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June 19, 1990

W. J. Cahill
Executive Vice President

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION
DOCKET NO. 50-445
OPERATION PROHIBITED BY TECHNICAL SPECIFICATIONS
LICENSEE EVENT REPORT 90-015-00

Gentlemen:

Enclosed is Licensee Event Report 90-015-00 for Comanche Peak Steam Electric Station Unit 1, "Missed Chemistry Sample Special Condition Surveillance Due to Procedural Deficiency."

Sincerely,

A handwritten signature in cursive script that reads "William J. Cahill, Jr.".

William J. Cahill, Jr.

KWV/daj

Enclosure

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

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NRC FORM 966		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-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) 015101010141415		Page (3) 1 OF 018																						
Title (4) MISSED CHEMISTRY SAMPLE SPECIAL CONDITION SURVEILLANCE DUE TO PROCEDURAL DEFICIENCY																												
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																		
05	20	90	90	0115	01006	11	9	90	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)	01218		<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(a)	<input type="checkbox"/> 50.73(a)(1)(i)	<input type="checkbox"/> 50.73(a)(1)(ii)	<input type="checkbox"/> 50.73(a)(1)(iii)	<input type="checkbox"/> 50.73(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(1)(v)	<input 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)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	<input type="checkbox"/> 50.73(a)(2)(ix)	<input type="checkbox"/> 73.71(b)	<input type="checkbox"/> 73.71(c)	Other (Specify in Abstract below and in Text, NRC Form 966A)	
Licensee Contact For This LER (12)										Name		Telephone Number																
GARY P. MCGEE SUPERVISOR COMPLIANCE										8117		819171-15141717																
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															
<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>On May 20, 1990 at 0338, testing was initiated which involved measuring the change in nuclear power as the valves in each steam dump bank are stroked from a full closed position to a full open position. The test procedure states that opening each steam dump bank should result in a nuclear power increase of approximately 10 percent. The test was completed at 0915 on May 21.</p> <p>Technical Specification (TS) 4.4.7, "Reactor Coolant System Specific Activity", Table 4.4-1 requires that a sample of reactor coolant for isotopic analysis is to be taken between two and six hours following a change exceeding 15 percent of rated thermal power (RTP) within a one hour period. Changes in excess of 15 percent of RTP within a one hour period occurred due to the testing on 8 occasions. TS 4.4.7, Table 4.4-1 surveillance requirements were not met within the required time frame on 4 of the occasions.</p> <p>The missed surveillances were due to a procedural deficiency. Corrective actions include revising the test procedure to provide the appropriate cautions regarding the required sample.</p>																												

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Facility Name (1) COMANCHE PEAK - UNIT 1	Docket Number (2) 01510101415	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="3">LER Number (6)</th> <th colspan="2">Page (3)</th> </tr> <tr> <th>Year</th> <th>Sequential Number</th> <th>Revision Number</th> <th></th> <th></th> </tr> <tr> <td style="text-align: center;">910</td> <td style="text-align: center;">- 0115</td> <td style="text-align: center;">- 010</td> <td style="text-align: center;">012</td> <td style="text-align: center;">OF 018</td> </tr> </table>	LER Number (6)			Page (3)		Year	Sequential Number	Revision Number			910	- 0115	- 010	012	OF 018
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Text (If more space is required, use additional NRC Form 366A's) (17)

I. DESCRIPTION OF THE REPORTABLE EVENT

A. PLANT OPERATING CONDITIONS BEFORE THE EVENT

On May 20, 1990 at 0930, Comanche Peak Steam Electric Station (CPSES) Unit 1 was in Mode 1, Power Operation, at approximately 28 percent power.

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

Not applicable - no structures, systems or components were inoperable at the start of the event have been determined to have contributed to the event.

C. REPORTABLE EVENT CLASSIFICATION

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

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

On May 20, 1990 at 0338, testing was initiated to verify the capacity of the Steam Dump System (EISS:(SB)). This test involves opening the valves (EISS:(PCV)(SB)) in each steam dump bank, while maintaining the Main Generator (EISS:(EL)) output constant, and measuring the change in nuclear power as the valves are stroked from a full closed position to a full open position. The procedure states that opening each steam dump bank individually should result in a nuclear power increase of approximately 10 percent. The test, which was completed at 0915 on May 21, is conducted one time only during initial power ascension.

As a result of the Steam Dump Valve testing conducted on May 20 and 21, power changed in excess of 15 percent of rated thermal power (RTP) within one hour on eight separate occasions. Technical Specification 4.4.7 (TS), "Reactor Coolant System Specific Activity", Table 4.4-1 requires that a sample of reactor coolant for isotopic analysis to be taken between two and six hours following a change exceeding 15 percent of RTP within a one hour period. The isotopic analysis is for I-131, I-133 and I-135.

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Following four of the eight power changes, chemistry samples were not obtained as required by TS 4.4.7 special condition surveillance. The missed surveillances occurred at 0935, 1055, 1219 and 2125 on May 20. Chemistry samples were obtained following four of the eight power changes which met TS 4.4.7 requirements.

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

Staff Chemists (utility, nonlicensed) were informed by Station Nuclear Engineering personnel (utility, nonlicensed) on May 21 at 1000 that the plant had experienced significant power changes on May 20. The Staff Chemists reviewed reactor power history for May 19 and May 20 and discovered that two TS special condition surveillances were missed. Further review of the information revealed that a total of four TS special condition surveillances were missed.

