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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
ATOMIC SAFETY AND LICENSING BOARD

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

Before Administrative Judges:

Charles Bechoefer, Chairman
Dr. Jerry R. Kline
Frederick J. Shon

In the Matter of

PACIFIC GAS AND ELECTRIC COMPANY
(Diablo Canyon Nuclear Power
Plant, Units 1 and 2)

Facility Operating Licenses
No. DPR-80 and DPR-82

Docket Nos. 50-275-OLA-2
50-323-OLA-2

ASLBP No. 92-669-03-OLA-2

(Construction Period
Recovery)

February 16, 1993

Intervenor San Luis Obispo Mothers for Peace

First Set of Written Interrogatories

and Requests for the Production of Documents

to Pacific Gas and Electric Company

Pursuant to the Atomic Safety and Licensing Board ("the Board") Order of January 21, 1993, in this docket, and pursuant to 10 CFR 2.740b, Intervenor San Luis Obispo Mothers for Peace ("MFP") hereby propounds written interrogatories, contained in Attachment B (Thermo-Lag) and Attachment C (maintenance and surveillance) hereto, to be answered by licensee Pacific Gas and Electric Company ("PG&E") within 14 days under oath or affirmation. The responses to

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the interrogatories should conform to the instructions and definitions contained in Attachment A hereto.

In addition, pursuant to the Board's Order of January 21, 1993, and 10 CFR 2.741(a), MFP hereby serves on licensee Pacific Gas and Electric Company requests for the production of certain documents, for response by PG&E within 30 days. These requests are contained in Attachment D (Thermo-Lag) and Attachment E (maintenance and surveillance) hereto

Respectfully Submitted,

Nancy Culver

San Luis Obispo Mothers
for Peace

ATTACHMENT A

Instructions and Definitions

- A. "Provide copies of" means to provide legible copies of all documents and records in PG&E's possession, custody, or control of the type which are requested (see Instruction and Definition "B", below, for further guidance on the meaning of "possession, custody, or control", and Instruction and Definition "C", below, for further guidance on "documents and records").
- B. "Possession, custody, or control" of documents and records means possession, custody, or control, or right to possession, custody or control by PG&E, including PG&E's attorneys, employees, representatives, agents, managing agents, directors, officers, partners, clients, consultants, contractors, witnesses, and all other persons or organizations known by PG&E to be acting or purporting to act on its behalf.
- C. "Documents and records" means any handwritten, typewritten, printed, recorded, graphic or photographic or sound reproduction, however produced or reproduced, including all originals, copies, prints, impressions, proofs, and drafts of any of the foregoing, together with all attachments thereto or enclosures therewith and all notations, comments, and all other retrievable data in any form whatsoever (including, without limitation, floppy disk, SCSI drive, IDE drive, hard drive, optical disk, floptical disk, Bernoulli Disk, compact disc, 8 mm video tape, VHS video tape, Beta video tape, photographic negative, photographic print, carbon copy, or any other form whatsoever) that are now or were formerly in the possession, custody, or control of PG&E or are known or believed to be responsive to this request regardless of who has or formerly had possession, custody, or control thereof.

- D. "Report", "document", and "record" are all-inclusive terms referring to any writing and/or recorded or graphic material, however produced or reproduced, including, without limitation, correspondence, memoranda, inter-office communications, intra-office communications, minutes, transcripts, summaries, extracts, abstracts, reports, notes, schedules, analyses, drawings, pictures, tables, graphs, charts, films, conference papers, transcripts, work papers, blueprints, designs, test results, inspection results, inspection reports, summaries of telephone conversations, telephone message slips, affidavits, declarations, testimony, editorial opinions, newspaper articles, magazine articles, diaries, maps, spreadsheets, databases, electronic mail, computer printouts, and all of the foregoing, in whatever form (for example: printed, typed, long-hand, shorthand, microfilm, microfiche, compact disc, audio tape, film, computer files, videotape, or any other form whatsoever), and anything similar to any of the foregoing, however designated or denominated, either in the possession, custody, or control of PG&E or its agents, or known by it to exist; and shall also mean all copies of documents and records by whatever means made and all drafts whether or not later finalized; and shall include any marginal notes or other markings appearing on any such "report", "document", or "record". These terms also include any attachments, addenda, supplements, errata, modifications, revisions, summaries, or other alterations of the original report, document, and/or record.
- E. "Identify", when used in reference to an individual person, means to state the person's full name and present, or last known address and telephone number; the person's present, or last known position and business affiliation; and the person's position and business affiliation at the time in question.
- F. "Identify", when used in reference to a corporation or some other business entity, means to state its full name, principal place of business or corporate headquarters, and the type of business in which it engages.

- G. "Identify", when used in reference to a document, means to state the date of the document, the type of document, the title and/or subject, the identifying numbers or alphanumerics associated with the document, the name(s), title(s), and affiliation(s) of the author(s), the approximate page length of the document, the revision number (if applicable), and the name(s), title(s), and affiliation(s) of all known recipients (regardless of whether the recipients are employees, agents, consultants, witnesses, or other persons affiliated with or engaged by PG&E).
- H. "Identify", when used elsewhere herein, means to state your total knowledge and information concerning the subject matter involved.
- I. In the event that any "report", "document", and/or "record" called for by the following requests is to be withheld on the basis of a claim of privilege, that document or report is to be completely identified. For each "report", "document", and/or "record" withheld, a list is to be furnished identifying each document so withheld, together with the following as to each such document:
- (a) Each and every reason for withholding the document;
 - (b) A statement constituting the complete basis for any claim of privilege, work product, or other grounds for non-disclosure; and
 - (c) A brief description of the documents, including the date of the document; the number of pages; attachments, and appendices; the identity (name, title, and organizational affiliation) of the documents author or preparer; the identity (name, title, and organizational affiliation) of each person to whom the document or a copy thereof was sent, shown, or made accessible, or to whom

it was explained; the identity (name, title, and organizational affiliation) of the present custodian(s) of the document and all copies thereof; the subject matter of the document, and, in the case of any document relating in any way to a meeting or conversation, the identification of such meeting or conversation (date, subject matters discussed, and identify of all participants); and the numbered paragraph of this request to which the document relates.

