

May 27, 1975
U.S. Nuclear Regulatory Commission
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of
PACIFIC GAS & ELECTRIC CO. }
Diablo Canyon Units 1 and 2 }

Dockets 50-275/323-OL

SAN LUIS OBISPO MOTHERS FOR PEACE (MFP)
RESPONSE TO BOARD'S ORDER OF MAY 16, 1975
RELATIVE TO PREHEARING CONFERENCE CONCERNING
SPECIAL NUCLEAR MATERIALS

I BACKGROUND

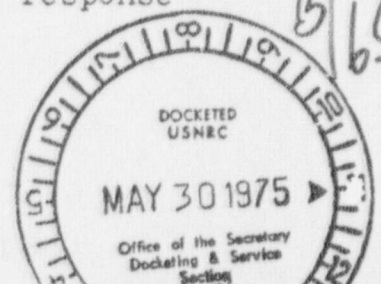
By letter dated July 22, 1974, Pacific Gas and Electric Co. (PG&E) submitted to the Directorate of Licensing, U.S.A.E.C., now the U.S.N.R.C., an application, allegedly pursuant to the provisions of 10 CFR 70, for the storage only of unirradiated nuclear fuel, neutron sources, and vessel surveillance capsules, to be stored or used at the Diablo site. This application is currently pending before the NRC Staff.

On April 10, 1975, MFP filed a motion with this Board requesting that the Board "issue an order denying PG&E the right to acquire, deliver, receive, possess, use, transfer, or store nuclear fuel assemblies within the County of San Luis Obispo until a valid operating license has been issued and has become effective for the Diablo plant."

In its response to the motion, dated April 17, 1975, PG&E submitted that the NRC regulations covering issuance of licenses for right and storage of unirradiated fuel assemblies are set forth in 10 CFR 70; that PG&E has applied for a license under those regulations, and the NRC Staff has the application under review; and, the MFP request that the Board issue an order denying PG&E the right to store unirradiated fuel assemblies is both an attack on NRC regulations and an attempt to interfere with independent Staff review. The PG&E response provides no bases whatsoever for the last two assertions.

Because the filing of the application was not advertised, and because none of the parties to this proceeding (except NRC Staff) were serviced with a copy of the application, MFP first became aware of the existence of the application when served with PG&E's response to the MFP motion.

On May 5, 1975, having shown what the Board considered to be good cause, the NRC Staff (Staff) filed a non-timely response



to the MFP motion. The Staff response asserts that "The jurisdictional question posed by this motion is essentially one of first impression. It is not a question that has previously been dealt with by a Licensing Board, "but submits "that the facts and circumstances present here warrant jurisdiction vesting with this Board...." However, on addressing itself to the merits of the motion, the Staff asserts it fails to meet the stringent test standards set forth in ALAB 58, WASH 1218, 447, 450 451 (June 20, 1972) and other citations, and the motion, therefore, should be denied.

By letter dated May 8, 1975 to Elizabeth S. Bowers, Chairman, and serviced on all parties, PG&E filed, without a showing of good cause, a non-timely supplement to their April 17, 1975 response cited above.

On May 16, 1975, the Board issued an order in which it requested all parties to submit briefs relating to the jurisdictional question and that MFP, if they desired, to submit additional information concerning the special nuclear materials (SNM) motion. This brief is submitted in accordance with that request.

Pursuant to the Board's order of May 16, 1975, PG&E filed a brief dated May 22, 1975 in which it is indicated that (1) PG&E believes that the Board presently lacks jurisdiction to consider the motion," and (2) "...suggests that the matter of jurisdiction be put to one side and that the Board consider the MFP motion on its merits."

Pursuant to the Board's May 16, 1975 order, the Staff filed a letter dated May 23, 1975 to inform the Board that it would rely on its Response of May 5, 1975 relating to jurisdiction.

