

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: 50.0 HRS. F. RIVARD 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</b> of <b>105</b>				
Title (4) <b>FAILURE TO SATISFY TECHNICAL SPECIFICATION SURVEILLANCE REQUIREMENT FOR LIQUID WASTE PROCESSING VALVE 1-7150</b>														
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 Name	Docket Number				
03	19	93	93	004	00	04	16	93	N/A	05000445				
Operating Mode (9) <b>1</b> This report is submitted pursuant to the requirements of 10 CFR § (Check one or more of the following) (11): <table border="0" style="width:100%;"> <tr> <td style="width:33%;">           20.402(b)            20.405(a)(1)(i)            20.405(a)(1)(ii)            20.405(a)(1)(iii)            20.405(a)(1)(iv)            20.405(a)(1)(v)         </td> <td style="width:33%;">           20.405(c)            50.36(c)(1)            50.36(c)(2)  <input checked="" type="checkbox"/> 50.73(a)(2)(i)            50.73(a)(2)(ii)            50.73(a)(2)(iii)         </td> <td style="width:33%;">           50.73(a)(2)(iv)            50.73(a)(2)(v)            50.73(a)(2)(vi)            50.73(a)(2)(vii)(A)            50.73(a)(2)(vii)(B)            50.73(a)(2)(viii)         </td> </tr> </table>												20.402(b) 20.405(a)(1)(i) 20.405(a)(1)(ii) 20.405(a)(1)(iii) 20.405(a)(1)(iv) 20.405(a)(1)(v)	20.405(c) 50.36(c)(1) 50.36(c)(2) <input checked="" type="checkbox"/> 50.73(a)(2)(i) 50.73(a)(2)(ii) 50.73(a)(2)(iii)	50.73(a)(2)(iv) 50.73(a)(2)(v) 50.73(a)(2)(vi) 50.73(a)(2)(vii)(A) 50.73(a)(2)(vii)(B) 50.73(a)(2)(viii)
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Licensee Contact For This LER (12) <table border="0" style="width:100%;"> <tr> <td style="width:60%;">Name <b>D. J. REIMER, MANAGER, SYSTEM ENGINEERING</b></td> <td style="width:20%;">Area Code <b>817</b></td> <td style="width:20%;">Telephone Number <b>897-5584</b></td> </tr> </table>												Name <b>D. J. REIMER, MANAGER, SYSTEM ENGINEERING</b>	Area Code <b>817</b>	Telephone Number <b>897-5584</b>
Name <b>D. J. REIMER, MANAGER, SYSTEM ENGINEERING</b>	Area Code <b>817</b>	Telephone Number <b>897-5584</b>												
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					
A	WE	ISV		N	A	WE	ISV							
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 fifteen single-space typewritten lines) (16)  <p>Technical Specification 4.0.5b requires Inservice Testing of ASME Code Class 1, 2 and 3 pumps and valves to be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10CFR50.55a.</p> <p>On November 6, 1991, during stroke testing of Liquid Waste Processing valve 1-7150 (LWPS) (EIS: (ISV)(WE)), a containment isolation valve, the valve stroked closed in four (4) seconds. This was within the acceptance criteria of less than or equal to 4 seconds, but exceeded the alert criteria of 3 seconds. On June 27, 1992, during stroke testing of the same valve, it stroked closed in four seconds. Although the acceptance criteria was met, the alert criteria was exceeded again. Exceeding alert criteria required that valve stroke testing frequency be increased from three (3) months to one (1) month; however, the testing frequency was not increased. Failure to increase surveillance frequency does not meet the requirements of Technical Specification 4.0.5b.</p> <p>The cause of event 1 was a failure to adequately review test results. The second event occurred because the responsible engineer believed it was necessary to obtain engineering evaluation resolution prior to increasing testing frequency. Corrective actions included personnel indoctrination, enhanced test controls and operator training.</p>														

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**I. DESCRIPTION OF THE REPORTABLE EVENT****A. REPORTABLE EVENT CLASSIFICATION**

Any operation or condition prohibited by the Technical Specifications.

**B. PLANT OPERATING CONDITIONS PRIOR TO THE EVENT**

On November 6, 1991, Comanche Peak Steam Electric Station (CPSES) Unit 1 was in Mode 6, with fuel off loaded during a refueling outage. On June 27, 1992, CPSES Unit 1 was in Mode 1, Power Operations.

**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**Event 1

On November 2, 1991, during surveillance of LWPS valve 1-7150 (EIS: (ISV)(WE)), the valve stroked closed in 4 seconds. This was within the acceptance criteria of less than or equal to 4 seconds, but was in excess of the alert criteria of 3 seconds (50% increase in baseline stroke time). The Reactor Operator (utility, licensed) who performed the surveillance test also performed the review of the alert criteria, but failed to identify the exceeded alert limit. Since the alert limits were contained in the body of the procedure and not on the data forms, and the procedure was not kept with the completed data sheet the remaining post work reviewers did not have the alert limits conveniently available for review. Therefore, valve 1-7150 was not placed in alert status and was not placed on increased testing frequency as required by ASME Code Section XI.