- J. In any case where documents which have been destroyed or are otherwise not now within the possession, custody, or control of PG&E which would have been responsive to the requests set forth below, please describe fully the circumstances under which such documents were destroyed or are otherwise not now within the possession, custody, or control of PG&E and provide all records which describe the disposition of such documents. In the case of each such document, please set forth in as much detail as possible PG&E's best recollection of the document (date, author, recipient, and substantive contents) and identify the person(s) who set forth this information.
- K. In any case where PG&E provides a document wherein any part of that document is "blacked out", "whited out", covered up, redacted, or otherwise not fully legible, please provide (with the response to the discovery request) a complete listing of the text (including detailed instructions as to where the text should be placed within the document) which is not contained within the copy of the record which PG&E is providing, but which the record should be read as including and identify specifically where in the document each such portion of text should be inserted.
- L. In any event that the exact information requested in any of the interrogatories and/or document requests is not available or cannot be ascertained at this time, please answer

such interrogatory and/or document request with all of the information currently available, and specifically indicate that such answer is not exact and why the answer is not exact.

- M. All "reports", "documents", and "records" are to be produced as they have been kept in the usual course of business with any identifying labels, file markings, or other similar identifying features or shall be organized and labeled to correspond to the appropriate document request or interrogatory herein. If there are no such "reports", "documents", or "records" responsive to a particular category, you shall so state in writing.
- N. "And", "or", and "and/or" means the conjunctive or disjunctive, whichever is more inclusive.
- O. "You", "your", and "PG&E" means Pacific Gas and Electric Company.
- P. All interrogatories and document requests are continuing in nature and previous responses should be promptly supplemented as soon as you develop, obtain, discover, ascertain, or otherwise become aware of additional information bearing on your responses to previous interrogatories and/or document requests. If you develop, obtain, discover, locate, ascertain, or otherwise become aware of additional information bearing on its responses to previous data requests, and you claim privilege for any such information, please comply with Instruction "I", above.
- Q. In responding to all interrogatories and/or record requests, please identify the person(s) preparing the responses. In addition, please identify the person(s) who can competently testify to the truth of the response provided PG&E, and identify any witnesses or prospective witnesses in this proceeding who are sponsoring the response.

- R. "Thermal Science Incorporated", "Thermal Science, Inc.", and "TSI" all refer to the company which supplied the fire barrier material known as and referred to in the Board's January 21, 1993, Order as Thermo-Lag. References to "Thermal Science Incorporated", "Thermal Science, Inc.", and "TSI" shall include its attorneys, employees, representatives, agents, managing agents, directors, officers, partners, clients, consultants, contractors, witnesses, and all other persons or organizations known by PG&E to be acting or purporting to act on their behalf.
- S. "Safety-related" ("safety related") and "important-to-safety" ("important to safety") shall have the meanings specified in the standard NRC guidance to all Office of Nuclear Reactor Regulation Employees dated November 20, 1981 (a copy of which is attached). Unless specifically directed by an interrogatory or document request, these terms should be interpreted as expansively as possible consistent with the standard NRC guidance referenced above.

WASHINGTON, D. C. 20555

NOV 20 1981

MEMORANDUM FOR: All NRR Personnel

FROM: Harold R. Denton, Director
Office of Nuclear Reactor RegulationSUBJECT: STANDARD DEFINITIONS FOR COMMONLY-USED SAFETY CLASSIFICATION
TERMS

Litigation of one of the principal issues in the TMI-1 Restart Hearing brought to light the fact that there is not complete consistency among all elements of the NRR staff in the application of safety classification terms used frequently in the conduct of NRR's safety review and licensing activities. More specifically, it appears that terms "important to safety," "safety grade," and "safety-related" have been used at times interchangeably, or in ways not completely consistent with the definitions and usage of such terms in the regulations, and which do not fully reflect the intent of the regulations or current licensing practice.

Efforts have been underway for some months now to develop guidance for the consistent usage of these terms. These efforts have included: (a) review of a large number of Reg Guides and SRP's, in conjunction with parts of the regulations upon which they are based, for consistency in the application of safety classification terminology, (2) extensive discussions among cognizant NRR, RES (Stds. Devel.) and ELD representatives regarding proper interpretation and application of such terms, including consideration of alternative "standard" definitions and (3) consultation with the cognizant ACRS Subcommittee regarding these matters, and consideration by the full ACRS as well.

As a result of these efforts, I am endorsing and prescribing for use by all NRR personnel the standard definitions set forth in the enclosure to this letter. It should be noted that in connection with long-term efforts to develop means for ranking reactor plant systems with respect to degree of importance to safety, and in connection with related efforts to develop a graded Q.A. approach in reactor licensing, the general question of safety classifications and safety classification terminologies will be reexamined; and this could result in changes to the definitions set forth in the enclosure or perhaps in development of a completely new scheme in this regard. For the time being, however, the definitions in the enclosure should be considered "standard" and should be applied consistently by all NRR personnel in all aspects of our safety review and licensing activities and should be appropriately reflected in our regulatory guidance documents.

it is expected that minor editorial revisions will have to be made to some existing Reg Guides and SRP's in order to make their wording consistent with these definitions." You should review the regulatory guidance documents within your purview in this regard and recommend the necessary changes; it is not expected that this will involve extensive revision efforts. I want to make clear that my interest here is only in establishing consistency in the language used by all cognizant groups within NRR in expressing our technical requirements. It is not my intention by this action to dictate new technical requirements, to modify existing technical requirements, or to broaden the existing scope of NRR licensing review.



Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Enclosure:
Definition of Terms

DEFINITION OF TERMSImportant to Safety

- Definition - From 10 CFR 50, Appendix A (General Design Criteria) - see first paragraph of "Introduction."

"Those structures, systems, and components that provide reasonable assurance that the facility can be operated without undue risk to the health and safety of the public."

- Encompasses the broad class of plant features, covered (not necessarily explicitly) in the General Design Criteria, that contribute in important way to safe operation and protection of the public in all phases and aspects of facility operation (i.e., normal operation and transient control as well as accident mitigation).
- Includes Safety-Grade (or Safety-Related) as a subset.

