PACIFIC GAS AND ELECTRIC COMPANY

COPY

April 19, 1985

PGandE Letter No.: DCL-85-158

Mr. George W. Knighton, Chief
Licensing Branch No. 3
Division of Licensing
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Docket No. 50-275, OL-DPR-80
Docket No. 50-323
Diablo Canyon Units 1 and 2
Pipeway Structures

Dear Mr. Knighton:

On February 28, 1985, the NRC Staff conducted a civil/structural audit of the Unit 1 pipeway structure. On March 7, 1985, PGandE responded to several questions raised at the audit by the NRC Staff and its consultants. On March 11, 1985, in response to a further Staff request, PGandE verbally clarified the applicability of the Unit 2 responses to Unit 1. This letter specifically documents conclusions on the pipeway structures as requested by the Staff in Supplemental Safety Evaluation Report (SSER) 29.

Calculation No. 1149C-1, Rev. 0, provided to the Staff on March 6, 1985, was prepared for the Unit 2 pipeway structure to evaluate critically loaded pipeway structure bents for load combinations including design earthquake (DE) or double design earthquake (DDE) loads with pipe rupture loads. The results confirmed that the Unit 2 pipeway structure satisfies design criteria for these load combinations.

A Unit 1 study was performed for critically loaded pipeway structure bents for the same load combinations. This study confirmed that the Unit 1 pipeway structure also satisfies design criteria for the DE or DDE loads combined with pipe rupture loads.

PGandE believes that these conclusions on the Units 1 and 2 pipeway structures are responsive to the request identified in SSER 29, Section 8.3, with regard to the pipeway structure.

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

Sincerely,

W. A. Raymond

for J. D. Shiffer

cc: C. J. Constantino
R. T. Dodds
J. B. Martin
H. E. Schierling
Service List

bcc: Diablo Distribution

DWO

0208S/0031K

ACTS #1952

ENCLOSURE 1

DIABLO CANYON UNITS 1 AND 2
RESPONSE TO QUESTIONS TWO THROUGH
FIVE OF NRC LETTER DATED JANUARY 16, 1985

Note: Response to questions one and six was provided in PGandE letter DCL-85-025, dated January 24, 1985.

NRC Request, Item 2

Item 2.1 requests confirmation that all components whose function is required to trip the reactor are identified as safety-related. Item 2.1 also requests a summary report describing the vendor interface program for the reactor trip system components. The PG&E response of November 7, 1983, commits to completing the program by June 1985 for Unit 1 and June 1986 for Unit 2, and it commits to submitting a report detailing the required information by August 1985 for Unit 1 and August 1986 for Unit 2. The staff considers Item 2.1 to be one of the higher priority items in Generic Letter 83-28, which was issued in July 1983. Therefore, PG&E should submit a description of the program and implement it prior to initial criticality for Unit 2, and within 90 days for Unit 1.

PGandE Response

1. PGandE has performed the following work to address Item 2.1:

   - Developed a list of components which trip the reactor
   - Confirmed that the safety-related components on the above list are so identified
   - Developed a list of documents that identify and control activities on reactor trip system components
   - Developed a list of suppliers of reactor trip components
   - Informed the reactor trip component suppliers of the significance of properly transmitting their documentation to PGandE

- o Enhanced the existing program to ensure that vendor information is controlled, referenced, and incorporated into Company procedures

2. Summary of Vendor Interface Program

PGandE has closely coupled response to the vendor interface portion of Item 2.1 with the industry response to Item 2.2.2. The industry response was provided in NUTAC 84-10, "Vendor Equipment Technical Information Program" (VETIP), which was submitted to the NRC on March 23, 1984. PGandE participated in the development of the NUTAC program and endorses it as described in NUTAC 84-10.

The VETIP is an industry controlled program that does not rely on vendor action, other than by the NSSS supplier, to provide equipment information to utilities. The VETIP provides information developed by industry experience through existing systems and programs such as the Nuclear Plant Reliability Data System (NPRDS), the Significant Event Evaluation and Information Network (SEE-IN), and the NRC reporting programs that disseminate significant failure information.

The VETIP refutes the portions of GL 83-28 that require an active interface program with vendors of safety-related components and explains why it is a superior, positive approach to addressing the real concerns expressed in the generic letter, i.e., to improve the safety and reliability of nuclear units by ensuring that utilities are provided with significant and timely technical information concerning reliability of safety-related components.

