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RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 90-011-00:on 900921,identified that Tech Specs 3.6.1.3 & 3.0.4 were not met for unit 2 containment air lock due to programmatic deficiency.STP M-8A1 successfully performed on 901003.W/930526 ltr.

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Gregory M. Rueger
Senior Vice President and
General Manager
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May 26, 1993

PG&E Letter No. DCL-93-130

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

Re: Docket No. 50-323, OL-DPR-82
Diablo Canyon Unit 2
Licensee Event Report 2-90-011-00
Technical Specifications 3.6.1.3 and 3.0.4 Not Met for Unit 2 Containment Air Lock Due To Programmatic Deficiency

Gentlemen:

PG&E is submitting the enclosed Licensee Event Report pursuant to 10 CFR 50.73(a)(2)(i)(B) regarding two events in which Technical Specifications for the containment airlock were not met due to lack of post-maintenance testing that resulted from a programmatic deficiency.

This event has in no way affected the health and safety of the public.

Sincerely,

Gregory M. Rueger

cc: Ann P. Hodgdon
John B. Martin
Mary H. Miller
Sheri R. Peterson
CPUC
Diablo Distribution
INPO

DC2-93-WP-N025

Enclosure

1120S/85K/KAB/2246

IE22
1/1

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
DIABLO CANYON UNIT 2	0 5 0 0 0 3 2 3	1 OF 7

TITLE (4) TECHNICAL SPECIFICATIONS 3.6.1.3 AND 3.0.4 NOT MET FOR UNIT 2 CONTAINMENT AIR LOCK DUE TO PROGRAMMATIC DEFICIENCY

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MON	DAY	YR	YR	SEQUENTIAL NUMBER	REVISION NUMBER	MON	DAY	YR	FACILITY NAMES	DOCKET NUMBER (8)
09	21	90	90	- 0 1 1 -	0 0	05	26	93		0 5 0 0 0 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	1
POWER LEVEL (10)	1 0 0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR: (11)

X 10 CFR 50.73(a)(2)(i)(B)

OTHER -

(Specify in Abstract below and in text, NRC Form 366A)

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER AREA CODE	TELEPHONE NUMBER
DAVID P. SISK, SENIOR REGULATORY COMPLIANCE ENGINEER	805	545-4420

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 (16)

On April 25, 1993, at 1045 PDT, Technical Specification (TS) 3.0.4 was not met when Unit 2 entered Mode 4 (Hot Shutdown) with the personnel air lock (PAL) inoperable. Post-maintenance testing (PMT) as required by TS 4.6.1.3.b.2 to demonstrate the operability of the PAL following removal (and subsequent return) of a differential pressure (dP) gauge was not performed prior to Mode 4 entry. On April 26, 1993, during the review of mode transition documentation, the System Engineer discovered that the required PMT had not been performed. During the investigation of this event, the technical review group (TRG) discovered a previous occurrence as described below.

On September 21 and 22, 1990, with Unit 2 in Mode 1 (Power Operation) at 100 percent power, the 24 hours allowed by TS 3.6.1.3, Action b for an inoperable PAL was exceeded. Containment dP gauges had been removed for calibration and reinstalled without the PMT required by TS 4.6.1.3.b.2.

The root cause of these two events is programmatic deficiency. References used for work order development did not identify the gauges as a containment pressure boundary.

To prevent recurrence of these events, the component database for the PAL dP gauges was updated and labels were installed on the associated instruments and tubing. In addition, a maintenance bulletin was issued to train applicable personnel on this event.

I. Plant Conditions

September 21, 1990: Unit 2 was in Mode 1 (Power Operation) at 100 percent power.

April 25, 1993: Unit 2 was in Mode 4 (Hot Shutdown) at 0 percent power.

II. Description of Event

A. Summary:

On April 25, 1993, Unit 2 personnel air lock (PAL) (VA)(AL) containment (NH) differential pressure (dP) Gauge (VA)(PI) PI-178 was removed and reinstalled. Since the work order had not indicated that post-maintenance testing (PMT) was required, no local leak rate testing (LLRT) of the instrument fittings was performed as required by Technical Specification (TS) 4.6.1.3.b.2. Unit 2 entered Mode 4 with the PAL inoperable, which did not meet TS 3.0.4. During the investigation of this event, the technical review group (TRG) discovered a previous occurrence as described below.