Safety-Related

- Definition - From 10 CFR 100, Appendix A - see sections III.(c), VI.a.(1), and VI.b.(3).

those structures, systems, or components designed to remain functional for the SSC (also termed 'safety features') necessary to assure required safety functions, i.e.:

- (1) the integrity of the reactor coolant pressure boundary;
- (2) the capability to shut down the reactor and maintain it in a safe shutdown condition; or
- (3) the capability to prevent or mitigate the consequences of accidents which could result in potential off-site exposures comparable to the guideline exposures of this part.

- Subset of "Important to Safety"
- Regulatory Guide 1.29 provides an LWR-generic, function-oriented listing of "safety-related" structures, systems, and components needed to provide or perform required safety functions. Additional information (e.g., NSSS type, SOP design A-B, etc.) is needed to generate the complete listing of safety-related SSC's for any specific facility.

Note: The term "safety-related" also appears in 10 CFR 50, Appendix B (O.A. Program Requirements); however, in that context it is framed in somewhat different language than its definition in 10 CFR 100, Appendix A. That difference in language between the two appendices has contributed to confusion and misunderstanding regarding the exact meaning of "safety-related" and its relationship to "important to safety" and "safety-grade." A revision to the language of Appendix B has been proposed to clarify this situation and remove any ambiguity in the meaning of these terms.

Safety-Grade

- Term not used explicitly in regulations but widely used/applied by staff and industry in safety review process.
- Equivalent to "Safety-Related," i.e., both terms apply to the same subset of the broad class "Important to Safety."

ATTACHMENT B

Interrogatories (Thermo-Lag)

1. Please identify each and every area (such as, for example, pump rooms, enclosures, pipe chases, cable chases, etc.) at the Diablo Canyon Nuclear Power Plant for which there are fire barriers containing or comprised of Thermo-Lag (if this listing of areas consists of Table 1 of PG&E's response to Supplement 1 to NRC Bulletin 92-1, it will be a sufficient response for PG&E to so note, and additionally to affirm that Thermo-Lag is not used in any other fire barriers at the Diablo Canyon Nuclear Power Plant and to provide the information requested below). For each such area identified, please separately provide the following:
 - (a) A diagram showing the location and elevation of the area with respect to the remainder of the plant and which identifies the equipment and components (by train) which are located in each such area;
 - (b) An identification of each and every interim fire-protection measure upon which PG&E relies to provide compensatory actions to account for the presence of Thermo-Lag fire barriers, and the location of the fire protection measure with respect to the Thermo-Lag barriers and the equipment for which the barriers were intended to provide protection (provide diagrams if possible) (to the extent that this information is covered in PG&E's response to Supplement 1 to NRC Bulletin 92-01, it will be sufficient to make reference thereto); further, if one of the compensatory measures is a continuous or hourly fire watch, please indicate where in the area the fire

watch personnel are stationed and what areas within the fire watch area are inspected and on what frequency;

- (c) An identification of approximately how frequently hourly fire watches inspect each area and an identification of approximately how much time is spent on each inspection (note that it could be presumed that the inspection frequency is "hourly" or at least once per 60 minutes, but it is possible that PG&E conservatively inspects the affected areas more frequently than this, or it is possible that under PG&E practices and procedures there is some leeway allowed such that the inspections could be done on, for example, and hourly +/- 15 minutes basis, thus there is a need for a response to this question even though the answer may appear to be superficially obvious);
- (d) An estimate of the length of time required from the time a fire is detected until the fact of the fire and its location can be reported by hourly fire watch personnel to the fire brigade;
- (e) An estimate of the length of time required from the time the fire brigade receives notice of the fact and location of a fire until the fire brigade can report to the fire location and begin to fight the fire; and
- (f) The distance from the fire location to the nearest fire hose station and/or portable fire extinguisher.

2. Please describe the schedule for performing the hourly fire watches for each area for which Thermo-Lag is provided as a fire barrier.

3. Please identify the maximum time period that can elapse between "hourly" fire watches.
4. Please describe the responsibilities of personnel assigned to fire watch duty. In your description, please explain whether the fire watch personnel have any other duties and, if so, describe those duties in detail and provide an estimate of what percentage of their time is spent on fire watch and other duties.
5. Please provide copies of the procedures which PG&E utilizes to inspect for the control of ignition sources and combustible materials at Diablo Canyon. If the current procedures are different from those in effect before PG&E became aware of the Thermo-Lag issue, please provide copies of both the former and current procedures.
6. Please compare the effectiveness of the fire detection capability which existed at Diablo Canyon prior to the declaration that Thermo-Lag fire barriers were inoperable with the fire detection capability that currently exists at Diablo Canyon. Please limit your response to those plant areas affected by Thermo-Lag-related fire barrier inadequacies.
7. Please compare the effectiveness of the fire suppression capability which existed at Diablo Canyon prior to the declaration that Thermo-Lag fire barriers were inoperable with the fire suppression capability that currently exists at Diablo Canyon. Please limit your response to those plant areas affected by Thermo-Lag-related fire barrier inadequacies.
8. For each of the Thermo-Lag-affected fire areas identified in PG&E's September 29, 1992, response to NRC Bulletin 92-01, Supplement 1, please indicate the distance (in feet or meters) from the fire area to the nearest plant communication system device (radio, paging system, etc.).

