CATEGORY 1

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BEHNKE,D.H. Pacific Gas & Electric Co.
FUJIMOTO,W.H. Pacific Gas & Electric Co.
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 85-043-00:on 850303,TS 3.3.2,Table 3.3-3 & Action 18 was not met when containment purge valves opened w/o valid current slave relay test due to inadequate procedure. Revised procedure.W/960325 ltr.

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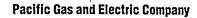
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Diablo Canyon Power Plant P.O. Box 56 Avila Beach, CA 93424 805/545-6000 Warren H. Fujimoto Vice President-Diablo Canyon Operations and Plant Manager

March 25, 1996



PG&E Letter DCL-96-072

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

Docket No. 50-275, OL-DPR-80
Docket No. 50-323, OL-DPR-82
Diablo Canyon Units 1 and 2
<u>Licensee Event Report 1-85-043-00</u>
<u>Technical Specification 3.3.2, Table 3.3-3, Action 18, Not Met When</u>
<u>Containment Purge Valves Were Opened Without a Valid Current Slave Relay Test Due to an Inadequate Procedure</u>

Dear Commissioners and Staff:

Pursuant to 10 CFR 50.73(a)(2)(i)(B), PG&E is submitting the enclosed Licensee Event Report regarding Technical Specification 3.3.2, Table 3.3-3, Action 18, not met when containment purge valves were opened without a valid current slave relay test due to an inadequate procedure.

The event did not adversely affect the health and safety of the public.

