Pacific Gas and Electric Company
Humboldt Bay Power Plant
TOM A. MOULIA
Plant Manager

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May 15, 1997

PML-97-049

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

Docket No. 50-133, OL-DPR-7
Humboldt Bay Power Plant, Unit 3
Licensee Event Report 3-97-001-00
Process Monitor Settings

Dear Commissioners and Staff:

Pursuant to 10 CFR 50.73(a)(2)(i)(B), PG&E is submitting the enclosed Licensee Event Report regarding incorrect settings of the process monitor warning and high alarms.

This condition did not affect the health and safety of the public.

Sincerely,

Tom Moulia

TOM A. MOULIA

Enclosure

cc: Richard F. Dudley
Kenneth E. Perkins
Ellis W. Merschoff
Humboldt Distribution
INPO

HB3-97-QC-N003

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Humboldt Bay Power Plant, Unit 3	0 5 0 0 0 1 3 3	1 OF 5

TITLE (4) Process Monitor Alarm Settings

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 (5)
4	8	97	97	- 0 0 1 -	0 0	5	15	97		

OPERATING MODE (9)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR: (1
N	

POWER LEVEL (10): 0 0 0

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 Sokolsky, Senior Licensing Engineer	707	444-0801

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 15, 1997, an operator performed a weekly surveillance test to set the liquid radwaste process monitor alarm settings. The operator observed that the as-found conditions set the previous week, on April 8, 1997, were too high and exceeded the limit in Technical Specification V.B.2.b. The process monitor warning alarm should have been set at 1500 counts per minute (cpm), but was found to be set at 41,000 cpm. The process monitor high alarm should have been set at 5000 cpm, but was found to be set at 300,000 cpm. The operator immediately set the alarm settings to the correct values.

The root cause of the event was personnel error, cognitive, in that the operator who incorrectly set the process monitor alarm settings on April 8 read the wrong scale on the monitor. Corrective actions to prevent recurrence include: coaching and counseling the employee as part of the positive discipline program; and revising the test procedure to modify the method by which the alarm settings are verified, and to specify the proper scale to use.

I. Plant Conditions

Unit 3 was in a SAFSTOR decommissioning mode.

II. Description of Problem

A. Event Description:

Surveillance Test Procedure (STP) 3.21.3, Weekly Process Monitor Checks, is used to set the process monitor (WD)(MON) warning light and high alarm settings at 1500 counts per minute (cpm) and 5000 cpm, respectively. If the high alarm setpoint is reached during normal plant operations, automatic actuation occurs to stop direct discharge. The STP 3.21.3 settings ensure Humboldt Bay Power Plant (HBPP) process monitor setpoints remain in compliance with Technical Specification V.B.2.b. This Technical Specification requires the process monitor alarm to be set at or below 1.0 E-4 micro curies per milliliter (ml) for Cs-137 (which is equivalent to approximately 26,500 cpm).

When a Senior Control Operator performed STP 3.21.3 on April 15, 1997, the as-found settings for the process monitor warning and high alarms were noted to be 41,000 cpm and 300,000 cpm, respectively. The value of 41,000 cpm is equivalent to approximately 1.28 E-4 micro curies per ml, and 300,000 cpm is equivalent to approximately 9.78 E-4 mirco curies per ml. The latter value exceeds the Technical Specification limit of 1.0 E-4 micro curies per ml.

The process monitor has two scales: one from 1 cpm - 10,000 (10K) cpm, the other from 10 cpm - 1,000,000 (1M) cpm. A selector switch (WD)(HS) below the monitor has two settings: 10K and 1M. To perform STP 3.21.3, the operator has the selector switch set to 1M, and sets the alarms for the readings on the 1M scale of the monitor. On April 8, 1997, when a different Senior Control Operator performed the STP, he had the selector switch in the 1M position, but read the 10K scale. The value of 1500 cpm as read on the 10K scale corresponds to 41,000 cpm on the 1M scale, and 5000 cpm on the 10K scale corresponds to 300,000 cpm on the 1M scale.

B. Discovery:

When a Senior Control Operator performed STP 3.21.3 on April 15, 1997, the as-found settings for the process monitor warning and high alarms were noted to be 41,000 cpm and 300,000 cpm, respectively, instead of 1500 cpm and 5000 cpm, respectively. The Senior Control Operator immediately set the alarm settings to the correct values in accordance with STP 3.21.3.