9. Please describe in detail the training which PG&E has provided to fire watch personnel (for both continuous and hourly fire watch personnel, responding separately if there is any difference) to inspect for control of ignition sources and combustible materials.
10. Please describe in detail the training which PG&E has provided to fire watch personnel (for both continuous and hourly fire watch personnel, responding separately if there is any difference) to look for signs of incipient fires.
11. Please describe in detail the training which PG&E has provided to fire watch personnel (for both continuous and hourly fire watch personnel, responding separately if there is any difference) to provide prompt notifications of fire hazards and fires.
12. Please describe in detail the training which PG&E has provided to fire watch personnel (for both continuous and hourly fire watch personnel, responding separately if there is any difference) to conduct fire suppression activities.
13. Please describe in detail the training which PG&E has provided to fire watch personnel (for both continuous and hourly fire watch personnel, responding separately if there is any difference) to assure that they are capable of determining the size, actual location, source, and type of fires which they observe.
14. Consistent with PG&E's response to Supplement 1 of NRC Bulletin 92-01 (enclosure to PG&E Letter Nos. DCL-92-208 and HBL-92-060, letter dated September 28, 1992), please state whether it is PG&E's position that fire barriers consisting of either 1-hour or 3-hour pre-formed Therm-Lag 330 panels and conduit shapes are "non-functional" within the meaning of DCCP Technical Specification 3.7.10, and, if not, please fully describe PG&E's

position regarding the functionality and/or operability of these barriers and identify fully each and every basis upon which PG&E relies in reaching this position.

15. Consistent with PG&E's response to Supplement 1 of NRC Bulletin 92-01 (enclosure to PG&E Letter Nos. DCL-92-208 and HBL-92-060, letter dated September 28, 1992), please state whether it is PG&E's position that fire barriers consisting of Thermo-Lag fire barriers used in raceways, walls, ceilings, equipment enclosures, or other areas to protect cable trays, conduits or separate redundant safe shutdown functions, are "non-functional" within the meaning of DCP Technical Specification 3.7.10, and, if not, please fully describe PG&E's position regarding the functionality and/or operability of these barriers and each and every basis upon which PG&E relies in reaching this position.
16. Please identify each and every instance in which redundant safety-related power, control, or instrumentation cabling is separated by less than twenty feet and for which fire protection is provided by fire barriers containing Thermo-Lag. For each such instance identified, please indicate whether that location is provided with fixed automatic fire detection and/or suppression systems (and, if so, the nature of such detection and/or suppression systems; e.g., protection provided by smoke detectors and a wet-pipe suppression system). If the requested information has not been previously identified by PG&E, please make available documentation sufficient to enable the identification of each such instance to be made independently of PG&E.
17. Please identify all Licensee Event Reports (LERs) issued by PG&E for Diablo Canyon Units 1 and/or 2 which address deficiencies in fire barriers.
18. Please identify all Licensee Event Reports (LERs) issued by PG&E for Diablo Canyon Units 1 and/or 2 which address problems with hourly and/or continuous fire watches (e.g.,

missed fire watches or failure to set up a fire watch in a timely manner given a known degraded fire barrier).

19. Please identify all Licensee Event Reports (LERs, issued by PG&E for Diablo Canyon Units 1 and/or 2 which note the occurrence of a fire within the protected area at the plant.
20. Please identify all NRC meeting minutes, meeting transcripts, meeting summaries, and other documents (including, without limitation, viewgraphs, slides, handouts, etc.) which record or otherwise document the proceedings of NRC meetings attended by PG&E concerning Thermo-Lag fire barrier material and/or compensatory actions which can or should be taken as a result of any deficiencies in such fire barrier material.
21. As part of its September 28, 1992, response to NRC Bulletin 92-01, Supplement 1, PG&E stated that "... in general, the combustible loadings for the DCPD fire areas with Thermo-Lag are relatively low" (see page 1 of the Enclosure to PG&E's response letter).
Regarding this statement, please:
 - (a) Describe in quantitative terms what PG&E means by "relatively low" in terms of combustible loadings.
 - (b) Identify those DCPD fire areas with Thermo-Lag where the combustible loadings are other than "relatively low" and provide PG&E's quantitative characterization of the combustible loading in such areas, comparing them in each case with the combustible loading which PG&E characterizes as "relatively low".

- (c) Identify the fixed and transient combustible loadings present in each of the DCPD fire areas with Thermo-Lag barriers (please specify the combustible materials present and their quantities in the case of fixed materials, and specify the types and maximum quantities of transient combustibles permitted in each such area, accounting for all activities required and permitted under PG&E maintenance and surveillance procedures and for all modes of operation from refueling to full power operation).
22. For each fire area listed in Table 1 of PG&E's response to NRC Bulletin 92-01 (PG&E Letter Nos. DCL-92-173 and HBL-92-048, letter dated July 29, 1992), please identify (by component, system, and train) the safety-related and important-to-safety equipment located in each fire area. Please also identify (by component, system, and train) the power, control, and/or instrumentation cables which terminate in or which pass through each fire area.
23. In PG&E's response to NRC Bulletin 92-01 (PG&E Letter Nos. DCL-92-173 and HBL-92-048, letter dated July 29, 1992), PG&E states in part, "As a result of the uncertainties associated with qualification of Thermo-Lag fire barrier systems for small conduits between 1-inch and 4-inches ϕ diameter, PG&E has verified that existing measures are sufficient to ensure that plant safety is not compromised." Regarding this statement, please define what PG&E means by "plant safety" and "compromised" in this context, and describe each and every basis for PG&E's statement that "plant safety is not compromised". Also, please indicate the meaning of the symbol " ϕ " in PG&E's response to NRC Bulletin 92-01, as cited above.
24. PG&E's response to Supplement 1 to NRC Bulletin 92-01 (Table 1 in the enclosure to PG&E Letter Nos. DCL-92-208 and HBL-92-060, letter dated September 28, 1992)

identifies as one column the heading "Fire Duration (minutes)". Please fully explain the meaning and derivation of "Fire Duration (minutes)" in each case in which an entry is made in that column.

25. Please indicate whether PG&E has issued any contract(s) (or any other document or documents which authorizes a vendor to perform work) to augment, modify, or replace the Thermo-Lag fire barriers in any or all of the areas identified in PG&E's response to Supplement 1 to NRC Bulletin 92-01 as containing such fire barriers. In addition, please identify the areas and specific barriers which are affected by these contract(s) or other authorizing documents.
26. For each fire area listed in Table 1 of PG&E's response to NRC Bulletin 92-01 (PG&E Letter Nos. DCL-92-173 and HBL-92-048, letter dated July 29, 1992), please identify whether a fire in that area could disable the communications system upon which PG&E relies to enable the fire watch personnel assigned to that fire area to communicate the occurrence of a fire to the fire brigade and other plant personnel (e.g., control room operators). If a fire could disable the communications system, please identify any alternate communications system upon which PG&E relies to provide the required notifications and if no such alternate system exists, please identify the travel time from the fire area to the nearest location at which the fire brigade could be notified in person of the existence of the fire.
27. Please indicate whether PG&E considers its NRC-approved fire protection plan to be legally binding and, if so, by what mechanism is the plan made legally binding (e.g., by specific NRC regulation, by reference in the Updated FSAR, by license condition, etc.).