PGandE's vendor interface program for the reactor trip system components relies heavily on the VETIP approach. PGandE has procedures that control the dissemination of operating experience and the review of NRC I&E Bulletins, Circulars, and Notices. PGandE has an established program with its NSSS vendor that addresses control of documentation. In addition, PGandE has contacted each reactor trip component supplier by mail and requested their cooperation in the distribution of supplier documentation.

PGandE has established additional procedures which ensure control of vendor documents upon their receipt, performance of technical reviews of documents on reactor trip components, and incorporation of appropriate information into the plant manual. These departmental procedures are provided as Attachments 1, 2, and 3.

NRC Request, Item 3

Item 2.2.1 requests a description of the equipment classification program for all safety-related components. The PG&E response of November 7, 1983, commits to completing this program by September 1985, but the letter does not specify a submittal date. PG&E should submit a description of the program prior to startup from the first refueling outage for Unit 1 and Unit 2.

PGandE Response

As stated in PGandE letter DCL-85-025, dated January 24, 1985, PGandE will submit a description of the equipment classification program for all safety-related components prior to startup from the first refueling outage for Unit 1 and Unit 2.

NRC Request, Item 4

For Item 3.1, PG&E needs to state when the procedures for post-maintenance testing of the reactor trip system components will be reviewed and approved. According to the PG&E response of November 7, 1983, a statement confirming implementation of this item will be made by January, 1986. The staff considers Item 3.1 to be one of the higher priority items in Generic Letter 83-28, which was issued in July, 1983. Therefore, PG&E should confirm implementation of this item prior to initial criticality for Unit 2. Your response of January 2, 1985 to this Item for Unit 1 is currently under staff review.

PGandE Response

1. Unit 1

PGandE's response to Item 3.1 was submitted in PGandE letter DCL-85-002, dated January 2, 1985. NRC letter dated March 21, 1985 requested further information on this item. PGandE's response to the March 21, 1985 NRC letter is provided as Enclosure 2 to this letter.

2. Unit 2

In PGandE letter dated November 7, 1983, NRC Action Item 3.1, "Post-Maintenance Testing (Reactor Trip System Components)," was divided by PGandE into Items 3.1.1, 3.1.2, 3.1.3, and 3.1.4. PGandE has performed the work associated with these four items for Unit 2 as discussed below.

3.1.1 Requirement:

"Obtain list of reactor trip components."

3.1.1 Action:

PGandE has developed a list of reactor trip components.

3.1.2 Requirement:

"Review maintenance procedures and Technical Specifications affecting reactor trip components to assure post-maintenance testing is performed."

3.1.2 Action:

PGandE has reviewed maintenance procedures and technical specifications affecting reactor trip components to ensure that post-maintenance testing is performed. Administrative Procedure NPAP C-6 ensures that surveillance tests are conducted after maintenance is performed on safety-related components. Accordingly, the tests must be completed satisfactorily before the component(s) or system(s) is declared operable.

3.1.3 Requirement:

"Review vendor and engineering recommendations to ensure appropriate test guidance is included in maintenance procedures and Technical Specifications affecting reactor trip components."

3.1.3 Action:

PGandE has reviewed applicable vendor and engineering recommendations to ensure that appropriate test guidance is included in maintenance procedures and technical specifications affecting reactor trip components. All recommendations have been incorporated into the appropriate maintenance procedures. No technical specification changes were made.

3.1.4 Requirement:

"Identify any post-maintenance test requirements in Technical Specifications that degrade safety of reactor trip components."

3.1.4 Action:

PGandE has not identified any post-maintenance test requirements in the technical specifications that degrade the safety of reactor trip components. PGandE letter DCL-84-364, dated November 30, 1984, which responded to GL 83-28, Item 4.5.3, referenced WCAP 10271 and WCAP 10271-S1 which allow for the relaxation of existing intervals for certain reactor trip testing. These WCAPs have recently been reviewed by the NRC. This item will be followed under GL 83-28 Item 4.5.3 as noted in Enclosure 3 (Item 4.5.3).

NRC Request, Item 5

Items 4.2.1 and 4.2.2 (higher priority items in Generic Letter 83-28) request specific details regarding preventative maintenance, surveillance, and trending of parameters program for reactor trip breakers. The PG&E response of November 7, 1983, references a procedure for periodic maintenance and a completion date of December 1983 for a parameter trending program, without any further detail. PG&E should provide details (what is lubricated, what is inspected, how often, what parameters are trended, with what frequency, etc.) prior to initial criticality for Unit 2, and within 90 days for Unit 1.