II JURISDICTION

Aware of the wide spectrum of powers delegated to Licensing Boards within the context of 10 CFR 2, we believe that the Board has or can assume jurisdiction with respect to the MFP motion. We would, therefore, like to associate ourselves with the material set forth under Discussion of pp 2-5 incl. of the Staff's response dated May 5, 1975. The latter Discussion does, however, appear to contain an error. It is our understanding that the holder of a "section 70" or "storage-only" license is allowed to inspect, modify, and repair fresh-fuel assemblies. The Staff's Discussion asserts the holder is allowed to only store the assemblies.

III ADDITIONAL INFORMATION CONCERNING SNM MOTION

The NRC regulations covering issuance of licenses for receipt and storage of fresh fuel assemblies and associated radioactive materials are set forth in 10 CFR 70. PG&E has applied for such a license, we have just learned, and the NRC Staff has the application under review. In particular 10 CFR 70.31 (d) provides that:

"No license will be issued by the Commission to any person within the United States if the Commission finds that the issuance of such license would be inimical to the common defense and security or would constitute an unreasonable risk to the health and safety of the public."

WFF believes that the issuance of an SNM license, at this time, would be in direct conflict with the criteria of Part 70.31 (d) and, therefore, the license should be denied.

It is possible to entertain a number of situations which might very well constitute an unreasonable risk to the health and safety of the public. Some of these follow.

The Seismic Problem

Since 1966, PG&E has found it convenient to disregard or treat lightly fully one half of the Diablo Canyon seismic field: the offshore field. At present it appears that their strategy is to soft-pedal the existence of the 90-mile Hosgri fault, (according to some modern seismologists, a part of the San Andreas Complex) which passes within two miles of the fuel storage area. And if this fails the next step is to discount the credibility of the occurrence of an earthquake with epicenter located above the Hosgri Fault, whose magnitude might lie in the 7 to 8 range. William Gawthrop has located the epicenter of the 1927 offshore quake of Richter Magnitude 7.5 on the Hosgri Fault. PG&E's response has been that the epicenter location error ellipses are so large as to preclude precise location of the quake.

Without addressing the question of the error ellipse sizes, WFF contends that even if they were of dimensions so great as to preclude accurate location, it is clearly in the public interest to assume that the 1927 quake's epicenter was immediately above the Hosgri Fault. Thus Diablo structural engineering criteria could be established whose bases sprung from modern seismic models instead of outdated models.

Further, even in the event that it were postulated, for the purpose of discussion, that the error ellipses are too large, it appears that one interested in locating the 1927 epicenter as well as other offshore seismic events, would take steps to decrease the dimensions of the offshore error ellipses. We deplore the apparent fact that neither PG&E nor the NRC Staff has taken affirmative steps to investigate the possibility of detonating explosives in the offshore area. Such tests, performed in cooperation with the Berkeley, Caltech, and U.S. G.S. seismic groups could improve existing velocity models and thereby decrease error ellipse dimensions. If convincing arguments against performing such experiments are not presented, the existence of a cover-up conspiracy will probably be suspected.

Since PG&E does not know what certain of the offshore seismological investigations will reveal, they are currently making an after-the-fact attempt to requalify Diablo Seismic Category I structures at a higher level than original structural design criteria called for. Note that the original safe shutdown earthquake (SSE) was defined by a ground acceleration of 0.4g. About a year ago attempts were already underway to requalify the plant at 0.5g. By letter from Henry W. Coulter to General L.V. Gossick dated Jan. 28, 1975, the U.S.G.S. has taken the position that the "design value of 0.5g... is inadequate." We can only assume that PG&E will attempt to requalify for an SSE of 0.6g. It is our impression that with respect to the SSE, a move from 0.4g to a 0.6g level requires very profound structural engineering changes.

In summary, we find that, with respect to what should be required for the public's health and safety, and with respect to what is required by 10 CFR 100, that the seismological/structural engineering situation at Diablo is currently in a disgraceful state of disarray.

San Luis Obispo Mothers for Peace contend that the issue of seismology has been admitted by this Board as a contention for purposes of discovery, and pending the resolution of this issue, by stipulation of the parties, by order of the Board, or by a Decision of this Board following the operating license evidenciary hearing, the seismic potential of the Diablo environment must be considered, legally, an unknown.