28. Please indicate whether PG&E considers itself legally required to comply with Appendix R to 10 CFR Part 50, for Diablo Canyon Units 1 and 2, and, if not, please explain in detail each and every basis for your conclusion.
29. Please identify, by manufacturer, cable size, cable type, and insulation material, the cables terminating in or passing through all areas of DCPD where Thermo-Lag is used.
30. In environmentally qualifying each cable identified in response to the previous interrogatory, please identify the assumptions (in quantitative and qualitative terms) that were made regarding temperature, as required by 10 CFR 50.49(e).
31. Please describe your procedure, if any, for assuring that the ambient conditions of temperature to which the cables identified in response to the two previous interrogatories are subjected remain within the temperature assumed for purposes of qualification testing.
32. Please identify the fire protection standards that are applicable to DCPD under NRC regulations (including regulations, regulatory guides, generic letters, bulletins, license conditions, FSAR commitments, and any other form of NRC-enforceable standard).

ATTACHMENT C

Interrogatories (Maintenance and Surveillance)

1. Please identify the programs and procedures used to verify that the actual environment in the as-installed position, for both operating and accident conditions over the plant design lifetime, for each safety-related structure, system and component is bounded by the conditions in its environmental and seismic tests for life and aging.
2. Please identify the programs and procedures used to verify that the actual environment in the as-installed position (for both operating and accident conditions over the plant design lifetime) for each non-safety structure, system and component whose failure could prevent satisfactory accomplishment of safety functions, is bounded by the conditions in its environmental and seismic tests for life and aging.
3. Please identify each safety-related and important-to-safety structure, system and component whose qualification and aging tests do not bound the possible environmental and seismic conditions over the plant design lifetime in its installed location. For each such identified item, please provide the details of actions that have already been taken and actions that are planned to be taken in response to this situation.
4. Please identify each safety-related and each important-to-safety structure, system and component whose testing and operation during manufacturer's checkout, burn in, environmental qualification, and aging tests, combined with PG&E's system testing, startup testing and operation prior to full power license have rendered the remaining qualified life less than the plant design life as reflected in the current operating license. For each such

identified item, please provide the details of actions that have already been taken and actions that are planned to be taken in response to this situation.

5. Please identify each safety-related and each important-to-safety structure, system and component whose testing and operation during manufacturer's checkout, burn in, environmental qualification, and aging tests, combined with PG&E's system testing, startup testing and operation prior to full power license have rendered the remaining qualified life less than the plant life as reflected in the current operating license plus the extension request in this proceeding. For each such identified item, please provide the details of actions that have already been taken and actions that are planned to be taken in response to this situation.
6. Please describe in detail how PG&E demonstrates that the performance or condition of a safety-related or important-to-safety structure, system or component is being effectively controlled through the performance of appropriate preventive maintenance.
7. During the operating life of DCP, what structures, systems, and components that are important-to-safety (and/or safety-related) have been unavailable due to performance of monitoring or maintenance? For each such structure, system, or component, please state the length of time it was unavailable and the month and year during which the unavailability occurred.
8. What actions, if any, has PG&E taken in response to the INPO standard (INPO 90-008) Maintenance Programs in the Nuclear Power Industry? What quantitative results does PG&E attribute to the actions taken in response to INPO 90-008? Please provide these results for each unit of Diablo Canyon compared to performance prior to applying the standard, and to the industry as a whole.

9. Please provide the definition of "surveillance" as currently used in the Diablo Canyon quality assurance (QA) program.
10. Please provide the definition of "surveillance" as used in the Diablo Canyon Units 1 and 2 Technical Specifications.
11. Please provide the definition of "surveillance" as used in the Maintenance Program for Diablo Canyon Units 1 and 2.
12. Please identify all reports and audits by PG&E and/or outside consultants which have reviewed the maintenance and/or surveillance of safety-related structures, systems, and/or components. In identifying these documents and studies, please indicate the titles, dates, authors, number of volumes, and the number of pages in each volume.
13. Please describe the process used at Diablo Canyon for tracking the surveillance activities which are required to be performed.
14. Please provide a description of PG&E's document control system used to track and control safety-related documentation for Diablo Canyon (including hard copy, computer systems, microfiche, and other media such as CD-ROM).
15. Please identify all safety-related structures, systems, and components which have experienced degradation or life reduction due to plant testing in the 1970's and 1980's.
16. Please describe the number and classification of personnel working on the maintenance and surveillance activities related to safety-related structures, systems and components at Diablo Canyon Units 1 and 2.

17. Please describe the number of maintenance items (including both routine and non-routine items) which were backlogged at the end of each calendar quarter in 1991 and 1992. (If data is not available on a quarterly basis but is available on some other interval, such as monthly, please provide the other data.)
18. Please describe the training procedures and retraining schedules for maintenance personnel at Diablo Canyon.
19. Please identify all Licensee Event Reports (LERs) and Non-Conformance Reports (NCRs) issued by PG&E for Diablo Canyon Units 1 and/or 2 which relate to maintenance or surveillance activities.
20. Please describe the procedures for verifying and documenting the experience level and qualifications of contract personnel brought into Diablo Canyon to work on maintenance and surveillance activities.
21. What is the staffing level at each unit of DCPD devoted to preventive maintenance activities and to corrective maintenance activities?
22. Please identify the INPO document(s) which provide recommendations concerning the magnitude of outstanding preventive and corrective maintenance activities which nuclear power plants should strive not to exceed.
23. Based on INPO-recommended levels of outstanding preventive and corrective maintenance activities (i.e., backlog), how have the levels of outstanding items over each of the last three years at each unit of DCPD compared to the INPO average?

