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NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

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PAC	IFIC	GAS	AND	ELEC	FRIC	COMPANY	
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Docket Nos. 50-275 O.L. 50-323 O.L.

WITHDRAWAL OF CERTAIN CONTENTIONS BY GOVERNOR DEUKMEJIAN AND JOINT INTERVENORS

Governor George Deukmejian and Joint Intervenors hereby withdraw contentions 3(c), 3(d), 3(e), 3(g), 3(i), 3(j), 3(k), and 3(n), previously admitted by the Atomic Safety and Licensing Appeal Board in the reopened proceedings on design quality assurance. For the benefit of the board and the parties, a brief statement is given of the reasons the contentions are being withdrawn.

I.

CONTENTIONS FALLING WITHIN THE SCOPE OF METHODOLOGY AND CONCLUSIONS ACCEPTED IN ALAB-644 AS LICENSING CRITERIA

Contentions 3(d), 3(e), 3(k), and 3(n) reflected technical concerns that initially appeared to be the product of design quality assurance failures. They are now being withdrawn because they have been found, through the process of discovery, to be within the licensing criteria approved in ALAB-644.

CONTENTIONS WITHDRAWN ON THE BASIS OF ADDITIONAL TECHNICAL INFORMATION

II.

The remaining contentions being withdrawn are those originally based on conerns that have been resolved by additional technical information gained in the course of discovery or from Pacific Gas and Electric Company's responses to open items in the Safety Evaluation Report Supplement 18.

<u>Contention 3(c)</u> was originally raised because the values of the effective damping in each mode, information necessary to assess the adequacy of the soil structure interaction analysis for the containment and auxiliary buildings, was not provided in the Diablo Canyon Project Phase I Final Report. That information has now been provided by the DCP and is satisfactory.

<u>Contention 3(q)</u> was based on the fact that in the analysis of the turbine building the crane had been considered only unloaded and parked in a single location. No analysis was presented showing that allowable stresses would not be exceeded for other loads upon and positions of the crane. The DCP has now presented information showing such analyses have been done and that allowables are not exceeded.

<u>Contention 3(i)</u> was based on the absence from the DCP Phase I Final Report and the relevant ITRs of any mention of sloshing effects inside the intake structure or of hydrodynamic pressures on the seaward wall due to vibrations

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of the structure during an earthquake. Information gained from depositions and a technical meeting with the DCP have shown that the position of flow straighteners precludes sloshing around them and that hydrodynamic pressure on the seaward wall should be small.

<u>Contention 3(j)</u> was originally based on the lack of justification for the combination of linear and nonlinear analyses of the crane in the turbine building. Depositions have revealed that the only nonlinearity is associated with slacking of the cable; this clarification obviates the original concern.

/// /// /// To assist the board and the parties, the remaining contentions being contested by the Governor and Joint Intervenors -- after the striking of those contentions disallowed by the board and the withdrawal of the contentions identified above -- are set out in the attached document. It is possible that the Governor or Joint Intervenors may still withdraw some of the remaining contentions.

DATED: October 24, 1983

JOHN K. VAN DE KAMP, Attorney General of the State of California ANDREA SHERIDAN ORDIN, Chief Assistant Attorney General MICHAEL J. STRUMWASSER, Special Counsel to the Attorney General SUSAN L. DURBIN, PETER H. KAUFMAN,

Deputy Attorneys General

By Susan DURB IN

Attorneys for Governor George Deukmejian 3580 Wilshire Boulevard Suite 800 Los Angeles, California 90010 Telephone: (213) 736-2105

JOEL R. REYNOLDS, Esq. JOHN R. PHILLIPS, Esq. ERIC HAVIAN, Esq. Center For Law in the Public Interest 10951 West Pico Boulevard Los Angeles, California 90064 Telephone: (213) 470-3000

DAVID S. FLEISCHAKER, Esq. P. O. Box 1178 Oklahoma City, Oklahoma 73101

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NOLDS ATTORNEYS FOR JOINT INTERVENORS

NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

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In the Matter of PACIFIC GAS AND ELECTRIC COMPANY (Diablo Canyon Nuclear Project, Units 1 and 2)

Docket Nos. 50-275 O.L. 50-323 O.L.