Sincerely,

Warren H. Fujimoto

cc: Steven D. Bloom L. J. Callan

> Kenneth E. Perkins Michael D. Tschiltz Diablo Distribution

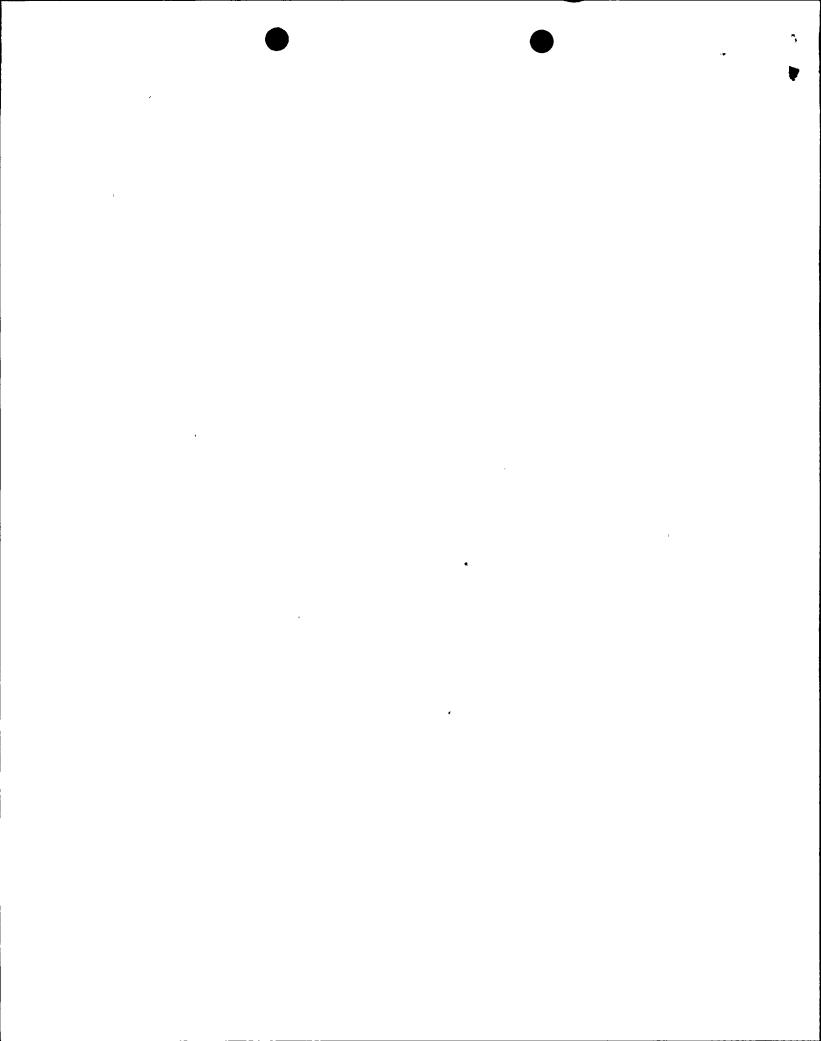
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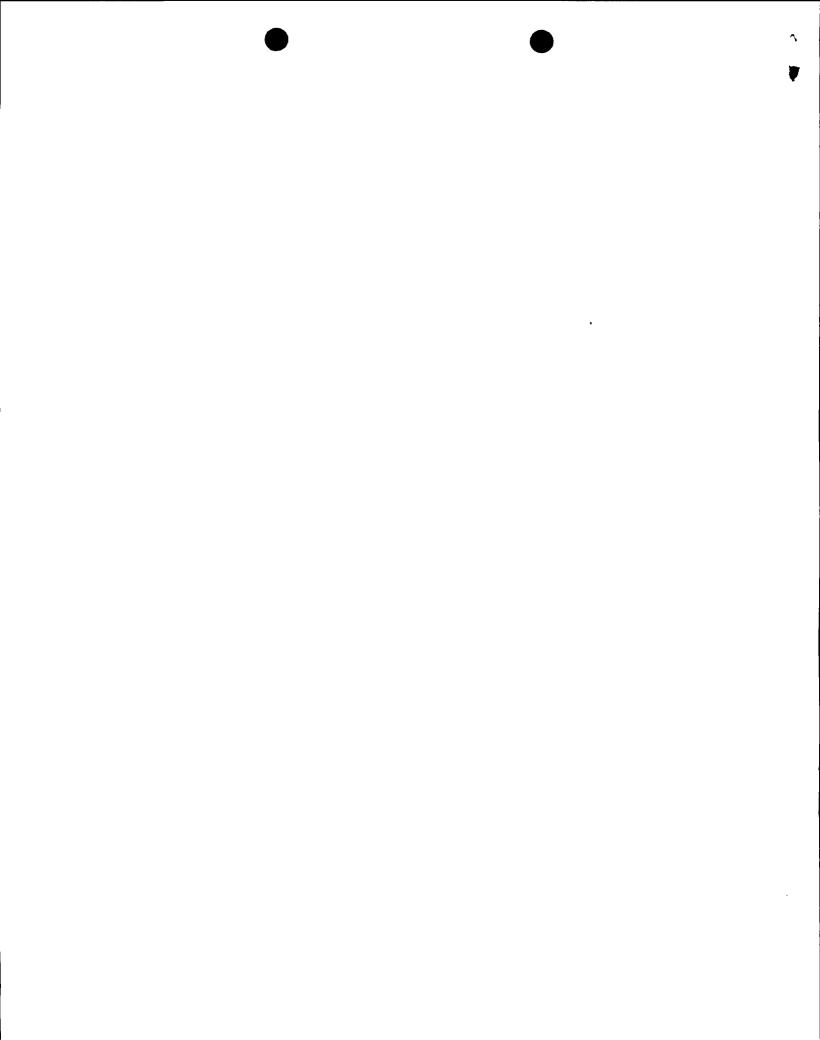


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LICENSEE CONTACT FOR THIS LER (12) TELEPHONE NUMBER														
Donald H. Behnke - Senior Regulatory Services Engineer 805 545-2629														
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13) CAUSE SYSTEM COMPONENT MANUFACTURER REPORTABLE TO IMPROS TO IMPROS														
SUPPLEMENTAL REPORT EXPECTED (14) EXPECTED MONTH DAY YEAR SUBMISSION														
[] YES (If yes, complete EXPECTED SUBMISSION DATE) [X] NO DATE (15)														

On March 5, 1985, with Unit 1 in Mode 1 (Power Operation) at approximately 90 percent power, and on September 30, 1985, with Unit 2 in Mode 2 (Startup) at approximately 3 percent power, Technical Specification (TS) 3.3.2 was not met when containment purge valves were opened without a valid current slave relay test. The 48 inch containment purge valves and the 12 inch containment pressure/vacuum relief valves on both units were subsequently opened numerous times for containment purges while the valves were inoperable due to non-performance of TS 4.3.2.1 required slave relay testing and/or TS 4.0.5 required stroke testing. The failure to meet a TS requirement was identified on February 21, 1996, as a result of a procedure revision.