24. Have you identified important-to-safety components for which the actual operating environmental conditions are not bounded by the environmental parameters used to precondition the equipment to its end-of-installed life conditions? If so, for each such case, identify the component and describe the action(s) that have been taken or are planned to be taken.

ATTACHMENT D

Requests for Production of Documents

(Thermo-Lag)

1. Please provide a copy of the current, interfiled, controlled (i.e., a copy which contains the most recent issued version of each page of the document) portions of the Diablo Canyon Nuclear Power Station, Units 1 and 2, Updated Safety Analysis Report which address fire protection issues.
2. Please provide a copy of the current, interfiled, controlled copy of the Diablo Canyon Nuclear Power Station, Units 1 and 2, "fire hazards analysis report" (i.e., the report which documents the compliance of the plant to the U.S. Nuclear Regulatory Commission's fire protection regulations).
3. Please provide copies of all "Justification for Continued Operation" ("JCOs") which have been issued for Diablo Canyon Nuclear Power Plant, Units 1 and 2, which concern fire barriers containing Thermo-Lag.
4. Please provide a copy of the current controlled version of the training manuals utilized to train personnel to perform in hourly fire watches and/or continuous fire watches at the Diablo Canyon Nuclear Power Plant, Units 1 and 2.
5. To the extent that any manual(s) provided in response to the previous interrogatory make reference to standards (such as, for example, National Fire Protection Association standards or U.S. Nuclear Regulatory Commission Regulatory Guides) as part of the

training manual and/or training program, please provide copies of the versions these standards which are so referenced.

6. Please provide documents which describe the "NUMARC program" on Thermo-Lag 330 testing, as identified in PG&E's response to NRC Bulletin 92-01, Supplement 1 (PG&E Letter Nos. DCL-92-208 and HBL-92-060, dated September 28, 1992).
7. Please provide copies of all procedures currently in use at the Diablo Canyon Nuclear Power Plant, Units 1 and 2, for the purpose of controlling transient combustible materials.
8. Please provide copies of all procedures currently in use at the Diablo Canyon Nuclear Power Plant, Units 1 and 2, for the purpose of conducting and documenting the results of hourly and continuous fire watches.
9. Please provide copies of all procedures currently in use at the Diablo Canyon Nuclear Power Plant, Units 1 and 2, for the purpose of implementing interim fire-protection measures apart from hourly and/or continuous fire watches.
10. Please identify and provide copies of all Quality Assurance Department audits, inspections, surveillances, and any other form of review conducted by the Quality Assurance Department of the interim fire-protection measures being utilized to compensate for the use of fire barriers containing Thermo-Lag materials.
11. Please provide copies of all documents received from TSI (and/or all TSI documents in PG&E's possession, custody, or control) which discuss interim fire-protection measures to be taken to compensate for fire barriers containing Thermo-Lag materials.

12. Please provide copies of all documents received from NUMARC (and/or all NUMARC documents in PG&E's possession, custody, or control) which discuss interim fire-protection measures to be taken to compensate for fire barriers containing Thermo-Lag materials.
13. Please provide a copy of the internal fire analysis portion of the report which PG&E has submitted or, if not yet submitted, the latest draft of the report which will eventually be submitted, to the U.S. Nuclear Regulatory Commission in response to Generic Letter No. 88-20, Supplement 4, "Individual Plant Examination of External Events (IPEEE) for Severe Accident Vulnerabilities - 10CFR50.54(f)", June 28, 1991. If no such report or draft exists, please provide a copy of the fire analysis portion of the Diablo Canyon Long-Term Seismic Program probabilistic risk assessment, as well as a description of any subsequent plant and/or procedural modifications which PG&E has made that would reduce the risk posed by fires.
14. Please provide a copy of the internal fire analysis portion of the "second tier" documentation of the IPEEE examination required by Generic Letter No. 88-20, Supplement 4, "Individual Plant Examination of External Events (IPEEE) for Severe Accident Vulnerabilities - 10CFR50.54(f)", June 28, 1991 (see, in particular, page 9, Section 9, of the Generic Letter supplement, which states: "The IPEEE should be conducted in a traceable manner to provide the basis for the findings. This can be dealt with most efficiently by a two-tier approach. The first tier consists of the results of the examination, which will be reported to the NRC. The second tier is the documentation of the examination itself, which should be retained by the licensee for the duration of the license.").
15. Please provide copies of records documenting the conduct of calculations performed for the Diablo Canyon Nuclear Power Plant, Units 1 and 2, using any version of the fire

propagation model known as COMPBRN, for configurations present in any of the fire areas identified in PG&E's response to Supplement 1 to NRC Bulletin 92-01 as containing Thermo-Lag fire barrier material. If no such calculations exist, please so state in writing. (Note that the initial version of the code was documented in an NRC-sponsored report, NUREG/CR-3239, COMPBRN - A Computer Code for Modeling Compartment Fires, November 1985; and that an additional version of the code is documented in UCLA-ENG-8524, COMPBRN III - A Computer code for Modeling Compartment Fires, November 1985.)

16. Please provide a copy of the current, interfiled, controlled "fire protection plan" for the Diablo Canyon Nuclear Power Plant, Units 1 and 2. (Note that the regulatory requirements for such a plan are addressed at 10 CFR 50.48(a).) To the extent that this plan differs from what has been referred to as the "Fire Protection Appendix R Submittal" (see, for example, NUREG/CR-4840, page 2-8), please also provide a copy of the current, interfiled, controlled "Fire Protection Appendix R Submittal".
17. Please provide copies of the documentation describing all exemptions or applications for exemptions to the requirements of 10 CFR 50.48 and/or 10 CFR 50, Appendix R, for DCCP.
18. Please provide a copy of the current, controlled, civil/structural drawing index for the Diablo Canyon Nuclear Power Plant, Units 1 and 2.
19. Please provide a copy of the current, controlled, general arrangement drawings for Diablo Canyon, Units 1 and 2, for areas of the plant in which fire barriers containing Thermo-Lag are located.