ISSUES TO BE CONTESTED BY GOVERNOR DEUKMEJIAN AND JOINT INTERVENORS

October 24, 1983

 The scope of the IDVP review of both the seismic and non-seismic aspects of the designs of safety-related systems, structures and components (SS&C's) was too narrow in the following aspects:

(a) The IDVP did not verify samples from each design activity (seismic and non-seismic).

(b) In the design activities the IDVP did review, it did not verify samples from each of the design groups in the design chain performing the design activity.

(c) The IDVP did not have statistically valid samples from which to draw conclusions.

(d) The IDVP failed to verify independently the analyses but merely checked data of inputs to models used by PG&E.

(e) The IDVP failed to verify the design of Unit 2.

 The scope of the ITP review of both the seismic and non-seismic aspects of the designs of the safety-related systems, structures and components (SS&C's) was too narrow in the following aspects:

(a) The ITP did not verify samples from each design activity (seismic and non-seismic).

(b) In the design activities the ITP did review, it did not verify samples from each of the design groups in the design chain performing the design activity. (c) The ITP did not have statistically valid samples from which to draw conclusions.

(d) The ITP has failed systematically to verify the adequacy of the design of Unit 2.

3. In various situations listed below, the ITP used improper engineering standards to determine whether design activities met license criteria. In some of these situations, the IDVP either used or approved the use of such improper standards or did not verify them at all.

(f) The ITP's modeling of the soil properties for the containment and auxiliary buildings was improper in that:

(i) in the soil structure interaction analysis of containment for the DE and the DDE, use of boundary motion inputs to the model were improperly used;

(ii) the soil structure interaction analysis for containment for the DE and the DDE uses a 7 percent damping value for rock, which is unconservative, especially for the DE;

(iii) the dynamic analyses of the containment for all earthquakes omit any analysis of uplifting of the foundation mat;

(iv) the modeling of the soil springs for the auxiliary building does not specify soil properties;

(v) in the modeling of the soil springs for the auxiliary building, the motion inputs to the lower ends of the springs does not account for all soil structure interaction phenomena that could be expected.

(o) The ITP has not demonstrated, and the IDVP has not verified, that the DCP modeling of the seismic response of the fuel handling building is proper, in that the DCP has not adequately justified the use of the translational and torsional response of the auxiliary building as input to the fuel handling building nor has it demonstrated the validity of the dynamic degrees of freedom selected.

(p) The ITP has not demonstrated, and the IDVP has not verified, that the DCP seismic model of the slabs in the auxiliary building is proper, in relation to the use of vertical and rotational springs to model the columns, and the motions used as input at the ends of the springs not connected to the slabs. In addition, in the study of the diaphragms, the ITP has not adequately accounted for the inplane flexibility of these slabs, and has not adequately demonstrated that stresses are within allowable limits at all elevations.

(q) The ITP has not demonstrated and the IDVP has not verified, that the soils analysis for the buried diesel fuel oil tanks is proper in that the values of the exponent shown in figure 14 of ITR 68 have not been demonstrated to be appropriate and the variation of shear velocity with depth is not properly justified.

(r) The ITP has not demonstrated and the IDVP has not verified that the soils analysis for the auxiliary saltwater piping and circulating water intake conduits is proper in that the selection of the modulus versus strain curve utilized is not justified.

(s) The ITP has not demonstrated and the IDVP has not verified that the seismic analysis of the turbine building is proper in that bolt bearing capacities were taken from an inappropriate source.

(t) The ITP has not demonstrated and the IDVP has not verified that the seismic analysis of the turbine building is proper in that the use of four different models for the vertical analysis has not been justified.