This event was caused by an inadequate procedure. Engineering personnel failed to include the requirement for performance of TS 4.3.2.1 slave relay testing requirements in a procedural revision.

Procedures have been revised to require stroke testing of the 12 inch containment pressure/vacuum relief valves in applicable modes. In addition, procedures will be revised prior to the next refueling outage to require slave relay testing of the 48 inch purge valves to be current prior to opening a vent path.

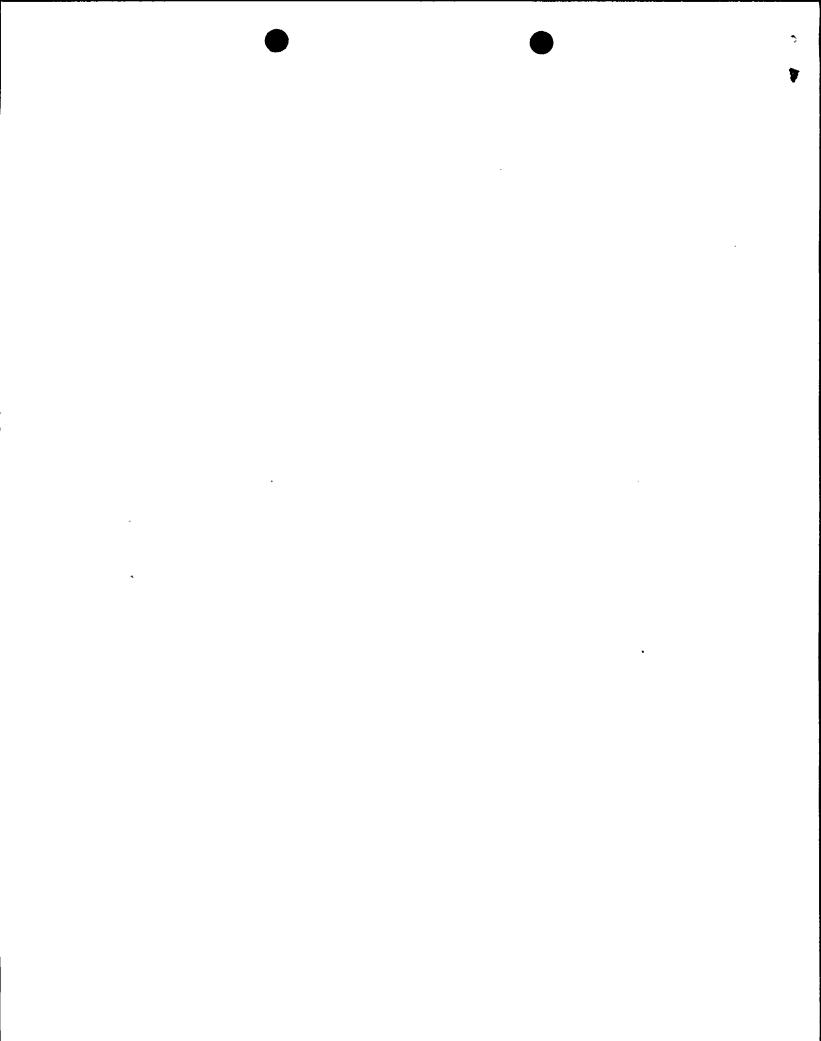


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On March 5, 1985, with Unit 1 in Mode 1 (Power Operation) at approximately 90 percent power, and on September 30, 1985, with Unit 2 in Mode 2 (Startup) at approximately 3 percent power, Technical Specification (TS) 3.3.2 was not met when containment purge valves were opened without a valid current slave relay test. The 48 inch containment purge valves and the 12 inch containment pressure/vacuum relief valves on both units were subsequently opened numerous times for containment purges while the valves were inoperable due to non-performance of TS 4.3.2.1 required slave relay testing and/or TS 4.0.5 required stroke testing. The failure to meet a TS requirement was identified on February 21, 1996, as result of a procedure revision.