20. Please provide a copy of the current, controlled Fire Brigade Procedures for Diablo Canyon Nuclear Power Plant, Units 1 and 2.
21. Please provide a copy of the current, controlled power and control cable routing diagrams for Diablo Canyon Nuclear Power Plant, Units 1 and 2.
22. Please provide copies of all reports submitted by PG&E to American Nuclear Insurers (ANI) concerning the occurrence of a fire at Diablo Canyon Nuclear Power Plant, Units 1 and 2.
23. Please provide copies of all reports submitted by PG&E to MAELIU concerning the occurrence of a fire at Diablo Canyon Nuclear Power Plant, Units 1 and 2.
24. Please provide copies of all PG&E notes, minutes, meeting transcripts, meeting summaries, and other documents (including, without limitation, viewgraphs, slides, handouts, etc.) which record or otherwise document the proceedings of NRC meetings attended by PG&E concerning Thermo-Lag fire barrier material and/or compensatory actions which can or should be taken as a result of any deficiencies in such fire barrier material.
25. In PG&E's response to NRC Bulletin 92-01 (PG&E Letter Nos. DCL-92-173 and HBL-92-048, letter dated July 29, 1992), PG&E states in part, "As a result of the uncertainties associated with qualification of Thermo-Lag fire barrier systems for small conduits between 1-inch and 4-inches ϕ diameter, PG&E has verified that existing measures are sufficient to ensure that plant safety is not compromised." Regarding this statement, please provide copies of records which document PG&E's verification that "existing measures are sufficient to ensure that plant safety is not compromised".

26. In PG&E's response to NRC Bulletin 92-01 (PG&E Letter Nos. DCL-92-173 and HBL-92-048, letter dated July 29, 1992), PG&E states in part, "As a conservative measure to augment the approved Appendix R Fire Protection Program, DCPD has maintained hourly fire watches in effect since the beginning of commercial operation in all fire areas (except in the containment buildings and the Units 1 and 2 intake areas) where DCPD credits Appendix R safe shutdown circuits." In addition, in PG&E's response to Supplement 1 to NRC Bulletin 92-01 (Table 1 in the enclosure to PG&E Letter Nos. DCL-92-208 and HBL-92-060, letter dated September 28, 1992), PG&E identifies eleven fire areas containing Thermo-Lag installations. For each of these eleven fire areas, please provide copies of the records documenting the performance of the hourly and/or continuous fire watches for the past 30 days.
27. PG&E's response to Supplement 1 to NRC Bulletin 92-01 (Table 1 in the enclosure to PG&E Letter Nos. DCL-92-208 and HBL-92-060, letter dated September 28, 1992) identifies as one column the heading "Fire Duration (minutes)". Please provide copies of the calculations and supporting reports which form the basis for these fire durations.
28. Please provide any studies, evaluations, or reports conducted to confirm that all Thermo-Lag-affected areas can in fact be inspected by fire watches on an hourly basis, given the layout of the Diablo Canyon plant and the number of fire watch personnel assigned to such duties.
29. Please provide copies of any studies, evaluations, assessments, or reports in PG&E's possession, custody, or control which discuss the effectiveness of training in obtaining procedural compliance involving repetitive tasks over long periods of time (i.e., months to years). If PG&E has no such documents, please describe in detail the bases for PG&E having confidence that plant personnel assigned to fire watch duties over long periods of

time will maintain their effectiveness in terms of complying with procedures which govern the conduct of their work.

30. Please provide a copy of the latest version (interfiled and controlled) of the Technical Specifications for Diablo Canyon Units 1 and 2.
31. Please provide a copy of the documents which constitute PG&E's review of the information contained in NRC Information Notice 92-82 ("Results of Thermo-Lag 330-1 Combustibility Testing", December 15, 1992) for applicability to DCP, and, to the extent that such information is not reflected in those documents, please identify each and every instance in which Thermo-Lag fire barrier material is used at DCP to enclose intervening combustibles.
32. Please provide the NRC safety evaluation performed pursuant to 10 CFR 50.48(b) for Diablo Canyon Power Plant.
33. Please provide a copy of the documents which constitute PG&E's response to NRC Generic Letter 86-10 ("Implementation of Fire Protection Requirements", April 24, 1986).
34. Please provide copies of the program and procedures used at DCP for assuring that the ambient conditions of temperature to which the cables identified in response to the two previous interrogatories are subjected remain within the temperature assumed for purposes of qualification testing.
35. For each cable identified in response to Interrogatory #29 in Attachment B, please provide the environmental qualification file that is kept in accordance with 10 CFR 50.49(j).

For each area of DCPD where Thermo-Lag is used in the presence of cable that is important to safety, please provide all records of ambient temperature which have been collected during the operating life of the plant.

Please provide copies of any contract(s) (or any other document or documents which authorize the vendor to perform work) to augment, modify, or replace the Thermo-Lag fire barriers in any or all of the areas identified in PG&E's response to Supplement 1 to NRC Bulletin 92-01 as containing such fire barriers.

ATTACHMENT E

Requests for Production of Documents

(Maintenance and Surveillance)

1. Please provide a copy of PG&E's comments to the NRC regarding the proposed maintenance rule (now in the regulations as 10CFR50.65 to be effective by July 10, 1996). This should include comments by PG&E and by any and all organizations representing PG&E's interests (e.g. NUMARC).
2. Please provide a copy of all correspondence between PG&E and the NRC related to the proposed maintenance rule (10CFR50.65) and its implementation at Diablo Canyon.
3. Provide a copy of the program and procedures used to verify that the actual environment in the as-installed position, for both operating and accident conditions over the plant design lifetime, for each safety-related structure, system and component is bounded by the conditions in its environmental and seismic tests for life and aging.
4. Provide a copy of the program and procedures used to verify that the actual environment in the as-installed position, for both operating and accident conditions over the plant design lifetime, for each important-to-safety structure, system and component is bounded by the conditions in its environmental and seismic qualification tests for life and aging.
5. Provide a copy of the procedures covering maintenance and surveillance of safety-related and important-to-safety structures, systems, and components whose testing and operation during manufacturer's checkout, burn in, environmental qualification, and aging tests, combined with PG&E's system testing, startup testing and operation prior to full power

license have rendered the remaining qualified life less than the plant design life as reflected in the current operating license.