4. The IDVP accepted deviations from the licensing criteria without providing adequate engineering justification in the following respects:

- a. Contrary to the requirements of FSAR Section 17.1 regarding compliance of the as-built installation with the design documents, the IDVP review of the AFWS disclosed that the as-built installation failed to meet the design drawings in that (i) a steam trap on the turbine-driven AFW pump steam supply line is not provided and (ii) there are discrepancies in the arrangement of the long-term cooling water supply line.
- b. Contrary to FSAR Section 8.3.3, the electrical design does not fully comply with the commitments regarding separation and color coding.
- c. Contrary to the single failure criterion of Appendix A to 10 C.F.R. Part 50, a single failure may cause loss of redundant power divisions because redundant electric power division trains are electrically interconnected through two circuit breakers and a single power transfer switch.

- d. Contrary to GDC 57 of Appendix A, valve operators for the isolation valves which provide the steam supply to the turbine-driven auxiliary feed pump from two of the main steam generators have not been classified and procured as safety-related components.
- e. The single failure of an auxiliary relay would prevent automatic closure of the redundant steam generator blowdown isolation valves on automatic initiation of the AFWS contrary to a Westinghouse interface requirement and FSAR Figure 7.2-1.
- f. Contrary to NUREG 0588 regarding environmental qualifications, flow transmitter FT-78 and flow control valve FCV-95 are located in a harsh environment but were not listed as such in the PG&E Environmental Qualification Report dated September 1981, and are not yet environmentally qualified.
- g. Contrary to the requirements of NUREG 0588 regarding environmental qualifications, portions of the CRVPS were omitted from PG&E's Environmental Qualification Report.
- h. Contrary to PG&E's September 14 and December 28, 1978, licensing commitments, CRVPS equipment identified in the FSAR as necessary to maintain control room habitability during safe shutdown has not been evaluated regarding the effects of a moderate energy pipe break.
- i. The fire protection for the motor driven AFW pump room is not consistent with the PG&E licensing commitment for fire zone separation as stated in its November 13, 1978, Supplemental Information for Fire Protection Review ("SIFPR") in that:
 - there is a large grated ventilation opening in the ceiling of the room;
 - a fire damper has gaps when it is closed.
- j. The fire protection for the AFW pump room is not consistent with the PG&E licensing commitment for cable separation as stated in its SIFPR of November 13, 1978, in that:
 - the pumps for the motor driven AFW pumps and the control circuitry for a flow control valve necessary for operation of the turbine driven AFW pump are located in a single fire zone;

- 2) cables for some AFW circuits are not routed in accord with descriptions in the SIFPR and four AFW circuits PG&E committed to identify and review in the SIFPR were not included in that document.
- k. Contrary to the licensing commitment set forth in its SIFPR of November 13, 1978, each of the three 4160 volt cable spreading rooms has a ventilation opening leading up to the 4160 volt switchgear rooms.
- Contrary to FSAR Section 3.6, possible jet impingement loads have not been considered in the design and qualification of safety-related piping and equipment inside containment.
- m. Contrary to QA program commitments in FSAR Section 17.1, documented evidence is inadequate to demonstrate that rupture restraints outside and inside containment have been properly designed and installed to provide protection against rupture in high pressure piping.
- n. For the containment exterior shell review the ITP review used the AISC Code rather than Section III of the ASME Code contrary to the commitment in Table 3.2-4 of the FSAR.
- o. Contrary to the requirements of NUREG-0588 regarding environmental qualifications, safetyrelated cables and cable splices which could be subject to a harsh environment during a high-energy line break are not identified in the PG&E Environmental Qualification Report.
- p. The NSC pipe break analysis, which is Appendix A to FSAR Section 3.6, did not include all likely sources of water in the calculation of flooding levels.
- q. Contrary to PG&E's December 28, 1979, licensing commitment letter to the NRC, modifications to protect two Auxiliary Feedwater valves from the effects of moderate energy line breaks were not implemented.
- r. Contrary to the licensing commitment to maintain minimum system redundancy as stated in FSAR Section 3.6A (NSC evaluation of pipe break outside containment), four components were identified for

which high energy line cracks could cause temperatures in excess of the specification temperatures of the components.