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I. Plant Conditions

Unit 1 and Unit 2 operated in various modes and at various power levels during this event.

II. Description of Problem

A. Summary:

On March 5, 1985, with Unit 1 in Mode 1 (Power Operation) at approximately 90 percent power, and on September 30, 1985, with Unit 2 in Mode 2 (Startup) at approximately 3 percent power, Technical Specification (TS) 3.3.2, Table 3.3-3, "Engineered Safety Features Actuation System Instrumentation," Action 18, was not met when containment purge valves (VA)(RCV) (RCV-11 and RCV-12) were opened without a valid current slave relay test.

B. Background:

The containment purge supply and exhaust system (VA) consists of two 48 inch (one purge and one exhaust) and one 12 inch (vacuum relief and exhaust) penetrations between containment and the Auxiliary Building ventilation system (VF) (see Figure 1). There are seven valves (VA)(V) in this system, all of which close automatically when a containment ventilation isolation (CVI) signal (JE) is generated. The valves are divided into two groups, with the three valves inside containment associated with CVI train A and the four valves outside containment associated with CVI train B. The trains and their associated relays make up the two channels of CVI required by TS Table 3.3-3.

TS 3.3.2, Table 3.3-3, item 3.c.1), "Containment Ventilation Isolation - Automatic Actuation Logic and Actuation Relays," requires two channels to be operable in Modes 1 through 4 or maintain the containment purge valves closed.

TS 4.3.2.1, Table 4.3-2, Functional Unit 3.c.1), "Engineered Safety Features Actuation System Instrumentation Surveillance Requirements - Containment Ventilation Isolation - Automatic Actuation Logic and Actuation Relays," requires staggered monthly actuation logic (JE), master relay (JE)(RLY) tests, and quarterly slave relay (JE)(RLY) tests for the automatic actuation logic and relays associated with the CVI function. The actuation logic and master relay tests do not require operation of the CVI valves. However, slave relay tests require energization of each slave relay and verification of operability of each

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relay. In order to perform a slave relay test on isolation valves, the valves must be opened so that an isolation test signal can be used to demonstrate the correct actuation of the slave relay and its associated testable devices.

C. Event Description:

On January 13, 1981, Surveillance Test Procedure (STP) V-16A, "Containment Purge Valve Exercising;" and STP V-16B, "Containment Purge Valve Exercising;" were approved. STP V-16A and V-16B exercised the purge valves, including the slave relays prior to opening the valves. STP V-16A and STP V-16B also identified that this test should be accomplished prior to opening a flow path between the containment atmosphere and the environment.

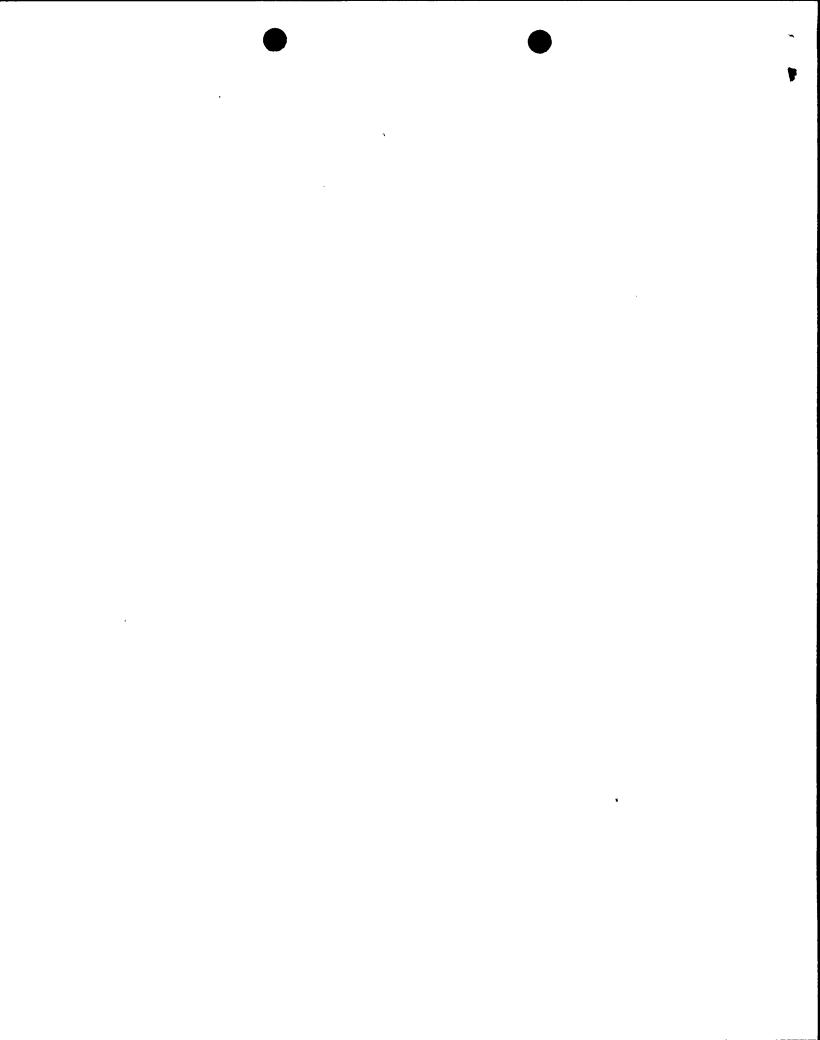
On November 9, 1984, STP V-16A was performed on Unit 1 satisfying the slave relay quarterly surveillance requirement.

