

UNITED STATES OF AMERICA

DOCKETED
USNRC

NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD '83 SEP -2 A10 :29

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.

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

ANSWERS OF GOVERNOR DEUKMEJIAN
TO APPLICANT'S THIRD SET OF INTERROGATORIES

Governor George Deukmejian hereby responds to the third set of interrogatories propounded to him by applicant Pacific Gas and Electric Company.

INTERROGATORY NO. 1:

Identify each and every person you intend to or may call as a witness during these proceedings. As to each such witness, state:

(a) Name, occupation, occupational address and telephone number.

(b) Whether the witness will render expert testimony.

(c) If the witness will render expert testimony, please list each specific subject matter about which the witness will be expected to testify.

(d) If the witness will be called to give expert testimony, please list the specific qualifications of the witness that you contend would qualify the witness to give

opinion testimony on each specific subject matter about which the witness will testify.

(e) List each and every professional article, book, or the like, if any, the witness has authored or co-authored concerning each specific subject matter set forth in your answer to 1(c).

(f) Identify each and every document the witness will rely on to reach any opinion testimony and specifically corollate each such document (by page and paragraph number) to each specific subject matter on which the witness will render an opinion.

(g) As to each specific subject matter identified in your answer to 1(c), identify by docket number and case name each Nuclear Regulatory Commission licensing proceeding where the witness has previously given expert testimony concerning each specific subject matter.

(h) As to each proceeding identified in your answer to 1(g), please state:

- (i) The date(s) the expert testimony was given.
- (ii) Whether you have a copy of the testimony given.
- (iii) Whether you have a copy of the transcript covering any or all of the witness' examination and/or cross-examination for each such proceeding.
- (iv) Whether you have a copy of any notes which the witness made in preparation for, or utilized during, the witness' examination or cross-examination in each such proceeding.

(i) As to each specific subject matter identified in your answer to 1(c), identify by docket number and court name each legal proceeding where the witness has previously given expert testimony concerning each specific subject matter.

(j) As to each proceeding identified in your answer to 1(i), please state:

(i) The date(s) the expert testimony was given.

(ii) Whether you have a copy of the transcript covering any or all of the witness' examination and/or cross-examination for each such proceeding.

(iii) Whether you have a copy of any notes which the witness made in preparation for, or utilized during, the witness' examination or cross-examination in each such proceeding.

(k) As to each specific subject matter identified in your answer to 1(c), identify committees and organizations where the witness has previously given testimony concerning each specific subject matter.

(l) As to each committee or organization identified in 1(k), please state:

(i) The date(s) the expert testimony was given.

(ii) Whether you have a copy of the testimony given.

(iii) Whether you have a copy of the transcript covering any or all of the witness' examination and/or cross-examination for each such proceeding.

(iv) Whether you have a copy of any notes which the witness made in preparation for, or utilized during, the

witness' examination and/or cross-examination in each such proceeding.

ANSWER TO INTERROGATORY NO. 1:

The only expert witness that the Governor presently intends to call is Jose M. Roesset. Dr. Roesset's qualifications are given in the attached Exhibit.

(a) 3506 Duval Road, Austin, TX 78759; (512)835-0257.

(b) Yes.

(c) Structural engineering.

(d) See Exhibit.

(e) See Exhibit.

(f) Not presently determined.

(g) None.

(h) Not applicable.

(i) The only testimony Dr. Roesset has offered was given before the Nuclear Regulatory Commission in the proceedings on suspension of the Diablo Canyon low-power license.

(j) (i) September 1981; November 1981.

(ii) Yes.

(iii) No.

(k) Dr. Roesset has never given sworn "testimony" to any such committee or organization. To the extent that he has spoken to such organizations, no record is known to exist of the numerous instances of such professional contacts.

(l) Not applicable.

INTERROGATORY NO. 2:

Please set forth with particularity each and every exhibit you intend to mark for identification at the reopened hearings on design quality assurance.

ANSWER TO INTERROGATORY NO. 2:

The Governor has not yet made a final determination as to the exhibits he may wish marked for identification at the reopened hearing on design quality assurance. A number of such potential documents, and portions thereof, are identified in the the Governor's response to the "Licensee's Second Set of Interrogatories to the Governor." Pursuant to the Atomic Safety and Licensing Appeal Board's instructions at the August 23 and 24, 1983, pre-hearing conference, the Governor anticipates providing a proposed exhibit list on the date established by the board.

INTERROGATORY NO. 3:

List specifically, including page and section number, each and every license commitment set forth in the Diablo Canyon FSAR which you allege has not been complied with.

ANSWER TO INTERROGATORY NO. 3:

The Governor's review of the compliance of Diablo Canyon Units 1 and 2 with the FSAR and other license criteria is not yet complete. The results of the Governor's review to date are summarized in the Governor's response to the 146 interrogatories propounded in the " Licensee's Second Set of Interrogatories to the Governor." That answer is current as of

the date of this filing and will be supplemented as provided by 10 C.F.R. § 2.740 (e).