Because of these seismic problems as well as legal problems set forth above, we cannot imagine how in the world PG&E can guarantee the integrity of the fuel assemblies within their lattice-type fuel racks. The unknown seismic field could unleash an amount of energy whose uppermost limit remains, at this time, unknown. The fuel racks, according to the FSAR, are allegedly designed for a ground acceleration of 0.4g, a figure which, at this point, has little significance. (It is appropriate to observe that the Staff's Safety Evaluation Report is, at this point, silent with respect to the seismic environment of Diablo Canyon, apparently due to PG&E's seismic studies slippage.)

Because the nature of the Diablo seismic field is an outstanding contested and unresolved issue, there is little that can be said about the behavior of the fuel racks, overhead cranes, and associated equipment which is above and in the neighborhood of the fresh fuel assemblies, during what we consider to be a credible earthquake. A strong quake might therefore, be responsible for producing extensive and severe deformations in the fuel assembly rack lattices. Such a deformed geometry, coupled with the introduction of unborated water into the area (and possibly even without water) could, depending upon the nature of the deformation, be responsible for an effective mult. factor (k) criticality of one or greater. A supercriticality in the fuel handling area is, generally, considered poor form, with respect to the health and safety of the public. The fuel handling building is not designed to contain the fission products of an unplanned-for criticality and the results of the situation set forth above could lead to radiation doses many orders of magnitude greater than allowable limits to onsite personnel, people in the low population zone, and certainly to the intervenors and the public at large. This is clearly not in our interest nor in the public interest.

The Sabotage Problem

The reliability of the onsite security program has not, to our knowledge, been resolved. The ACRS review of this subject is still underway and the ACRS letter to the Commission has not, as yet, been sent. Furthermore, several intervenors in this proceeding have raised the issue of sabotage. This Board has admitted, for discovery, the issue of domestic sabotage.

Over the past year, PG&E facilities at Diablo Canyon and at the Pismo Beach Lay-Down Yard have been the subjects of innumerable bomb threats. This Intervenor was on one occasion prevented from making a discovery site tour for over an hour while a bomb sweep was made by PG&E and County Sheriffs Department personnel.

In addition, during the past several months the perpetration of acts of violence on PG&E facilities in the Northern part of the State have become a matter of course. Thus, apparently threats are being implemented.

An act of sabotage could, it is believed, create a critical geometry in the fuel handling area if fresh fuel and unborated water sources are available.

Mothers for Peace are not at all convinced that it is possible to say with a substantial degree of certainty that the existing

security forces and security plans could prevent would-be saboteurs from accomplishing their goals, and for this reason, we also believe this Board should act in favor of our motion.

In addition to the above we have another reason for opposing the storage of fuel assemblies onsite at this time. We hesitate to be dramatic but feel that in the public interest, the reason should not appear on the record.

We do not feel that the issuance of the requested order would substantially harm other parties in this proceeding. Only FG&E has casually indicated in its response dated April 17, 1975 to the MFP motion that "should the requested motion be granted, alternative storage facilities outside San Luis Obispo County would have to be established at considerable expense." This unquantitated, unverified, and unsupported assertion provides no basis for its veracity. We might suggest that alternate storage facilities need not be established, and that the fuel assemblies simply be allowed to remain at the fabricator's warehouse, it being assumed that they have a license to store fuel.

Respectfully submitted,

Sandra A. Silver

Sandra A. Silver
1315 Cecelia Ct.
San Luis Obispo, CA 93401

Dated: May 27, 1975

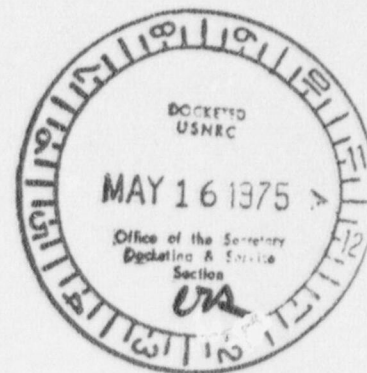
Xc: Elizabeth S. Bowers
Glenn O. Bright
William P. Cornwell
Philip A. Crane, Jr.
Frederick Eissler
William E. Martin
Alan S. Rosenthal
Secretary, U.S. NRC
Gordon Silver
Andrew Skaff
James R. Tourtellotte

May 13, 1975

RELATED CORRESPONDENCE

Mr. Philip A. Crane, Jr.
Law Department
Pacific Gas and Electric Co.
77 Beale Street
San Francisco, CA 94106

(Re: NRC Dockets 50-275/323-01.)