- S. Contrary to the licensing commitment to maintain minimum system redundancy as stated in FSAR Section 3.6A (NSC evaluation of pipe break outside containment), a conduit was identified whose failure due to a high energy line crack could eliminate redundant Auxiliary Feedwater system flow.
- t. Contrary to the FSAR Section 8.3 commitment to provide switchgear buses with adequate short circuit interrupting capability, the calculated duties for circuit breakers on 4160 V buses F, G, and H were above the nameplate ratings for those buses.
- u. Contrary to single failure criteria stated in FSAR Section 3.1.1, reviews of the Auxiliary Feedwater and Control Room Ventilation and Pressurization systems identified circuit separation and single failure deficiencies. Similar deficiencies were identified in additional verification reviews, which included other safety-related systems.

5. The verification program has not verified that Diablo Canyon Units 1 and 2 "as built" conform to the design drawings and analyses.

6. The verification program failed to verify that the design of safety-related equipment supplied to PG&E by Westinghouse met licensing criteria.

7. The verification program failed to identify the root causes for the failures in the PG&E design quality assurance program and failed to determine if such failures raise generic concerns.

8. The ITP failed to develop and implement in a timely manner a design quality assurance program in accordance with 10 C.F.R. Part 50, Appendix B to assure the quality of the recent design modifications to the Diablo Canyon facility and the IDVP failed to ensure that the corrective and preventative action programs implemented by the ITP are sufficient to assure that the Diablo Canyon facilities will meet licensing criteria.

9. Contrary to General Design Criteria 44 (GDC-44) of Appendix A to 10 C.F.R. Part 50, PG&E has failed to provide adequate assurance of component cooling water system (CCWS) heat removal safety function capacity in that the maximum ocean water temperative of 64 degrees F. is not conservative because it has already been exceeded in 1983. Furthermore, a technical specification limitation which permits plant operation at reduced power levels in lieu of enlarging the capacity of the CCWS does not provide an equivalent level of safety as compliance with the requirements of GDC-44 (SSER 16 (Aug. 1983) and September 1983 ocean water temperature readings).

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

In the Matter of PACIFIC GAS AND ELECTRIC COMPANY (Diablo Canyon Nuclear Power

Plant, Units 1 and 2)

Docket Nos. 50-275 O.L. 50-323 O.L.

CERTIFICATE OF SERVICE

I hereby certify that on this date I caused copies of the foregoing Withdrawal of Certain Contentions by Governor Deukmejian and Joint Intervenors served on the following by U.S. Mail, first class (except for those persons marked with an asterisk ("*"), to whom the envelope was posted Express Mail), postage prepaid.

Hon. Nunzio Palladino, Chairman U.S. Nuclear Regulatory Commission 1717 H Street, N.W. Washington, D.C. 20555

Hon. Victor Gilinsky, Commissioner U.S. Nuclear Regulatory Commission 1717 H Street, N.W. Washington, D.C. 20555

Hon. Thomas Roberts, Commissioner U.S. Nuclear Regulatory Commission 1717 H Street, N.W. Washington, D.C. 20555 Hon. James Asselstine, Commissioner U.S. Nuclear Regulatory Commission 1717 H Street, N.W. Washington, D.C. 20555

Hon. Frederick M. Bernthal, Commissioner U.S. Nuclear Regulatory Commission 1717 H Street, N.W. Washington, D.C. 20555

Atomic Safety and Licensing Appeal Board U.S. Nuclear Regulatory Commission Washington, D.C. 20555

Hon. Thomas S. Moore, Chairman * Atomic Safety and Licensing Appeal Board U.S. Nuclear Regulatory Commission Washington, D.C. 20555