INTERROGATORY NO. 4:

For each license commitment identified in your response to the preceding interrogatory, state in detail each and every fact upon which you base your allegation that the license commitment has not been met.

ANSWER TO INTERROGATORY NO. 4:

The Governor's review of the compliance of Diablo Canyon Units 1 and 2 with the FSAR and other license criteria is not yet complete. The results of the Governor's review to date are summarized in the Governor's response to the 146 interrogatories propounded in the "Licensee's Second Set of Interrogatories to the Governor." That answer is current as of the date of this filing and will be supplemented as provided by 10 C.F.R. § 2.740 (e).

INTERROGATORY NO. 5:

Specifically identify each and every document which you claim supports each fact set forth in your response to the preceding interrogatory and correlate each such document (by page and paragraph number) with each such fact.

ANSWER TO INTERROGATORY NO. 5:

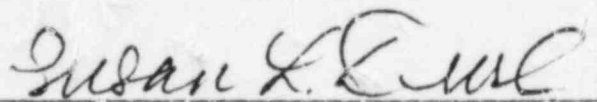
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Interrogatories to the Governor." That answer is current as of the date of this filing and will be supplemented as provided by 10 C.F.R. § 2.740 (e).

DATED: August 31, 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 L. DURBIN

Attorneys for Governor George Deukmejian

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EXHIBIT "A"

BIOGRAPHY

Jose M. Roesset

Education

Escuela Especial de Ingenieros de Caminos - Madrid Spain	
Civil Engineer	1959
Massachusetts Institute of Technology, Sc. D.	1964

Professional Employment

Assistant Engineer, Agroman Empresa Constructura, Madrid	1954-1959
Civil Engineer, Agroman Empresa Construction, Madrid	1959-1961
Research Assistant, M.I.T.	1962-1963
Teaching Assistant, M.I.T.	1963-1964
Assistant Professor, M.I.T., Dept. of Civil Engineering	1964-1969
Visiting Professor, University of Chile	1966-1969
Associate Professor, M.I.T., Dept. of Civil Engineering	1969-1975
Professor of Civil Engineering, M.I.T.	1975-1978
Professor of Civil Engineering, University of Texas	1978 to date

Professional Societies

American Society of Civil Engineers
American Concrete Institute
Colegio de Ingenieros de Caminos, Calales Y Puertos

Publications

"Bridge Design System," with C. A. Cornell and J. F. Brotchie, M.I.T. Dept. of Civil Engineering Research Report R65-26, September, 1965.

"Fundamentos de Programacion y Use de Computadores," (Basic Programming and Use of Computers), published by University of Chile, 1966 (in Spanish)

"Metodos Numericos de Analisis Estructural" (Numerical Methods in Structural Analysis) published by the Univeristy of Chile, 1966 (in Spanish)

"Analisis de Muros y Facadas Mediante Elementos Finotos," paper presented to Pan American Symposium, Caracas, 1967 (in Spanish) with T. Guendalman, R. Luft, and M. Sarrazin.

"Fundamentos del problema de optimazation del Diseno Estructural," Materiales, Maquinaria Y Metodos para la Construccion, No. 41, 1967 (in Spanish)

"ICWA-STRUDL I - Student Manual," M.I.T. Civil Engineering Report R68-71, September, 1968.

"The Use of ICES-STRUDL I in Design Courses," M.I.T. Civil Engineering Report R68-72, September, 1968.

"Theoretical Background for Amplification Studies," with R. W. Whitman, M.I.T. Civil Engineering Report R69-15, March, 1969.

"Hysteretic Damping in Inelastic One-Degree-of-Freedom Systems," with H. Kamil, M.I.T. Civil Engineering Report R69-52, August, 1969.

"Nonlinear Dynamic Response and Ductility Requirements of Building Structures Subjected to Earthquakes," by S. A. Anagnostopoulos (J.M. Roesset and J. M. Biggs, supervisors) M.I.T. Civil Engineering Report R72-54, September, 1972

"Accuracy of Modal Superposition for One-Dimensional Soil Amplification Analysis," with R. V. Whitman and L. Ayestaran. Paper presented at the Conference on Microzonation for Safer Construction Research and Application, Seattle, Washington, October, 1972

"Ductility Requirements for Some Nonlinear Systems Subjected to Earthquakes," with S. A. Anagnostopoulos. Paper presented at the Fifth World Conference on Earthquake Engineering, Rome, June 1973

"Nonlinear Dynamic Analysis of Buildings with Torsional Effects," with S. A. Anagnostopoulos and J. M. Biggs, Paper presented at the Fifth World Conference on Earthquake Engineering, Rome, June 1973

"A Comparison of Linear and Exact Nonlinear Analyses of Soil Amplification," with I. V. Constantopoulos and J. T. Christian. Paper presented at the Fifth World Conference on Earthquake Engineering, Rome, June 1973