On November 10, 1984, Revision 0 of STP V-16 superseded STP V-16A and STP V-16B. STP V-16, "Containment Purge Valve Actuation on a Containment Ventilation Isolation Test Signal," is used to verify proper actuation of CVI purge valves flow control valve (FCV)-660, FCV-661, radiation control valve (RCV)-11, and RCV-12 on a refueling frequency. Engineering personnel failed to include the requirement to perform this STP prior to opening the purge valves in Modes 1 through 4 in STP V-16.

On March 5, 1985, the quarterly surveillance interval for slave relay testing associated with the Unit 1 48 inch purge valves, including the 25 percent extension allowed by TS 4.0.2, was exceeded. On March 5, 1985, with Unit 1 in Mode 1 at approximately 90 percent power, TS 3.3.2, Table 3.3-3, "Engineered Safety Features Actuation System Instrumentation," Action 18, was not met when containment purge valves were opened without a valid current slave relay test.

On September 30, 1985, the quarterly surveillance interval for slave relay testing associated with the Unit 2 48 inch purge valves, including the 25 percent extension allowed by TS 4.0.2, was exceeded. On September 30, 1985, with Unit 2 in Mode 2 at approximately 3 percent power, TS 3.3.2, Table 3.3-3, "Engineered Safety Features Actuation System Instrumentation," Action 18, was not met when containment purge valves were opened without a valid current slave relay test.

The 48 inch containment purge valves and the 12 inch containment pressure/vacuum relief valves on both units were subsequently opened



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numerous times for containment purges, while the valves were inoperable due to non-performance of the slave relay testing.

On February 21, 1996, a Technical Review Group (TRG) convened to review problems identified during a procedure revision. The TRG determined that the condition described above was a failure to meet the requirements of TS 3.3.2 since 1985.

A shift order was issued to make sure the purge valves were not opened until the surveillance requirements were met. On March 1, 1996, STP V-3T6, "Exercising Containment Ventilation Isolation Valves FCV-660, 661, 662, 663, 664, RCV-11, and 12," was revised to perform valve stroke exercising. On March 2, 1996, STP V-3T6 was successfully performed for the 12 inch pressure/vacuum relief valves on both units.

- Inoperable Structures, Components, or Systems that Contributed to the Event:
 None.
- E. Dates and Approximate Times for Major Occurrences:

March 5, 1985: Event date for Unit 1: Action statement

18 to TS 3.3.2, Table 3.3-3, item 3.c.1),

was not met when the 48 inch

containment purge valves were opened

for a containment purge without a

current successful quarterly

surveillance.

September 30, 1985: Event date for Unit 2: Action statement

18 to TS 3.3.2, Table 3.3-3, item 3.c.1),

was not met when the 48 inch

containment purge valves were opened

for a containment purge without a

current successful quarterly

surveillance.

February 21, 1996:

Discovery date.

