the testing requirements. The response, received on March 12, 1991, provided the acceptance criteria based on the design calculations for twelve check valves (EIIS:(V)(BA)) in the system. The IST Coordinator's subsequent review

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of the acceptance criteria provided by Engineering revealed discrepancies between the test procedures and the acceptance criteria. The condition was documented and determined to be reportable on March 15, 1991. Evaluation determined that flow rates sufficient to meet the actual criteria had been achieved during recent testing activities. However, data was not available to demonstrate that the quarterly testing requirement for the turbine driven auxiliary feedwater pump suction, discharge, and steamline check valves had been performed to the correct criteria prior to February, 1991. This is considered to be a failure to demonstrate operability in accordance with a Limiting Condition for Operation.

On March 27, 1991, the IST Program Coordinator was performing a review of the procedure for ASME Section XI testing of additional AFW check valves. Close scrutiny of the acceptance criteria revealed inconsistencies similar to those documented on March 15. Data was available to demonstrate that 14 of the 16 affected valves had passed sufficient flow to demonstrate operability. Two other check valves in the turbine driven auxiliary feedwater flow path were declared inoperable, but the plant was in Mode 5 at the time, and AFW was not required to be operable. Because testing had not been performed to the correct criteria, the condition was considered to be an additional example of failure to demonstrate operability in accordance with a Limiting Condition for Operation.

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

While verifying the acceptance criteria for ASME Section XI testing of various check valves in the AFW system, the IST Program Coordinator discovered examples of incorrect acceptance criteria.

II. COMPONENT OR SYSTEM FAILURES

A. FAILED COMPONENT INFORMATION

Not applicable - there were no component failures associated with this event.

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B. FAILURE MODE, MECHANISM, AND EFFECT OF EACH FAILED COMPONENT

Not applicable - there were no component failures associated with this event.

C. CAUSE OF EACH COMPONENT OR SYSTEM FAILURE

Not applicable - there were no component failures associated with this event.

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

Not applicable - there were no component failures associated with 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

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

C. SAFETY CONSEQUENCES AND IMPLICATIONS OF THE EVENT

The objective of the inservice testing of ASME Code Class 1, 2, and 3 check valves is to demonstrate that there is a high probability that the check valves will operate satisfactorily if and when they are called upon to perform their safety related functions. Data from test activities on the AFW system has been used to demonstrate the operability of 26 of the 28 check valves identified on March 15 and 27. The remaining two check valves have been tested at a flow rate near the design value.

The small difference between design flow and tested flow is not considered to result in a significant reduction in confidence that the valves will perform as intended. These testing activities, along with the low probability of a check valve failure concurrent with an event necessitating the use of this system, provide sufficient basis to conclude that the event does not result in a threat to the safe operation of CPSES Unit 1 or the health and safety of the public.

IV. CAUSE OF THE EVENT

IMMEDIATE CAUSE

Each example is attributed to incorrect information contained in the test procedure.

ROOT CAUSE

Less than adequate technical reviews were performed during the procedure development and revision process. During both initial development and subsequent revisions to the AFW system operability test and the steam generator feedwater check valve test, the review process did not detect incorrect information concerning acceptance criteria. This is in part attributable to difficulty in locating technical information related to system flow rates required to establish check valve acceptance criteria.

V. CORRECTIVE ACTIONS

IMMEDIATE

The operations test procedures for the AFW System and the steam generator feedwater check valves will be changed to include the correct flow criteria, and the required tests will be performed during the current mid-cycle outage.

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ACTIONS TO PREVENT RECURRENCE

A review of IST implementing procedures will be performed to assure that the appropriate flow rate acceptance criteria is being utilized for check valve stroke testing. An overall review of the IST Program will be performed to identify and correct any additional problems.

VI. PREVIOUS SIMILAR EVENTS

CPSES Licensee Event Report (LER) 91-003-00 describes a reportable event resulting from incorrect information in the test procedure. The events of LERs 91-003-00 and 91-007-00 are being evaluated together as part of the effort to resolve documented deficiencies associated with inservice testing. Additional information will be provided in the forthcoming supplement to LER 91-003.