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

None.

D. Dates and Approximate Times for Major Occurrences:

April 8, 1997: Event Date: A Senior Control Operator performed STP 3.21.3, misread the process monitor scale and incorrectly set the process monitor warning and high alarm settings.

April 15, 1997: Discovery Date: A different Senior Control Operator performed STP 3.21.3 and noted the as-found settings for the process monitor warning and high alarms were found to be incorrect. The Senior Control Operator immediately set the alarm settings to the correct values in accordance with STP 3.21.3.

E. Other Systems or Secondary Functions Affected:

None.

F. Method of Discovery:

When a Senior Control Operator performed STP 3.21.3 on April 15, 1997, the as-found settings for the process monitor warning and high alarms were noted to be 41,000 cpm and 300,000 cpm, respectively, instead of 1500 cpm and 5000 cpm, respectively.

G. Operator Actions:

Upon discovery, the Senior Control Operator set the alarm settings to the correct values in accordance with STP 3.21.3.

H. Safety System Responses:

None.

III. Cause of the Problem

A. Immediate Cause:

The immediate cause of this event was determined to be that the Senior Control Operator read the wrong scale on the process monitor when setting the alarm set points.

B. Root Cause:

The root cause of this event was determined to be personnel error, cognitive, in that the Senior Control Operator read the wrong scale on the process monitor when setting the alarm set points.

C. Contributory Cause:

A contributing cause of this event was identified to be a procedure weakness in that STP 3.21.3 did not clearly identify the appropriate scale for the operator to use when setting the alarm set points.

IV. Analysis of the Event

During the period of April 8-15, 1997, the liquid release pathway monitor alarm was set at 300,000 cpm, which is equivalent to a radwaste concentration of 9.78 E-4 mirco curies per ml and is a factor of 10 above the Technical Specification V.B.2.b process monitor alarm setpoint limit of 1.0 E-4 micro curies per ml for Cs-137.

While the monitor alarm setpoint was outside the Technical Specification V.B.2.b limit during the period of April 8-15, it was still capable of performing its function of terminating any liquid release prior to exceeding the Technical Specification VI.B.1.a 10CFR20 APP B effluent limits. This is because of conservatisms in the setpoint requirement and circulator dilution of the liquid radwaste stream during the period.

In addition, all liquid discharges that occurred during this period were monitored for levels of activity by sampling and by a process monitor with a strip chart recorder output that was functional. A review of the strip chart recorder and the batch and composite sample analysis results indicate that the activity levels in the liquid releases during the period of April 8-15, 1997, were well below the Technical Specification VI.B.1.a 10CFR20 APP B effluent concentration limits for liquid radioactive waste discharges at the site boundary.

For example, the Technical Specification VI.B.1.a and 10CFR20 APP B effluent concentration limit for Cs-137 is 2.0 E-5 micro curies per ml. In comparison the Cs-137 concentration of the single radwaste batch released during the period was 3.02 E-6 micro curies per ml, and the caisson sump direct discharge composite samples were less than 1.3 E-8 micro curies per ml. Furthermore, the review of the strip chart recorder indicated that no liquid discharges during this period exceeded approximately 3.0 E-6 micro curies per ml. These levels were also consistent with, and did not deviate from, the normal acceptable levels that occurred during the previous weeks.

Based on the above information, the health and safety of the public were not affected by this event.

V. Corrective Actions

A. Immediate Corrective Actions:

1. The process monitor warning and high alarm settings were reset correctly.

2. All operators were re-educated on the proper method to set the process monitor warning and high alarm settings.

3. A shift order was sent to shift foremen requiring them to independently verify the correct settings for process monitor alarms anytime they are changed. This is an interim measure to remain in place until Corrective Action to Prevent Recurrence B.2 is implemented.

B. Corrective Actions to Prevent Recurrence:

1. Discussed the event with the responsible employee. Coached and counseled the employee as part of the positive discipline program.

2. Revise STP 3.21.3 to require an independent verification whenever process monitor high alarm settings are changed.

3. Revise STP 3.21.3 to clearly identify the appropriate scale for the operator to use when setting the alarm set points.

4. Review other STPs that contain alarm settings required by Technical Specifications to determine if these other procedures require modifications similar to those described in Corrective Actions to Prevent Recurrence B.2 and B.3.

VI. Additional Information

A. Failed Components:

None.

B. Previous LERs on Similar Events:

None.