F. Other Systems or Secondary Functions Affected:

None.

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G. Method of Discovery:

The failure to meet a TS requirement was identified on February 21, 1996, as result of a procedure revision.

H. Operator Actions:

None required.

I. Safety System Responses:

None required.

III. Cause of the Problem

A. Immediate Cause:

TS 3.3.2, Table 3.3-3, "Engineered Safety Features Actuation System Instrumentation," Action 18, was not met when containment purge valves were opened without a valid current slave relay test.

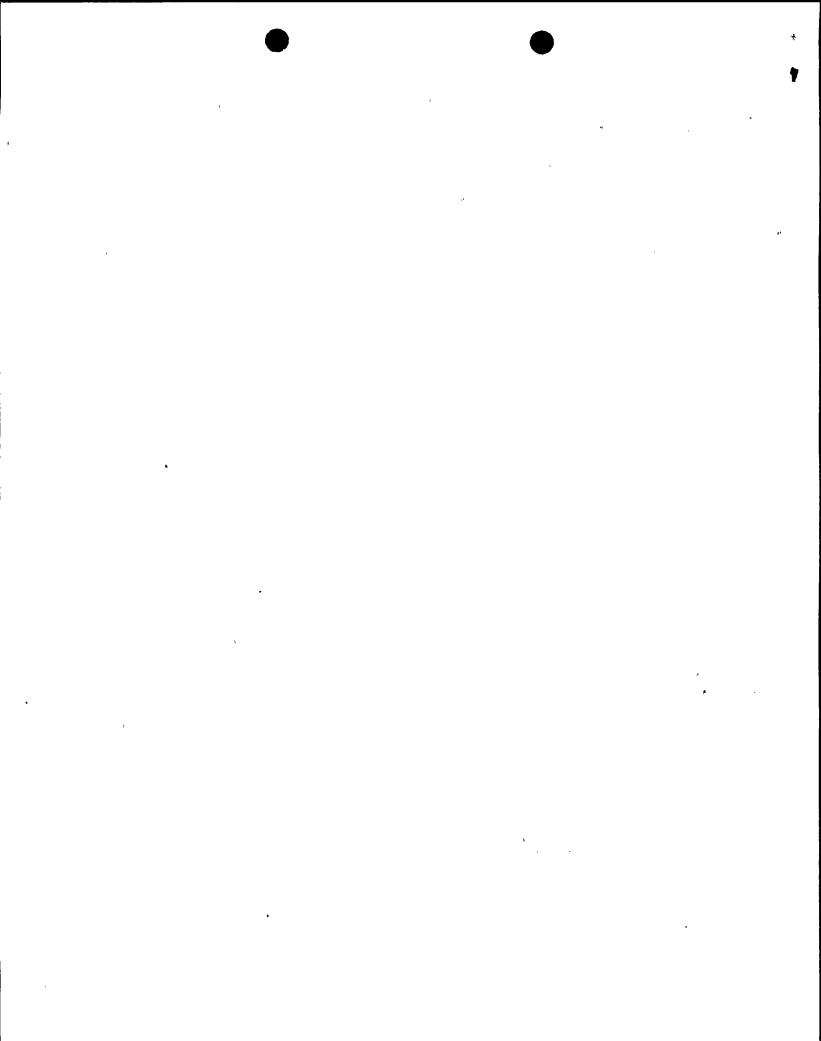
B. Root Cause:

This event was caused by an inadequate procedure. Engineering personnel failed to include the requirement for performance of TS 4.3.2.1 slave relay testing requirements in a procedural revision.

IV. Analysis of the Event

Surveillances performed on a refueling outage basis have shown the containment purge valves to be operable. The results of these surveillances demonstrate that had the need arisen, the purge valves would have performed their required safety function of closing within the required time constraints (if open) and maintaining containment integrity. A maintenance history search did not find any failures which could have prevented these valves from performing their intended safety function except for the local leak rate test failure reported in LER 2-87-025, "Potential Loss of Containment Integrity When FCV-661 Failed Local Leak Rate Test Due to Dust on Valve Seat While FCV-660 Was Potentially Inoperable Due to Personnel Error," on June 21, 1988. As discussed in LER 2-87-025, FCV-660 and FCV 661 were fully functional and capable of performing their intended safety function.