Hon. W. Reed Johnson * Atomic Safety and Licensing Appeal Board U.S. Nuclear Regulatory Commission Washington, D.C. 20555

Hon. John H. Buck * Atomic Safety and Licensing Appeal Board U.S. Nuclear Regulatory Commission Washington, D.C. 20555

Judge John F. Wolf, Chairman Atomic Safety and Licensing Board U.S. Nuclear Regulatory Commission Washington, D.C. 20555

Judge Glenn O. Bright Atomic Safety and Licensing Board U.S. Nuclear Regulatory Commission Washington, D.C. 20555

Judge Jerry R. Kline Atomic Safety and Licensing Board U.S. Nuclear Regulatory Commission Washington, D.C. 20555

Harold Denton Director of Nuclear Reactor Regulation U.S. Nuclear Regulatory Commission Washington, D.C. 20555

Leonard Bickwit, Esq. Office of the General Counsel U.S. Nuclear Regulatory Commission Washington, D.C. 20555 Lawrence Chandler, Esq. * Henry J. McGurren, Esq. Office of Executive Legal Director BETH 042 U.S. Nuclear Regulatory Commission Washington, D.C. 20555

Secretary U.S. Nuclear Regulatory Commission Washington, D.C. 20555 Attention: Docketing and Service Section

Mrs. Elizabeth Apfelberg 1415 Cozadero San Luis Obispo, CA 93401

Janice E. Kerr, Esq. Public Utilities Commission 5246 State Building 350 McAllister Street San Francisco, CA 94102

Mrs. Raye Fleming 1920 Mattie Road Shell Beach, CA 93449

Mr. Frederick Eissler Scenic Shoreline Preservation Conference, Inc. 4623 More Mesa Drive Santa Barbara, CA 93105

Gordon Silver Sandra A. Silver 1760 Alisal Street San Luis Obispo, CA 93401

Joel R. Reynolds, Esq. Eric Havian, Esq. John Phillips, Esq. Center for Law in the Public Interest 10951 West Pico Boulevard, Third Floor Los Angeles, CA 90064

Bruce Norton, Esq. * Norton, Burke, Berry & French 2002 East Osborn Phoenix, AZ 85064

Philip A. Crane, Jr., Esq. * Richard F. Locke, Esq. Pacific Gas and Electric Company 77 Beale Street, Room 3135 San Francisco, CA 94106 David S. Fleischaker, Esq. P. O. Box 1178 Oklahoma City, OK 73101

Arthur C. Gehr, Esq. Snell & Wilmer 3100 Valley Bank Center Phoenix, AZ 85073

Mr. Richard B. Hubbard MHB Technical Associates 1723 Hamilton Avenue, Suite K San Jose, CA 95125

Mr. Carl Neiberger Telegram Tribune P. O. Box 112 San Luis Obispo, CA 93402

Virginia and Gordon Bruno Pecho Ranch P.O. Box 6289 Los Osos, CA 93402

Nancy Culver 192 Luneta San Luis Obispo, CA 93401

Maurice Axelrad, Esq. * Lowenstein, Newman, Reis, & Axelrad 1025 Connecticut Avenue, N.W. Washington, D.C. 20036 Cheryle Johnson Five Cities Times Press Recorder P.O. Box 460 Arroyo Grande, CA 93420

DATED: October 24, 1983

JOHN K. VAN DE KAMP, Attorney General of the State of California ANDREA SHERIDAN ORDIN, Chief

Assistant Attorney General MICHAEL J. STRUMWASSER, Special

Counsel to the Attorney General SUSAN L. DURBIN,

PETER H. KAUFMAN,

Deputy Attorneys General

By CHAEL J. STRUMWASSER

Attorneys for Governor George Deukmejian

3580 Wilshire Boulevard Suite 800 Los Angeles, California 90010 (213) 736-2102