Dear Mr. Crane:

Transmitted herewith is an interrogatory to which P.G. and E.'s response would be appreciated.

Sincerely yours,

Gordon A. Silver

Gordon A. Silver

1315 Cecelia Court
San Luis Obispo, CA 93401

Xc with enclosure:

Elizabeth E. Apfelberg
Elizabeth S. Bowers
William P. Cornwell
Frederick Eissler
Sandra A. Silver
Andrew J. Skaff
James Tourtellotte
Secretary, NRC

3/66

In the Matter of
PACIFIC GAS & ELECTRIC CO. }
(Diablo Canyon, Units 1 and 2) }

Dockets 50-275/323-OL



INTERVENOR'S INTERROGATIONS TO APPLICANT

Intervenor submits the following interrogatories to the applicant (PG&E) to be answered, under oath, by such PG&E personnel as have knowledge of the facts, in accordance with 10 CFR 2.740b. References herein to "P.G.&E." are to the Pacific Gas and Electric Co., including its officers, employees, vendors, contractors, and consultants.

1. Reference "Answer of Pacific Gas and Electric Company to Motion Filed by San Luis Obispo Mothers For Peace Dated March 6, 1975" dated March 18, 1975. On p. 1 is found the following statement:

".....in connection with another proceeding PGandE had the Humboldt County infant mortality records examined, and it developed that infant mortality in Humboldt County actually had declined since the Humboldt reactor was placed in operation."

Please explain with specificity the bases, if any, for this alleged matter of fact. Identify proceeding, methodology, and control group, if any. Include results of study.

2. Identify by title, author, investigator, agency, beginning date, and completion date, all studies, reports, memoranda, correspondence, investigations, and other documents pertaining to the geology and seismological environment of the Diablo Canyon Power Plant, Units 1 and 2, of which you are aware that are

- A. Completed
- B. In progress
- C. Projected for the future

3. Identify by title, author, investigator, agency, beginning date, and completion date, all studies, investigations, reports, memoranda, correspondence, and other documents pertaining to the structural engineering design criteria of seismic category I and category II systems and components of the proposed Diablo Canyon power plant units 1 and 2, which are

- A. Completed
- B. In progress
- C. Projected for the future.

- 3.1 Intervenor requests PG&E to promptly supplement its initial response to questions 2 and 3 if and when any new information pertaining to the substance of these questions becomes known,

thereby making the initial responses incomplete.

- A. Will you comply with request 3.1 without an order?
- B. If answer to 3.1A is not yes, please set forth basis for response.

4. Reference FSAR, p. 11.5-14, third line. With respect to the three types of radioactive wastes cited, where do you intend to ship them when they leave the site and what will be their routes?
5. During the start-up program and after, do you intend to measure, off-site, the presence of plutonium-239 or other plutonium isotopes, on land, sea or air, in contradistinction to gross particulate alpha activity? That is, describe any and all off-site programs for identifying plutonium isotopes.
6. Do you intend to use the P.G.andE. facilities in the "Five Cities" area of Pismo Beach to store, warehouse, or transfer fresh or spent fuel, or other radioactive wastes? Please describe.
7. Please specifically identify by title and brief summary of contents, all manuals, guides, procedures, plans, and other documents and texts which will be required to be in the control room (and/or associated offices) for the use of senior control operators during
 - A. Initial fuel loading
 - B. Startup and power ascension
 - C. Commercial operation.
8. Please answer interrogatory no. 7 for the case of the chief Startup Engineer.
9. Please answer interrogatory no. 7 for the case of Plant Superintendent.
10. Reference FSAR, "Reporting of Security Incidents." p. 13.7-7. Line six is vague because the words "facts" and "substantiated" are not quantitated. Please explain.
11. Identify the first commercial power plant to use 17 X 17 fuel assemblies. If no commercial plant has used a core comprised entirely of 17 X 17 assemblies, what plant will be the first to do so?
12. Is it expected that ice will be kept in the containment building? If yes, give FSAR reference.