II. COMPONENT OR SYSTEM FAILURES

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

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

B. CAUSE OF EACH COMPONENT OR SYSTEM FAILURE

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

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D. FAILED COMPONENT INFORMATION

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

III. ANALYSIS OF THE EVENT

A. SAFETY SYSTEM RESPONSES THAT OCCURRED

Not applicable - there were no safety systems required to respond during this event.

B. DURATION OF SAFETY SYSTEM INOPERABILITY

Not applicable - there were no safety systems rendered inoperable.

C. SAFETY CONSEQUENCES AND IMPLICATIONS OF THE EVENT

The purpose of the isotopic analysis of the reactor coolant sample for I-131, I-133 and I-135 required by TS following changes exceeding 15 percent of RTP in a one hour period is only to assess the parameters associated with the Iodine spiking phenomena which may occur following changes in thermal power.

Although sampling the reactor coolant for isotopic analysis was missed on four occasions on May 20, the results of the five samples taken on May 20 and May 21 were within TS 3.4.7 limits for gross activity.

Based on the above, the event did not adversely affect the safe operation of CPSES Unit 1 or the health and safety of the public.

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IV. CAUSE OF THE EVENT

ROOT CAUSE

The root cause of the missed surveillances for the changes in excess of 15 percent of RTP within one hour on May 20 was due to the procedure governing the steam dump capacity test being deficient. The procedure review criteria stated that the steam dump capacity would increase by 10 +/- 2 percent on each bank of valves with generator output fixed. However, unforeseen changes greater than 15 percent of RTP occurred during the testing and the procedure did not contain information to "trigger" the special condition surveillance.

Contributing Factor - 1

Unit Supervisor (utility, licensed) involved in portions of the testing was aware of changes occurring in power but did not associate those power changes with the need to perform reactor coolant analysis for Iodine. The failure to identify the need for a sample is a cognitive personnel error.

Contributing Factor - 2

Misunderstood verbal communication contributed to the missed surveillance at 2125 for the change greater than 15 percent of RTP that occurred between 1455 and 1525 on May 20. A Unit Supervisor informed the Chemistry Technician at 1910 on May 20 that a change greater than 15 percent of RTP within one hour occurred at 1504. The Chemistry Technician had taken a sample at 1720 due to a four hour frequency sampling program which met the TS requirement also. However, the time of the change provided by the Unit Supervisor was the onset of the power change and not after the change of 15 percent of RTP within one hour was exceeded which occurred at 1525. Therefore, an additional sample should have been taken after 1725 and prior to 2125.

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V. CORRECTIVE ACTIONS

A. Immediate Corrective Actions

The on-shift licensed operators were informed by Operations staff of the missed special condition surveillances and were reminded to remain cognizant of power changes and the need to perform reactor coolant analysis for Iodine to meet TS requirements.

B. Corrective Actions to Prevent Recurrence

Root Cause

Unforeseen changes greater than 15 percent of RTP within one hour occurred during the testing and the test procedure did not contain a caution to "trigger" the special condition surveillance.

Corrective Action

The test procedure on steam dump valves capacity will be revised to include a "trigger" to the special condition surveillance to ensure inclusion in Unit 2 testing.

Contributing Factor - 1

Unit Supervisor involved in the testing was aware of changes occurring in power but did not associate those power changes with the need to perform reactor coolant analysis for Iodine.

Corrective Action

The Unit Supervisor has been counselled on the importance of remaining cognizant of power change and the need to perform reactor coolant analysis for Iodine to meet TS requirements. To provide additional awareness, this Licensee Event Report will be reviewed by on-shift licensed operators.

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Contributing Factor - 2

Misunderstood verbal communication between the Unit Supervisor and the Chemistry Technician.

Corrective Action

The test procedure revision identified in corrective action to the root cause will include a requirement for Operations personnel to inform Chemistry personnel of the time period the reactor coolant sample is to be taken to meet TS 4.4.7 surveillance requirements.

C. ACTION TAKEN ON GENERIC CONCERNS IDENTIFIED AS A DIRECT RESULT OF THE EVENT

Generic Implication

Other plant procedures may exist that the procedure performance could result in a missed special condition surveillance due to the lack of an adequate "trigger" such as the special condition surveillance on changes in excess of 15 percent of RTP within one hour.

Corrective Action

1. Placards have been placed on the control boards above the Control Rod In-Hold-Out switch (EHS: (HS)(AA)) and below the generator demand panel. The placards caution the Operator to notify Chemistry of changes in excess of 15 percent of RTP within a one hour period.
2. Operation and test procedures will be reviewed and revised as necessary to include a "trigger" to the special condition surveillance if the potential of a change in excess of 15 percent of RTP within one hour exists.
3. A review will be conducted for the adequacy of "triggers" currently in place for special condition surveillances. The procedures will be revised as necessary. Administrative procedures will be revised to require Operations personnel to include time requirements as necessary when requesting support from other departments.

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

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VI. PREVIOUS SIMILAR EVENTS

LER 90-005-00 and LER 90-010-00 involved missed special condition surveillances. However, the specific causes of the events and the specific cause of the event described in this LER were sufficiently different such that the corrective actions for LER 90-005-00 and LER 90-010-00 were not applicable to the event described in this LER.

VII. ADDITIONAL INFORMATION

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