

Pacific Gas and Electric Company

*To Mr. McGowan*

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SEP 11 1992  
NRC REGION V

September 4, 1992

PG&E Letter No. DCL-92-192

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

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Re: Docket No. 50-275, OL-DPR-80  
Docket No. 50-323, OL-DPR-82  
Diablo Canyon Units 1 and 2  
Response to Request for Information in NRC Inspection Reports  
50-275/92-15 and 50-323/92-15

Gentlemen:

NRC Inspection Reports 50-275/92-15 and 50-323/92-15, dated August 3, 1992, and received by PG&E on August 6, 1992, identified several concerns regarding control room operations during the 1992 annual emergency preparedness exercise. These concerns included the verification of reactor shutdown by the operating crew and the inability of the NRC inspector to observe operator actions due to the use of a taped scenario. PG&E's responses to the concerns are enclosed.

Sincerely,

Gregory M. Rueger

cc: Ann P. Hodgdon  
John B. Martin  
Philip J. Morrill  
Harry Rood  
CPUC  
Diablo Distribution

Enclosure

1045S/85K/DPS/2237

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## ENCLOSURE

RESPONSE TO REQUEST FOR INFORMATION IN  
NRC INSPECTION REPORTS 50-275/92-15 and 50-323/92-15

The cover letter to NRC Inspection Reports 50-275/92-15 and 50-323/92-15, dated August 3, 1992, requested a response to several concerns regarding control room operations during the 1992 annual emergency preparedness exercise. These concerns included the verification of reactor shutdown by the operating crew and the inability of the NRC inspector to observe operator actions due to the use of a taped scenario. PG&E's responses to the concerns follow.

Failure to Properly Verify Reactor Shutdown (Open Item 92-15-01)

## NRC Concern:

Operators did not properly verify that the reactor was shutdown after the reactor trip. Despite the clearly indicated failure of the PR [Power Range], IR [Intermediate Range], and SRNIs [Source Range Nuclear Instruments] and of DRPI [Digital Rod Position Indication] Step 1 of E-0 [Emergency Operating Procedure], "Reactor Trip or Safety Injection," was verified completed satisfactorily by the crew. Subsequent questioning revealed the operators responsible for this verification believed the NIs and DRPI were operable during the performance of step 1. Step 1 involved verifying power was decreasing by using these NIs, all rods are bottomed by using DRPI, and reactor trip breakers were open. DRPI was flashing indicating failure and all NIs were pegged low indicating failure. Reactor trip breakers were satisfactorily verified open. Seventeen minutes after the trip the SRNI was reported failed, to the Senior Control Room Operator (SCO), and 19 minutes after the trip the DRPI was reported failed to the SCO. In this instance the operators did not properly verify the reactor was shutdown.

## PG&amp;E Response:

PG&E has determined that DRPI indications on the simulator gave misleading information to the operators. The display was different from what would have been seen if the actual event had occurred. The numerical magnitude of conditional malfunctions necessary for this scenario exceeded the capacity of the simulator. Therefore, contrary to the scenario, the simulator showed proper and expected DRPI response to the reactor trip. PG&E will provide additional training on verifying NI indication following a reactor trip during licensed operator initial and requalification training.



Ineffective Communication in Control Room (Minor Concern)

NRC Concern:

At times, operators demonstrated ineffective communication because some orders and information were not acknowledged. This was particularly evident during coordination between the Control Operator (CO) and Assistant CO as Feed Bypass Valves were placed in Auto and in reports to the SCO during implementation of the Emergency Procedures.

PG&E Response:

PG&E believes that significant improvement has been made in control room communications in the last two years. PG&E concurs that improvements are still necessary and is in the process of improving crew performance in this area by continuing emphasis during simulator requalification training.