13. For units 1 and 2 please provide currently anticipated dates for

- A. Shipping of first fresh fuel assembly
- B. Arrival on site of first assembly
- C. Arrival on site of last assembly
- D. Beginning of fuel loading
- E. Completion of fuel loading
- F. Criticality
- G. Synced and on line.

14. With respect to Diablo Unit 1 spent fuel reprocessing please set forth identification of

- A. Potential reprocessors with whom you are negotiating
- B. Location of above reprocessors.
- C. Reprocessors who presently are capable of reprocessing (in contradistinction to storing) your spent fuel.
- D. Location of above reprocessors.
- E. Reprocessors or other firms who are capable of storing your spent fuel.
- F. Location of above storers.
- G. Storers with whom you are negotiating.
- H. Location of above storers.
- I. Reprocessors and storers with whom you had concluded negotiations.
- J. Locations of above reprocessors and storers.

15. With respect to initial fuel assembly shipments, identify with as much precision as possible, the route to be followed by trucks within San Luis Obispo and Santa Barbara Counties.

16. In the event that no reprocessing plants or off-site storage pools be prepared to accept your spent fuel assemblies what will be done with them?

17. Under the circumstances of interrogatory 16, if, in addition, spent fuel assemblies are stored in the spent fuel pool, what is the maximum storage fraction that will be used for storage.

18. Describe proposed procedures, if any, involving limitations on onsite storage of spent fuel.

19. Discuss and quantitate the maximum radiation dose, when the maximum allowed amount of spent fuel assemblies are stored on site to

- A. On site personnel
- B. People at exclusion zone boundary
- C. People in small craft, approaching from the sea, as close as legally possible to the plant.

20. With respect to the seismic qualification of Category I systems and equipment, please indicate what will allegedly withstand

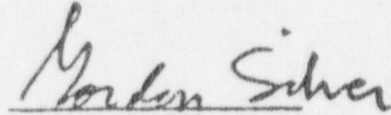
- A. 0.4g
 - B. 0.5g
 - C. 0.6g
 - D. More than 0.6g
21. Please indicate what Category I systems and equipment have not yet been qualified by NRC Staff at the level of
- A. 0.4g
 - B. 0.5g
22. With respect to the 17 X 17 core design please set forth those areas that have not, as yet, been qualified, by the NRC Staff, as complying with the ECCS final acceptance criteria.
23. What geological or seismological investigations of the neighborhood of Diablo Canyon, that have not at this time been completed, do you or your consultants think should be done? Please reply in a specific and unambiguous fashion.
24. Reference NRC ACRS meeting of February 18 and 19, 1975 at San Luis Obispo, Transcript pp. 90-95. Please provide intervenor with Blume (1965) analytical equation used for determination of Diablo site ground acceleration.
25. Same reference as interrogatory no. 24. Please show how each variable of Blume (1965) equation was evaluated (i.e., quantitate).
26. Refer to interrogatories 24 and 25. If Blume (1965) equation was not used to establish structural criteria please provide and identify equation that was used, if any, and, in addition, indicate values assigned each variable.
27. Refer to interrogatories 24, 25, and 26. If a graphical presentation was employed please provide intervenor with graph used to predict ground acceleration.
28. Reference NRC ACRS Meeting of February 18, 1975, Transcript p. 92, line 19 to p. 93, line 23. With respect to the "discrepancy" noted at p. 93, line 23,
- A. Have Trifunac and Blume come to an agreement?
 - B. If yes, please explain why the discrepancy emerged and how it has been resolved.
 - C. If no, is a meeting scheduled for the future?
 - D. If Trifunac and Blume have corresponded on the instant discrepancy, please identify the communications, and indicate whether or not you will provide intervenor with a copy of such communications without an order?
29. Please indicate what P.C.andE. and its consultants consider to be the minimum acceptable seismic design basis for Diablo Canyon units 1 and 2 in the light of the requirements set forth in 10 CFR Part 100, Appendix A.