On September 20 and 21, 1990, PAL dP Gauges PI-176 and PI-178, respectively, were removed from the PAL to be calibrated. The gauges were returned to the PAL and no PMT was performed to demonstrate PAL operability within the 24 hours allowed by TS 3.6.1.3, Action b.

B. Background:

The containment PAL provides access to containment while maintaining a pressure boundary between containment and outside atmosphere. DP Gauges PI-175 and PI-176 are part of the pressure boundary between atmosphere and the inside of the air lock. PI-178 and PI-181 are part of the pressure boundary between the inside of the air lock and containment. A PMT following replacement of one of these four gauges ensures that the pressure boundary between containment and atmosphere is intact. Failure of a gauge, or its associated fittings, could result in leakage between the inside of the PAL and containment and/or atmosphere.

TS 3.6.1.3 requires each containment air lock be operable in Modes 1, 2 (Startup), 3 (Hot Standby), and 4. Action b requires that with the air lock inoperable, either restore the air lock to operable status within 24 hours or be in Mode 3 within six hours and Mode 5 (Cold Shutdown) within the following 30 hours.

TS 4.6.1.3.b.2 requires that an air lock be demonstrated operable prior to establishing containment integrity when maintenance has been performed on the air lock that could affect the air lock sealing

capability. Operability shall be demonstrated by conducting an overall air lock leakage test.

TS 3.0.4 prohibits entry into a Mode when the limiting conditions for operation for that Mode are not met and the associated action requires a shutdown within a specified interval.

Surveillance Test Procedure (STP) M-8A, "Overall Leak Rate Testing of the Personnel Air Lock," satisfies the requirements of TS 4.6.1.3.b.2 as an overall air lock leakage test. This procedure requires that the test be performed prior to establishing containment integrity if the air lock has been opened and maintenance has been performed that could affect the air lock's sealing capability.

STP V-600, "General Containment Isolation Valve Leak Tests," also may be used as an LLRT to satisfy the requirements of TS 4.6.1.3.b.2.

C. Event Description:

On April 25, 1993, at approximately 0100 PST, personnel discovered an incorrect reading on Unit 2 PAL dP Gauge PI-178. During preparation of the work order to repair this gauge, the work planner specified the PMT as not required, based on no known TS operability concerns associated with the pressure gauge.

PI-178 was repaired and, at approximately 0800 PST, reinstalled. Since the work order had not indicated that a PMT was required, LLRT of the instrument fittings was not performed as required by TS 4.6.1.3.b.2.

On April 25, 1993, at 1045 PST, TS 3.0.4 was not met when Unit 2 entered Mode 4, without performing an LLRT on the PAL.

On April 26, 1993, at 0830 PST, during the review of mode transition documentation, the System Engineer discovered that the required PMT had not been performed. An LLRT was initiated, TS 3.6.1.3, Action b was entered, and the outer containment hatch door was locked. At 1200 PST, the LLRT was successfully completed for PI-178 and TS 3.6.1.3, Action b was exited.

Work Planning personnel performed a history search of all instances of PAL dP gauge removal to determine if required PMTs had not been performed in the past. The history search determined that PAL gauges had been removed and reinstalled four additional times since original installation. Two of the instances of gauge removal occurred during refueling outages and were followed by performances of STP M-8A, fulfilling the PMT requirement prior to transition to Mode 4. PMT was not performed for the other two instances and TS 3.6.1.3, Action b was not met. On May 7, 1993, a TRG determined that TS 3.6.1.3, Action b

was not met for these two additional instances, which are discussed below.

On September 20, 1990 and September 21, 1990, the Unit 2 PAL containment dP Gauges PI-176 and PI-178, respectively, were removed from the PAL to be calibrated. The gauges were reinstalled without performing a PMT, which is required by TS 4.6.1.3.b.2 to demonstrate PAL operability.

On September 21, 1990, TS 3.6.1.3, Action b was not met when a leak rate PMT was not performed on the PAL within 24 hours. On October 3, 1990, STP M-8A was performed for reasons unrelated to the maintenance on the pressure gauges, resulting in an operability verification for the PAL.

D. Inoperable Structures, Components, or Systems that Contributed to the Event:

None.

