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PACIFIC GAS AND ELECTRIC COMPANY

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JAMES D. SHIFFER
VICE PRESIDENT
NUCLEAR POWER GENERATION

March 14, 1986

PGandE Letter No.: DCL-86-071

Mr. James M. Taylor, Director
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Docket No. 50-323, OL-DPR-82
Diablo Canyon Unit 2
Response to NRC Enforcement Action EA 86-04

Dear Mr. Taylor:

On February 12, 1986, NRC Region V issued Enforcement Action EA 86-04, comprising a Notice of Violation and Proposed Imposition of Civil Penalty (Notice) for a Severity Level III violation involving the inoperability of one channel of the actuation logic of one main steam isolation valve.

Pursuant to 10 CFR 2.201 and in accordance with the Notice, enclosed is PGandE's response to the Notice. PGandE agrees with the statement of the violation and will pay the proposed penalty. Enclosed is a check for $50,000 payable to the Treasurer of the United States. PGandE has taken prompt and extensive corrective actions on this matter as discussed in the enclosed response to the Notice.

It is PGandE's policy that conditions adverse to quality be properly identified and corrected in order to resolve plant problems in a timely fashion. This policy requires that appropriate investigative and troubleshooting techniques be followed, that there be effective control of work activities, and that proper postmaintenance testing be conducted to

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ensure that systems operate as designed. PGandE believes that the corrective actions taken in this matter will serve to achieve these policy objectives.

Kindly acknowledge receipt of this material on the enclosed copy of this letter and return it in the enclosed addressed envelope.

Subscribed to in San Francisco, California this 14th day of March 1986.

Respectfully submitted,

Pacific Gas and Electric Company

By _____
J. D. Shiffer
Vice President
Nuclear Power Generation

Robert Ohlbach
Philip A. Crane, Jr.
Richard F. Locke
Attorneys for Pacific
Gas and Electric Company

By _____
Richard F. Locke

Subscribed and sworn to before me
this 14th day of March 1986

_____
Virginia L. Rundell, Notary Public in
and for the City and County of
San Francisco, State of California

My commission expires March 28, 1986

VIRGINIA L. RUNDELL
NOTARY PUBLIC-CALIFORNIA
CITY AND COUNTY OF
SAN FRANCISCO
My Commission Expires March 28, 1986

Enclosure

cc: L. J. Chandler
R. T. Dodds
J. B. Martin
B. Norton
H. E. Schierling
S. A. Varga
CPUC
Diablo Distribution

0767S/0042K/JHA/

ENCLOSURE

RESPONSE TO NOTICE OF VIOLATION AND
PROPOSED IMPOSITION OF CIVIL PENALTY

Pursuant to 10 CFR 2.201, PGandE hereby responds to Enforcement Action EA 86-04, comprising a Notice of Violation and Proposed Imposition of Civil Penalty (Notice) for a Severity Level III violation issued by NRC Region V on February 12, 1986. The Notice cited a concern regarding the inoperability of one channel of the actuation logic of one main steam isolation valve.

STATEMENT OF VIOLATION

"Technical Specification 3.3.2 requires that "Engineered Safety Features Actuation System (ESFAS) instrumentation channels and interlocks shown in Table 3.3-3 shall be OPERABLE ..." Action statement b. of TS 3.3.2 specifies that "With an ESFAS instrumentation channel or interlock inoperable, take the ACTION shown in Table 3.3-3." Table 3.3-3 requires both channels for the automatic actuation relays of the "Steam Line Isolation" function to be operable in modes 1 through 3. Table 3.3-3 ACTION 22 for the "Automatic Actuation Logic and Actuation Relays" of the "Steam Line Isolation" function requires that "With the number of OPERABLE Channels one less than the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 6 hours and in at least HOT SHUTDOWN within the following 6 hours...".

Contrary to the above, Diablo Canyon, Unit 2 was in mode one, two or three from July 25, 1985 until August 31, 1985 and again from October 7, 1985 until November 27, 1985 with one channel of the automatic actuation logic for main steam isolation valve FCV-44 inoperable and did not achieve HOT STANDBY within 6 hours nor HOT SHUTDOWN within the following 6 hours.

This is a Severity Level III Violation (Supplement I). (Civil Penalty $50,000)."

ADMISSION OR DENIAL OF THE VIOLATION

PGandE agrees the violation occurred as described above. PGandE will pay the proposed penalty.

REASONS FOR THE VIOLATION

The reasons for the above violation are as follows:

1. Wiring change

   Subsequent to preoperational startup testing, an undocumented wiring change was made to the control circuit of Train A of Main Steam Isolation Valve (MSIV) FCV-44. This change resulted in the inoperability of Train A for the MSIV. The preoperational startup tests were designed and conducted in a manner to provide assurance that the plant systems would operate as designed. Documentation was reviewed which verified that the tests were conducted as reviewed and approved. Because of plant modifications requiring a rerouting of conduit, the control circuit was "determinated" and "reterminated" in early 1984. An original test

procedure was modified for use in verifying that the control circuit would actuate correctly after the "retermination". Based on discussions with the individual (no longer working for PGandE) who conducted the test, it appears that the system was operable in September 1984. PGandE cannot determine with certainty when the change was made; however, results of the investigation indicate that the change was made between the "retermination" and July 1985.