30. If the definitive location of the 1927, magnitude 7.3 earthquake ultimately becomes a value judgement by all concerned, due to lack of definitive data, do you feel obliged to postulate its location on the Hosgri, in the interests of the public health and safety?
31. If answer to above is no, please set forth basis for answer.
32. In the context of 10 CFR 100, Appendix A, what do you consider to be the magnitude of the maximum earthquake that could occur on the Hosgri Fault Zone?
33. In the event of an earthquake producing a ground acceleration at the site of 0.5 g,
 - A. What will be the acceleration of the floor and equipment consoles in the control room, and,
 - B. How will the stability of the reactor operators be affected, and,
 - C. Can you say categorically that an operator will not be thrown from one side of the room to the other and impaled on protruding controls?
34. What safety features have been designed into the control room to prevent operators from sustaining serious injury and to ensure their capability of effecting a safe shutdown, during high control-room accelerations due to the safe shutdown earthquake?
35. Please identify and list all site studies and photographic series made of intake and discharge plume completed, in progress, or projected for the future.
36. Will you make available for intervenor's inspection, at your San Luis Obispo offices, all intake and discharge plume studies including all dye test photographs, without an order?
37. Are you aware of any studies made of the concentration of copper present on the ocean floor in the neighborhood of the discharge structure and plume?
 - A. If answer is yes please identify such studies and provide intervenor with results.
38. Please set forth the nature of the South Cove siltation problem which occasioned the site visit of the California Fish and Game Dept. and officials from the California Attorney General's Office during or around the week of April 20, 1975.

39. Regarding unit 1 and unit 2 condenser tubing please
- Indicate if you have plans to replace any copper tubing with tubing of another metal.
 - Set forth the extent of the replacement
 - Indicate if a definite decision has been made with respect to the subject of interrogatory no. 39A.
 - Indicate the tubing metal (specific formulation) to be used.
40. If the unit 1 copper condenser tubing is to be replaced,
- How long will the conversion take?
 - Will it be possible to isolate and work on sections so that other portions of the condenser can remain operative?
41. Please identify, including dates, all applications and other documents and letters pertaining to your requests to acquire and possess nuclear fuel assemblies and other special nuclear materials (SNM).
42. Reference FSAR p. 11.6-1 par. 2. Please set forth those aspects, if any, of the off site radiological monitoring program that ensure independence between P.G.andE's readings and the readings of the State of California.
43. Ref. FSAR p. 11.6-6 par. 3. With respect to milk-sample collection, specifically identify by name and title, P.G.andE. collector and State of California collector. Under what circumstances can these collectors be the same person?
44. Where and by whom will the samples of interrogatory no. 43 be read?
45. Ref. FSAR p. 11.6-6 par. 4. Please set forth criteria used to determine if animals have been eating locally grown feeds. During operational period, in contradistinction to baseline data period, indicate criteria used to determine if animals have been eating upwind or downwind-grown feeds.
46. Ref. FSAR p. 11.6-6 par. 6. Please eliminate vagueness by indicating quantitatively the frequency of milk sampling during operational period of plant.
47. Ref. FSAR p. 12.1-14 par. 3. Please set forth all cases where Humboldt workers have been exposed to radiation levels in excess of as low as practical levels since Humboldt plant has been in existence and indicate circumstances.
48. Ref. FSAR p. 12.1-18 par. 3. Please indicate the total number of personnel, since 1962, at the Humboldt nuclear plant that have received radiation doses per year in excess of
- | | |
|-----------|----------|
| A. 10 rem | D. 4 rem |
| B. 6 rem | E. 3 rem |
| C. 5 rem | |

During the course of these proceedings certain responses to interrogatories presented herewith may become subject to supplementation within the meaning of 10 CFR 2.740 (e). The way the latter section is read by Intervenor, it appears Applicant has overlooked or disregarded these provisions in the past. Perhaps the troops will undertake to comply with 2.740 (e) in the future.

Sincerely yours,



Gordon A. Silver

Dated: May 13, 1975

1315 Cecelia Ct.
San Luis Obispo
California 93401