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Thus, the health and safety of the public were not adversely affected by this event.

V. Corrective Actions

A. Immediate Corrective Actions:

A shift order was issued to make sure the purge valves were not opened until the surveillance requirements were met.

- B. Corrective Actions to Prevent Recurrence:
 - The 48 inch purge valves are no longer opened at power for containment purges. Increased preventive maintenance to reduce gaseous leakage in containment has reduced the need for containment purges to a level such that the smaller 12 inch pressure/vacuum relief valves are sufficient to meet TS requirements for containment purges.
 - STP V-16 will be revised/replaced to test CVI actuation prior to opening a vent path between the containment and the outside environment when entering refueling outages.
 - 3. STP V-3T6 has been revised to require quarterly stroke time testing of the 12 inch purge valves in Modes 1 through 4, plus Mode 6 (Refueling).

VI. Additional Information

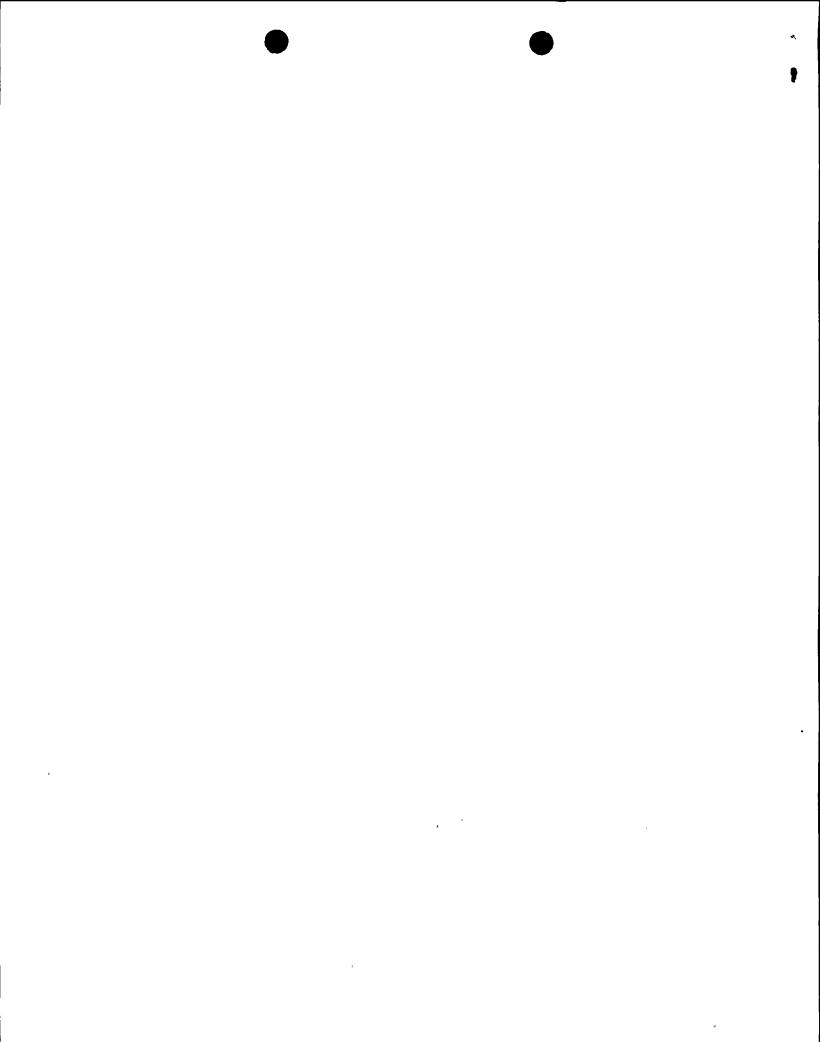
A. Failed Components:

None.

B. Previous LERs on Similar Problems:

LER 2-87-025 reported a potential TS violation when two redundant containment purge valves were potentially inoperable at the same time. The corrective actions for the 1987 event (improvements in the operability of the 48 inch purge valves), would not be expected to prevent the current event.

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FIGURE 1

Containment Purge and Relief Valves