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### Event 2

On June 27, 1992, during surveillance of LWPS valve 1-7150 (EHS: (ISV)(WE)), the valve stroked closed in 4 seconds. This was within the acceptance criteria of less than or equal to 4 seconds, but was in excess of the alert limit of 3 seconds. The Reactor Operator (utility, licensed) who performed the surveillance test also performed the review of the alert criteria and identified the excessive stroke time to the Unit Supervisor (utility, licensed). The excessive stroke time was noted on the surveillance work order and on the appropriate test data form. An engineering evaluation was written to evaluate the need for additional corrective actions. The surveillance work order was then sent to the Operations Surveillance Coordinator (utility, licensed) to close the record and process the work order for post work reviews. The Operations Surveillance Coordinator failed to place the valve on increased testing frequency as required.

Technical Specification 4.0.5b requires inservice testing of ASME Code Class 1, 2 and 3 pumps and valves to be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and Applicable Addenda as required by 10CFR50.55a. Section XI of the ASME Boiler and Pressure Vessel Code, Subsection IV-3417 "Corrective Action" states in part "If, for power operated valves, an increase in stroke time of . . . 50% or more for valves with full-stroke times of less than or equal to 10 SECS, is observed, test frequency shall be increased to once each month until corrective action is taken, at which time the original test frequency shall be resumed." Failure to increase valve stroke test frequency does not satisfy the requirements of Technical Specification 4.0.5b and is considered reportable under 10CFR50.73(a)(2)(i)(B).

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

The second event was discovered during a review of open Technical Evaluations (TEs) on February 25, 1993. During the evaluation process of TE 92-001401, which documented the second event, previously completed surveillance work orders which stroke tested LWPS valve 1-7150 were reviewed by Engineering to determine if a trend could be established as to its degradation. It was during this review of previous stroke times that the first event was discovered. The Operations Surveillance Coordinator was notified by Engineering on February 25, 1993, of the occurrence of both events. The Operations Surveillance Coordinator submitted ONE Form FX-93-566 on February 26, 1993, to document the occurrences. The condition was evaluated as reportable on March 19, 1993.

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## II. COMPONENT OR SYSTEM FAILURES

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

Not applicable - there were no component failures associated with these events.

### B. DURATION OF SAFETY SYSTEM TRAIN INOPERABILITY

Not applicable - there were no safety related equipment rendered inoperable during or as a result of the events.

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

The stroke time of LWPS valve 1-7150 during each event did not adversely affect the safe operation of Unit 1 or the health and safety of the public. The stroke time exceeded the alert criteria but was within the acceptance criteria of four seconds established in accordance with ASME Section XI.

## III. CAUSE OF THE EVENT

In Event 1, the cause for failure to increase the testing frequency of LWPS valve 1-7150 was less than adequate self checking in that the review of test results did not identify the need for increased test frequency. For Event 2, the Operations Surveillance Coordinator believed it was necessary to have resolution of the engineering evaluation prior to placing the valve in increased testing frequency.

Contributing factors to the above cited events included:

- a. Alert limit values located in the body of the procedure but not on the data forms which complicated the review process.
- b. Lack of tracking to ensure increased testing was implemented.

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**IV. CORRECTIVE ACTION****A. IMMEDIATE**

Upon the discovery of the events, the Reactor Operator involved in the first event and the Operations Surveillance Coordinator were counselled on less than adequate data reviews. Shift operations personnel were advised of the events via a memorandum in the Shift Orders. Concerning the second event, the Operations Surveillance Coordinator was indoctrinated concerning the need to immediately establish increased surveillance frequencies for valves testing in the alert range.

LWPS valve 1-7150 was placed on increased test frequency and a work order was initiated to perform trouble shooting to determine if corrective action was required. Corrective action was accomplished and valve baseline stroke time was reconfirmed. The valve test frequency was returned to quarterly.

**B. ACTIONS TO PREVENT RECURRENCE**

Test procedure data sheets will be revised to include alert levels. Appropriate test procedures will be revised to require Limiting Condition for Operation Action Requirement (LOCAR) tracking when an alert limit is exceeded and will specify a 96 hour time limit for the determination of equipment operability. Steps will be added to test procedures to provide guidance on what actions must be performed when an alert limit is exceeded.

Licensed operators will receive training on surveillance testing requirements and what is required when these requirements are not satisfied.

**V. PREVIOUS SIMILAR EVENTS**

One previous event (LER-90-026-00) discussed the failure to increase testing frequency when a component tested within the alert range. The cause of the event discussed in LER-90-026-00 was determined to be an inadequate manual surveillance scheduling method. The causes of this LER are different and actions taken for LER-90-026-00 would not have precluded the events identified in this LER. However, as part of previous procedure upgrading, alert levels were added to test procedures. Further changes as specified in IV.B. above, to add the alert levels to the actual test data sheets should preclude events similar to those discussed in this LER.