6. Provide a copy of the procedures covering maintenance and surveillance of safety-related and important-to-safety structures, systems, and components whose testing and operation during manufacturer's checkout, burn in, environmental qualification, and aging tests, combined with PG&E's system testing, startup testing and operation prior to full power license have rendered the remaining qualified life less than the plant life as reflected in the current operating license plus the extension request in this proceeding.
7. Please provide the latest (most recent) report from the tracking system used to track the surveillance of safety-related structures, systems, and components at DCPD.
8. Please provide a list of the DCPD structures, systems and components which are safety-related. If a key to acronyms and abbreviations is available for this listing, please also provide this key.
9. Please provide a list of the DCPD structures, systems and components which are important-to-safety but are not safety-related. If a key to acronyms and abbreviations is available for this listing, please also provide this key.
10. Please provide a copy of the policy, procedures, and instructions for maintenance of structures, systems and components which are safety-related at Diablo Canyon Units 1 and 2.

11. Please provide a copy of the policy, procedures, and instructions for maintenance of structures, systems and components which are important-to-safety but not safety-related at Diablo Canyon Units 1 and 2.
12. Please provide a copy of the policy, procedures, and instructions for maintenance of structures, systems and components which are neither important-to-safety nor safety-related at DCCP.
13. Please identify the location, within the Diablo Canyon Updated FSAR and other plant descriptive documents provided to the NRC in the licensing process, of the description of the requirements and process for conducting surveillance maintenance and periodic replacement of structures, systems and components which are safety-related but have a qualified life shorter than the licensed plant life. Please provide the Updated FSAR references including sections and page numbers. If the requirements and descriptions are in documents other than the Updated FSAR or are in documents other than those provided to the NRC, please also provide a copy of these additional documents.
14. Please provide a list of the structures, systems, and components which are safety-related but which are known (for example, as a result of environmental and/or seismic qualification testing) to have a qualified design life that is less than the duration of the current plant license. For each such structure, system, and/or component, please provide copies of the surveillance and maintenance procedures and instructions applicable to that item.
15. Please provide a list of all safety-related structures, systems, and components that have a qualified design life measured from a date prior to receipt of the full-power Operating

License. For each item identify the start date of the qualified design life period (month and year) and the qualified life (in years).

16. For each of the equipment components or systems described below, please provide a copy of the maintenance information from the equipment literature and instruction manuals provided by the vendors (vendor manuals):
 - (a) Auxiliary Saltwater System Pumps;
 - (b) Auxiliary Saltwater System Motors;
 - (c) Atmospheric Steam Dump Valves;
 - (d) Suction Cooling Suction Valves;
 - (e) Emergency Diesel Generators;
 - (f) Supply Fans for 480 volt Switchgear Ventilation System;
 - (g) Inverters for Vital Instrument Channels;
 - (h) RWST Level Instruments;
 - (i) Pressurizer Pressure Instrumentation;
 - (j) 125 V DC Battery Chargers;
 - (k) Emergency Lighting Batteries; and
 - (l) Out-of-Core Start-up Neutron Detectors.
17. Please describe the process of tracking the maintenance activities which are normally required to be performed on systems, structures, and components which are important-to-safety (including safety-related structures, systems, and components), and provide a copy of the most recent report(s) generated by this tracking system.

18. Please describe the process of tracking maintenance activities which need to be performed but have not yet been completed (i.e. backlogged), and provide the most recent report(s) generated by this tracking system.
19. Please provide a copy of the policies and procedures setting forth the requirements and qualifications of contract personnel to be used in maintenance and surveillance activities at Diablo Canyon Units 1 and 2.
20. Please provide copies of all reports and audits by PG&E and/or outside consultants which have reviewed maintenance and/or surveillance activities at Diablo Canyon.
21. Please provide the policy, procedures, and instructions for performing surveillance of the safety-related structures, systems, and components at Diablo Canyon Units 1 and 2.
22. Please provide copies of all Licensee Event Reports (LERs) and Non-Conformance Reports (NCRs) issued by PG&E for Diablo Canyon Units 1 and/or 2 which relate to maintenance or surveillance activities.
23. Please provide copies of the procedures for verifying and documenting the experience level and qualifications of contract personnel brought into Diablo Canyon to work on maintenance and surveillance activities.
24. Please provide copies of all reports and audits by PG&E and/or outside consultants which have reviewed the maintenance and/or surveillance of safety-related structures, systems, and components.

25. Please provide copies of the INPO document(s) which provide recommendations concerning the magnitude of outstanding preventive and corrective maintenance activities which nuclear power plants should strive not to exceed.
26. Please provide copies of the numeric, graphic, and written descriptions prepared by PG&E over the last three years of DCP's performance compared to the INPO recommendations for outstanding preventive and corrective maintenance activities.
27. Please provide equipment qualification files for all electrically-operated valves inside containment (e.g., motor-operated valves, solenoid-operated valves, and pilot-operated valves) that are on systems important-to-safety. For each such valve, provide all records of ambient temperature, radiation, and humidity at the location of the valve during its operating life.

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Certificate of Service

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I hereby certify that copies of the foregoing Intervenor San Luis Obispo Mothers for Peace First Set of Written Interrogatories and Requests for the Production of Documents to Pacific Gas and Electric Company have been served upon the following persons by U.S. mail, first class, or as otherwise indicated.

Office of Commission Appellate
Adjudication
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Administrative Judge
Charles Bechhoefer, Chairman*
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Administrative Judge
Jerry Kline*
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Administrative Judge
Frederick J. Shon*
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
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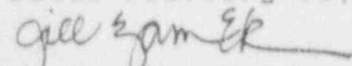
Adjudicatory File
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Secretary of the Commission*
Docketing and Service Branch
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Robert R. Wellington, Esq.
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Monterey, CA 93940

* overnight express mail

Dated February 16, 1993, San Luis Obispo County, CA


Jill ZamEk