



UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

Docket Nos. 50-275/323-OL

RESPONSES OF JOHN J. FORSTER
TO INTERROGATORIES PROPOUNDED BY
PG&E DATED JUNE 16, 1976

1(a) Section 5.4.2 of the FES predicts bioaccumulation will occur in aquatic and terrestrial biota, some of which (e.g., fish, abalone, cow) are in man's food chain. Bioaccumulation is equivalent to buildup of concentration in the instant context. Further, the citation from p. 5-66 of the FES does not take into account the radiological consequences of massive earthquakes on the Hosgri-San Simeon Fault Zone or, for that matter, even the OBE. Note that one of the factors which invalidates the usefulness of Table 7.2 of the FES is the unwarranted assumption that the plant and facilities have been engineered to properly withstand the DE and DDE.

1 (b) There has been no clear statement as to the total number of reactors that are anticipated for the State of California. As each new reactor comes on line, it adds its increment to the total amount of effluents, releases, and discharges. There is nothing in the documents of this docket that indicates the existence of upper limits on effluents established to ensure the health and safety of the public. Certainly a threshold theory of radiation damage, which we understand the NRC to sponsor, recognizes "upper limits". (See Hiroshim and Nagasaki data.)

2. The applicant did not present drawings showing anticipated isotherm patterns, or tables listing isotherm areas, under various conditions expected at the site (FES Addendum, p.3-10), and has, therefore, failed to make a reasonable prediction of the environmental impact of the thermal plume prior to the proposed action. Although the condenser cooling water is expected to be discharged at a temperature of not greater than 25°F (delta T) above the intake temperature (excluding defouling operations), the Staff studies are limited to a delta T of 19°F. The environmental impact of defouling is not addressed by Staff.

It appears that the analytical and physical model studies have not produced favorable data and that notwithstanding this, the applicant and the Staff are determined to push the discharge through a NEPA review.

An additional concern is the failure of applicant and NRC Staff to indicate whether the cooling system, including the discharge system, can properly withstand the forces of an OBE and SSE and tsunamis caused by them. If not, the environmental impact must be addressed.

Relative to the requirements of 10 CFR 50, Appendix D, such a situation is inadequate.

In addition to the above we are relying upon the arguments set forth in the July 2, 1976 RESPONSE OF WILLIAM P. CORNWELL TO INTERROGATORIES FILED BY PACIFIC GAS AND ELECTRIC COMPANY DATED JUNE 16, 1976.

3. The sources of cosmic radiation and terrestrial gamma radiation (the major categories of natural background radiation - BEIR Report, p. 12) are, generally, not ingested. Radioactive effluents in gaseous, liquid and solid form, however, are subject to bioaccumulation and introduction into the food chain. Once ingested by man constant internal exposure is provided. Certain tissues concentrate the dose (e.g., thyroid), producing denser radiations. The relative anticipated amount does not generally take into consideration reactor accidents or natural events such as damaging earthquakes.

Background radiation is harmful to the extent that it is estimated to cause at least 10-20% of the spontaneous incidence rate of cancers and leukemias. (E. B. Lewis, "Science", 1957) Background is generally held the causative factor in various other somatic and genetic damage.

4. In the absence of complete geologic, seismic, and structural review it is difficult to make a decision as to plant reliability factor. Neither OBE nor SSE have been agreed upon.

The ASLB must consider the cost/benefit aspects of the plant. Plant reliability factor is pertinent to such a consideration.

I declare under penalty of perjury that the foregoing Responses To Interrogatories are true and correct to the best of my knowledge, information, and belief.

JOHN J. FORSTER

By Gordon Silver
Gordon Silver

CC: ASLB Members
All Parties
Secretary, NRC

Dated: July 20, 1976