PGandE Response

In a second NRC letter dated January 16, 1985, specific details were requested on Items 4.2.1 and 4.2.2. PGandE's letter DCL-85-070, dated February 21, 1985, stated that work would be completed and approved procedures implemented by April 16, 1985. Work is now complete for both Units 1 and 2 and the approved procedures have been implemented. These procedures are:

- Maintenance Procedure E-7.8, "Reactor Trip Switchgear" - Maintenance is performed at refueling intervals and addresses all five NRC recommendations in Item 4.2.1 regarding maintenance on a refueling interval basis.

- Maintenance Procedure E-51.7, "Maintenance of Westinghouse Type DB, 480 Volt Breakers" - Maintenance is performed at 6-month intervals and addresses all 15 NRC recommendations in Item 4.2.1 regarding periodic maintenance.

- Maintenance Procedure E-51.7A, "Electrical Maintenance Procedure Westinghouse DB-50 Circuit Breaker Repair" - This procedure establishes the method and requirements for replacement of the undervoltage trip attachment.

- Maintenance Procedure E-51.7B, "Reactor Trip/Bypass Breaker Performance Trending" - This procedure describes trending for all four reactor trip breaker parameters of Item 4.2.2.

These procedures are provided as Attachments 4, 5, 6, and 7, respectively.

Attachments

ENCLOSURE 2

DIABLO CANYON UNITS 1 AND 2
RESPONSE TO NRC MARCH 21, 1985 REQUEST
FOR ADDITIONAL INFORMATION ON GENERIC LETTER 83-28

NRC Request, Item 1

Regarding Position 3.1.1, please confirm that the post-maintenance testing required of safety-related components in the reactor trip system demonstrates that the component is capable of performing all required safety functions.

PGandE Response

As stated in PGandE letter DCL-85-002, dated January 2, 1985, for Unit 1, and also discussed in Enclosure 1 of this April 18, 1985 letter for Unit 2, safety-related components in the reactor trip system have post-maintenance testing satisfactorily performed before the component(s) or systems(s) is declared operable. These tests demonstrate that the component is capable of performing its required safety functions.

These tests meet the specifications of the DCPP Final Safety Analysis Report, and DCPP Technical Specifications.

NRC Request, Item 2

Regarding Position 3.1.2, your letter of January 2, 1985, indicates that nine vendor recommendations still require review. Please confirm that this review has been completed for Unit 1 and that appropriate procedure revisions have been completed.

PGandE Response

This Position (item) number was incorrectly identified as Position 3.1.2. The correct item number is 3.1.3. PGandE has completed the review of the nine vendor recommendations identified for Unit 1. The appropriate procedure revisions have been completed for the recommendations that were determined to be applicable.

NRC Request, Item 3

Regarding Positions 3.2.1 and 3.2.2, your letter of November 7, 1983, committed to submit a statement by August 1, 1985, confirming implementation of these positions for Unit 1. Please ensure that the post-maintenance testing required of all safety-related components by such implementation, will verify the capability of components to perform all required safety functions. In addition, please explicitly confirm in your forthcoming August 1, 1985 submittal, that post-maintenance testing will verify this capability.

PGandE Response

PGandE intends to confirm in the upcoming submittal regarding Positions 3.2.1 and 3.2.2 that post-maintenance testing of all safety-related components will verify the capability of components to perform their required safety functions. These tests will meet the specifications of the DCPP Updated Final Safety Analysis Report, and DCPP Technical Specifications.

NRC Request, Item 4

Regarding Position 4.5.1, your letter of January 24, 1985 (Enclosure 2, paragraph B), states that "...on-line, independent, functional testing of the undervoltage and shunt trip features is performed in Modes 1 through 4, after maintenance, in accordance with STP I-33C." Please indicate the minimum frequency of breaker maintenance. This is needed to verify that the individual functional testing will be performed "on-line" in Modes 1 through 4, as well as during refueling outages.

PGandE Response

The frequency of breaker maintenance is 6 months. This frequency may be subject to change based on PGandE's trending program.