E. Dates and Approximate Times for Major Occurrences:

1.	September 20, 1990:	PAL dP Gauge PI-176 was removed from the PAL, calibrated, and then returned to the PAL, without any PMT performed.
2.	September 21, 1990:	Event date (PI-176). The PAL had been inoperable for more than the 24 hours allowed by TS 3.6.1.3, Action b. PAL dP Gauge PI-178 was removed from the PAL, calibrated, and then returned to the PAL, without any PMT performed.
3.	September 22, 1990:	Event date (PI-178). The PAL had been inoperable for more than the 24 hours allowed by TS 3.6.1.3, Action b.
4.	April 25, 1993:	PAL dP Gauge PI-178 was removed from the PAL, calibrated, and then returned to the PAL, without any PMT performed.
5.	April 25, 1993, at 1045 PDT:	Event date (PI-178). Unit 2 entered Mode 4 with the PAL inoperable.

6. April 26, 1993: Discovery date. The System Engineer determined that testing had not been performed on PI-178 prior to the Mode 4 transition on April 25, 1993.

7. May 7, 1993: Discovery date. The TRG determined that TS 3.6.1.3, Action b was not met for these two previous occurrences in September 1990.

F. Other Systems or Secondary Functions Affected:

None.

G. Method of Discovery:

The April 25, 1993, event was discovered by System Engineering during the review of mode transition documentation. The September, 1990, events were discovered by the TRG during the investigation of the April 25, 1993, event.

H. Operator Actions:

September 1990: None.

April 25, 1993: TS 3.6.1.3, Action b was entered and the outer containment hatch door was locked.

I. Safety System Responses:

None required.

III. Cause of the Event

A. Immediate Cause:

September 1990: No PMT was performed on PI-176 (or PI-178) within the 24 hours allowed by TS 3.6.1.3, Action b.

April 25, 1993: No PMT was performed on PI-178 prior to Unit 2 entry into Mode 4.

B. Root Cause:

The root causes of these events are programmatic deficiency. The references used by the I&C work planners to prepare the work order, including the component database, did not identify that the tubing and

fittings associated with the pressure gauges comprised a containment leakage boundary and that disconnection of the pressure gauges required a leak rate PMT.

IV. Analysis of the Event

In the event of an accident resulting in the pressurization or contamination of the containment atmosphere, any leakage past PI-178 would be contained by the pressure boundary between the PAL and atmosphere. During these events the PAL doors were operable and the outside door would have contained any pressurization or contamination within the PAL. Subsequent testing of the PAL following both events demonstrated that leakage was within acceptance criteria.

Thus, this event did not adversely affect the health and safety of the public.

V. Corrective Actions

A. Immediate Corrective Actions:

1. STP M-8A1 was successfully performed on October 3, 1990, for the PAL, meeting the PMT requirements of TS 4.6.1.3.b.2 for PI-176 and PI-178, and demonstrating PAL operability.

2. On April 26, 1993, the PAL was declared inoperable and TS 3.6.1.3, Action b was entered. The outer containment hatch door was locked to meet Action b, and an LLRT was performed to meet the PMT requirements of TS 4.6.1.3.b.2 for PI-178 and demonstrate PAL operability.

B. Corrective Actions to Prevent Recurrence:

1. The component database for the PAL gauges (PI-175, PI-176, PI-178, and PI-181) was updated to note that the tubing and fittings associated with the pressure gauges comprise a containment leakage boundary and that any maintenance which results in disconnection requires a leak rate PMT to meet the requirements of TS 4.6.1.3.b.2. The database has also been updated to include reference to STPs M-8A1 and V-600.

2. A maintenance bulletin was distributed to inform the appropriate personnel of this event.

3. Labels were attached to affected pressure gauges and instrument tubing in both units to inform personnel that instrument tubing and fittings comprise a containment leakage boundary and that disconnection requires a subsequent LLRT.

4. PG&E searched applicable drawings for other pressure gauges associated with the emergency air lock and electrical penetrations that might compromise the containment pressure boundary during maintenance activities, and none were found.

VI. Additional Information

A. Failed Components:

None.

B. Previous Similar Events:

LER 1-86-023-00, "Missed Surveillance on Containment Emergency Air Lock Due to Incorrect Update of the Preventive Maintenance and Test Scheduler"

This previous LER reported exceeding the allowable time limit for the containment emergency air lock surveillance. An STP required for both emergency air lock and PAL operability was performed on the PAL only. However, the test was reported as complete for both air locks to the Preventive Maintenance and Test Scheduler. The root cause of this previous event was personnel error (cognitive). The corrective actions to prevent recurrence included reviewing the event with associated personnel, implementing a new Recurring Task Scheduler System, and revising the applicable procedures. These previous actions could not have prevented the events of this current LER in that they address problems with regularly scheduled STPs, not PMT requirements.