Failure to Follow Procedures (Minor Concern)

NRC Concern:

Operators did not follow a procedure in two instances. Although verbatim compliance was not required, in these instances the inspector concluded that the operators did not comply with the intent of the procedures. Step 6.2.14 of OP-L4, "Normal Operation at Power," directed the operators to place the Feedwater Bypass Valves in auto at 30% power during a downpower. Contrary to this the operators placed the Feedwater Bypass Valves in Auto at 100% power. Also a note in OP-L4 directed the operators to borate as necessary to maintain Axial Flux Difference (AFD) within the target band during a downpower. Contrary to this the operators maintained AFD within the Tech Spec Limits, but not the target band, during the downpower. During subsequent questioning the facility agreed to evaluate the need for changing step 6.2.14 of OP-L4 to match the actual operation of the simulator and the plant.

PG&E Response:

The operating procedure used for the plant power reduction, OP L-4, is intended to be used for normal plant power changes. In the emergency exercise, a decision was made to reduce unit power rapidly in order to minimize the potential impact of the explosive devices that were postulated to be placed around the plant. The portions of the two procedures not followed involved maintaining reactor axial flux difference within the target band and the specific power level at which the main feedwater bypass valves were opened and placed in automatic control. Although both of these items are important during a normal shutdown, they are not specific requirements if a rapid shutdown is required.

PG&E will review and revise OP L-4 as required to provide additional guidance if a rapid plant shutdown is required.



Failure to Review Annunciator Response Procedures (Minor Concern)

NRC Concern:

Operators failed to refer to all Annunciator Response Procedures (ARPs) during the exercise. Out of 5 Annunciators received prior to the reactor trip when it would have been appropriate to refer to the ARPs, ARPs were referred to once. This did not effect plant status.

PG&E Response:

In all cases, the alarms that were received were expected, normal alarms for a plant down power maneuver and that required no operator actions. PG&E management expectations on use of annunciator response procedures require that the procedures be referred to on unexpected alarms only. PG&E will review policy documents on procedure use to ensure that management expectations are clearly defined.

Inability to Observe Operators During Critical Portion of Drill (Open Item 92-15-02)

NRC Concern:

The problem regarding the use of a taped scenario for control room actions was identified by the team as an apparent weakness in scenario implementation and development. NRC inspection procedure 82301 (Evaluation of Exercises for Power Reactors) indicated that inspectors will assess the performance of the control room staff as it conducts the task of "analysis of plant conditions and corrective actions." This could not be appropriately observed during the most critical times of the exercise (after the explosion leading to a General Emergency) since reactor control activity was taped and fed to the staff rather than their responding to the event in their normal manner. This could result in an inability for the licensee and the NRC to evaluate the exercise due to lack of observation opportunity. Future scenario activity will be reviewed by NRC to ensure that ability of the control room staff to respond to degrading plant conditions is appropriate to effectively implement the site emergency plan and to respond to plant conditions, to mitigate the event in progress, and coordinate with other emergency response facilities.

PG&E Response:

PG&E understands that this concern was not intended to imply that taped scenarios are unacceptable per se; rather, NRC identified a concern that there was insufficient opportunity to evaluate the control room (simulator) operators as stated in the exercise objectives. Specifically, since the simulator switched to a taped response mode approximately 22 minutes following the LOCA initiation, the operator actions to place the unit in a stable condition could not be observed.



PG&E agrees with this concern. Additional attention will be applied in future exercises to ensure that the scenario fully supports all exercise objectives. Furthermore, PG&E is evaluating various methods to actively involve the control room in the later phases of an exercise while still maintaining tight control over plant parameters affecting offsite release data.



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 50-323 Diablo Canyon Nuclear Power Plant, Unit 2, Pacific Ga 03000323

AUTH. NAME: RUEGER, G. M.  
 RECIP. NAME: \_\_\_\_\_  
 AUTHOR AFFILIATION: Pacific Gas & Electric Co.  
 RECIPIENT AFFILIATION: Document Control Branch (Document Control Desk)

SUBJECT: Forwards response to NRC 920803 ltr raising concerns re control room operations during 1992 annual emergency preparedness exercise, documented in Insp Repts 50-275/92-15 & 50-323/92-15.

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Pacific Gas and Electric Company

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Gregory M. Rueger  
Senior Vice President and  
General Manager  
Nuclear Power Generation

September 4, 1992

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