2. Equipment History

The DCPP procedural requirements for equipment history data base did not include the requirement to report blown fuses on Action Requests (ARs). Because of this, the fuse failure of July 27, 1985 was not documented in the equipment history data base and was therefore not considered in evaluating the subsequent fuse failures of August 14 and 29, 1985. These fuse failures were eventually mistakenly attributed to a shorted solenoid.

3. Postmaintenance Testing

Postmaintenance testing was not specifically designed for detection of wiring errors. Reliance was placed on the standard surveillance test to demonstrate operability. For example, during the solenoid replacement, the postmaintenance testing consisted of solenoid valve actuation and the associated MSIV closure timing test, and continuity testing which demonstrated operability assuming no wiring error was present. However, these tests were not capable of detecting the wiring error. The testing assumed that the wiring connections were made correctly.

4. Technical Review Group

The Technical Review Group (TRG) investigation was inadequate with respect to input from the persons who actually performed work on the system (i.e., solenoid replacement and "retermination" testing). Neither individual was employed at PGandE at the time of the investigation and PGandE did not attempt to contact them to obtain information concerning the event. The investigation should have ensured that all persons involved in the event were contacted for information and, as necessary, be present in the TRG to ensure that the information available to the TRG was accurate and complete. PGandE has since contacted all persons involved.

5. Problem Investigation and Resolution

Insufficient attention was being directed to troubleshooting, investigating, and resolving this type of problem. This resulted in not detecting and correcting the wiring error in a timely manner.

CORRECTIVE STEPS WHICH HAVE BEEN TAKEN AND RESULTS ACHIEVED

This response to the Notice and Licensee Event Report 2-85-019 describe the corrective actions which PGandE has taken with regard to this event. These

extensive corrective actions which focus on the root causes of the event address findings identified in IE Inspection Report 50-323/85-45 and subsequent discussions between Region V and PGandE management at the January 10, 1986 Enforcement Conference held at DCPP.

1. Wiring Change

   Although the specific date of the wiring change has not been established, the clearance procedural controls used for work control were strengthened during the transition from plant construction to operation and provide additional assurance that such uncontrolled changes will not occur in the future. Since no changes of the nature described above have been identified as originating after plant operational procedures were implemented, additional strengthening of these procedures does not appear to be necessary. While the procedures in their present form provide adequate control over work activities, PGandE will continue to monitor the effectiveness of the procedures to ensure that they adequately control changes to the plant.

2. Equipment History

   The Operations Department issued a Shift Order on January 3, 1986, and a Shift Foreman memorandum on January 6, 1986 to require that all blown fuse indications be documented by an Action Request (AR) to provide a complete equipment history data base.

   Electrical and I&C maintenance personnel received additional training emphasizing the importance of checking the equipment history data base prior to performing corrective maintenance.

3. Postmaintenance Testing

   Work planning center personnel and maintenance foremen have been counseled to ensure that appropriate postmaintenance functional testing is specified.

   To provide additional assurance that proper postmaintenance testing is conducted on safety-related components, Administrative Procedure C-6S3, "Post Maintenance Testing," was revised to require that the planned postmaintenance testing is reviewed by the organization performing the maintenance to ensure that it confirms the adequacy of the maintenance and also tests the equipment features upon which the maintenance is performed.

4. Technical Review Group

   On July 8, 1985 and November 25, 1985, the Plant Manager issued memoranda on the conduct of TRGs. These memoranda emphasized the importance of (a) thoroughly investigating events; (b) consulting with all persons involved in the event; and (c) ensuring whenever possible that the

persons most closely involved are present at the TRG. As a result of this event, these policies have been reemphasized.

On January 14, 1986, the manager of Nuclear Operations Support (NOS) assigned the Onsite Safety Review Group the responsibility of critiquing the conduct of TRGs at DCPP. On a quarterly basis, an overall assessment of the TRG process will be prepared and presented to the General Office Nuclear Plant Review and Audit Committee (GONPRAC).

5. Problem Investigation and Resolution

Corrective actions have been taken to achieve an increased attention to appropriate investigation and troubleshooting techniques in order to resolve plant problems in a timely fashion. These corrective actions are discussed above and include:

a. Documentation of all blown fuses on ARs to ensure a complete equipment history data base is available.

b. Training on the importance of checking the equipment history data base during corrective maintenance.

c. Review of postmaintenance testing requirements to assure proper testing.

d. Increased emphasis on the importance of conducting thorough TRG investigations to ensure proper identification of root causes of events and to ensure appropriate corrective action is taken to avoid similar problems in the future.

Evidence of results achieved is discussed below.

Steps have been taken to resolve the issues which collectively resulted in the MSIV inoperability. As a result of these steps, definite improvements are evident in these areas. Root causes of problems are identified in a timely manner and appropriate corrective actions are taken. For example, recently a minor wiring problem was discovered. The root cause of the problem was identified and corrected before proceeding with unit operations.

The routine plant surveillance test program, in conjunction with the special tests for components with continuity test circuits, has demonstrated the operability of all safety-related equipment in the plant. Thus, PGandE is confident that the operability of the plant has been demonstrated.

CORRECTIVE STEPS WHICH WILL BE TAKEN

No additional corrective actions are proposed to be taken.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance with all Technical Specification requirements was achieved on November 27, 1985 when the wiring was corrected and MSIV Train A was satisfactorily tested by slave relay actuation and returned to service.