UPDATED SUMMARY OF STATUS AND SCHEDULE
FOR GENERIC LETTER 83-28 ACTION ITEMS

Action Item No.	Subject	Status Unit 1	Status Unit 2	Updated Work Completion Schedule Unit 1	Updated Work Completion Schedule Unit 2	Comments
High Priority Items						
1.1	Post-Trip Review (Program Description And Procedure)	Complete	Complete	N/A	N/A	Response was DCL-84-034 (02/01/84). Additional information requested by NRC was provided in DCL-85-025 (01/24/85).
2.1	Equipment Classification And Vendor Interface (Reactor Trip System Components)	Complete, Enclosure 1 Item 2	Complete, Enclosure 1 Item 2	N/A	N/A	Completion dates were scheduled in DCL-85-025 (01/24/85).
3.1	Post-Maintenance Testing (Reactor Trip System Components)	Complete, Enclosure 2 Items 1, 2	Complete, Enclosure 1 Item 4	N/A	N/A	Unit 1: Response was DCL-85-002 (01/02/85). Additional information requested by NRC Unit 2: Completion date was scheduled in DCL-85-025 (01/24/85).
4.1	Reactor Trip System Reliability (Vendor-Related Modifications)	Complete	Complete	N/A	N/A	
4.2	Reactor Trip System Reliability (Reactor Trip Breakers)					
4.2.1	Periodic Maintenance	Complete, Enclosure 1 Item 5	Complete, Enclosure 1 Item 5	N/A	N/A	Completion dates were scheduled in DCL-85-025 (01/24/85).

UPDATED SUMMARY OF STATUS AND SCHEDULE
FOR GENERIC LETTER 83-28 ACTION ITEMS

Action Item No.	Subject	Status Unit 1	Status Unit 2	Updated Work Completion Schedule Unit 1	Updated Work Completion Schedule Unit 2	Comments
4.2.2	Trending of Parameters	Complete, Enclosure 1 Item 5	Complete, Enclosure 1 Item 5	N/A	N/A	Completion dates were scheduled in DCL-85-025 (01/24/85).
4.3	Reactor Trip System Reliability (Shunt Trip Attachment)	Complete	Complete	N/A	N/A	Responses were DCL-84-194 (05/24/84) and DCL-84-211 (06/06/84).
Medium Priority Items						
1.2	Post-Trip Review (Data And Information Capability)	Complete	Complete	N/A	N/A	Response was DCL-84-242 (06/27/84).
2.2	Equipment Classification And Vendor Interface (Safety-Related Components)					
2.2.1	Equipment Classification	On Schedule, Work in Progress	On Schedule, Work in Progress	Prior to Startup From First Refueling Outage	Prior to Startup From First Refueling Outage	Completion dates were scheduled in DCL-85-025 (01/24/85).
2.2.2	Vendor Interface	On Schedule, Work in Progress	On Schedule, Work in Progress	Prior to Startup From First Refueling Outage	Prior to Startup From First Refueling Outage	Completion dates were scheduled in DCL-85-025 (01/24/85).
3.2	Post-Maintenance Testing (Other Safety-Related Components)	On Schedule, Work in Progress	On Schedule, Work in Progress	06/01/85	06/01/86	No change from schedule provided in PGandE letter dated 11/07/83. Submittals to NRC scheduled for 08/01/85 and 08/01/86.

UPDATED SUMMARY OF STATUS AND SCHEDULE
FOR GENERIC LETTER 83-28 ACTION ITEMS

Action Item No.	Subject	Status Unit 1	Status Unit 2	Updated Work Completion Schedule Unit 1	Updated Work Completion Schedule Unit 2	Comments
4.2	Reactor Trip System Reliability (Reactor Trip Breakers)					
4.2.3	Life Cycle Testing of Breakers	Rescheduled, Work in Progress	Rescheduled, Work in Progress	Mid-December 1985	Mid-December 1985	Rescheduled in DCL-85-105 (03/13/85). Dependent on receiving test results from WOG by early November 1985.
4.2.4	Periodic Replacement of Breakers or Components	Rescheduled, Work in Progress	Rescheduled, Work in Progress	Mid-December 1985	Mid-December 1985	Rescheduled in DCL-85-105 (03/13/85). Dependent on receiving test results from WOG by early November 1985.
4.5	Reactor Trip System Reliability (System Functional Testing)					
4.5.1	On-line Functional Testing	Procedures Complete and Implemented, Enclosure 2 Item 4	Procedures Complete and Implemented, Enclosure 2 Item 4	N/A	N/A	Responses were DCL-84-241 (6/27/84) and DCL-84-347 (11/07/84). Additional information was requested by NRC.
4.5.3	On-line Functional Testing Intervals	Awaiting NRC/WOG Integration of WCAP with Industry Efforts on GL 83-28	Awaiting NRC/WOG Integration of WCAP with Industry Efforts on GL 83-28	Thirty Days After NRC/WOG Integration of WCAP with Industry Efforts on GL 83-28	Thirty Days After NRC/WOG Integration of WCAP with Industry Efforts on GL 83-28	NRC has issued the SER on WCAP-10271 and WCAP-10271, Supplement 1. However, in the SER, the NRC stated that review of the changes proposed for the actuation logic and reactor trip breakers has been deferred until the Staff and the WOG can integrate the WCAP with industry efforts on GL 83-28.