"Planning and Cost Evaluation Program for Comparing Preliminary Design Schemes for Highrise Apartments," by T. G. Harmon (R.J. Hansen and J. M. Roesset, supervisors), M.I.T. Report R73-39, September, 1973

"Amplification Studies for a Nonlinear Hysteretic Soil Model," by I. V. Constantopoulos (J.T. Christian and J.M. Roesset, supervisors) M.I.T. Report R73-46, September, 1973

"Dynamic Response of Structures in Layered Soils," by V. Chang-Liang (J.M. Roesset and G. Waas, supervisors), M.I.T. Report R74-10

"Forced Vibrations of Circular Foundations on Layered Media," by E. Kausel (J.M. Roesset and G. Waas, supervisors), M.I.T. Report R74-11. January, 1974

"Nonlinear Dynamic Response of Reinforced Concrete Frames," By Kenneth Mark (J.M. Roesset, supervisor), M.I.T. Report R76-38, August 1976

"Inelastic Dynamic Analysis of Building Frames," by Tarek Aziz (J.M. Roesset, supervisor) M.I.T. Report R76-37, August, 1976

"On the Simple Use of Models in Nonlinear Dynamic Analysis," by Javier Pique (J.M. Roesset, supervisor) M.I.T. Report R76-43, September, 1976

"Effect of Ductility on Response Spectra for Elasto-Plastic Systems," by Samir Sehayer (J.M. Roesset, supervisor) M.I.T. Report R76-42, September 1976

"Dynamic Analysis of Footings on Layered Media," with E. Kausel and G. Waas, Proceedings ASCE, EM5, October, 1975

"Dynamic Stiffness of Circular Foundations," with E. Kausel, Journal of the Engineering Mechanics Division, ASCE, December, 1975

"Dynamic Soil Structure Interaction," with E. Kausel, Numerical Methods in GeoMechanics, ASCE, Blacksburg, Virginia, June 1976.

"The Use of Amplification Functions to Derive Response Spectra, Including the Effect of Local Soil Conditions," with M. Sarrazin and E. Vanmarcke, M.I.T. Civil Engineering Report, R69-48, July, 1969.

"Analysis of Building Frames for Natural Frequencies and Natural Mode Shapes," with R. LaTona, M.I.T. Civil Engineering Report R69-59, August, 1969.

"A Consistent Set of Finite Elements for Continua and Linear Members," by Rene W. Luft (J.J. Connor and J. M. Roseest, supervisors). M.I.T. Civil Engineering Report R69-51, August, 1969

"Effect of the Angle of Incidence on the Amplification of SH Waves," Quarterly Progress Report of the Inter-American Program, R69-73.

"Soil Amplification of SV and P Waves," with Thomas J. Jones, M.I.T. Civil Engineering Report R70-3, January, 1970.

"Influence on Damping on Response Spectra," with Freedy Garcia, M.I.T. Civil Engineering Report R70-4, January, 1970

"Fundamentals of Soil Amplification," page 183, Seismic Design for Nuclear Power Plants, M.I.T. Press, Cambridge, Mass., 1970

"Seismic Analysis of Equipment Mounted on a Massive Structure," page 319, Seismic Design for Nuclear Power Plants, M.I.T. Press, Cambridge, Mass., 1970

"Statistical Properties of Strong Earthquakes," with Edmund Sixsmith, M.I.T. Civil Engineering Report R70-7, January 1970

"Nonlinear Analysis of Building Frames for Earthquake Loading," by R. W. Latona (J.M. Roesset, supervisor), M.I.T. Civil Engineering Report R70-59, September, 1970

"Automatic Generation of Finite Element Matrices," with R. W. Luft and J. J. Connor; Paper presented at the Fifth Conference on Electronic Computation, Purdue, September, 1970 Journal of the Structural Division, ASCE, Vol. 97, January, 1971.

"Soil Properties and the One-Dimensional Theory of Earthquake Amplification," with R. Dobry and R. V. Whitman, M.I.T. Civil Engineering Report R71-18, May 1971

"The Conception and Design of the Structural System for the Standard Oil of Indiana Building - A Collection of Three Papers," Co-author of one of the papers) M.I.T. Civil Engineering Report R72-3, January, 1972

"Risk Analysis and Decision Models in the Planning of Housing Projects," by J. A. Machado (J.M. Roesset, supervisor), M.I.T. Civil Engineering Report R72-44, June, 1972

"Dynamic Soil Structure Interaction," with M. A. Sarrazin and R. V. Whitman, Journal of the Structural Division, ASCE. July, 1972.

"Modal Analysis for Structures with Foundation Interaction," with R. V. Whitman and R. Dobry, Paper presented at the Cleveland Convention of ASCE, April, 1972

"Dynamic Stiffness of Piles," with G. Blaney and E. Kausel, Numerical Methods in GeoMechanics, ASCE Blacksburg, Virginia, June 1976

"Forced Vibrations of Strip Footings in Layered Soils," with G. Gazetas, Proceedings, National Structural Engineering Conference, ASCE, Madison, Wisconsin, August 1976

"Dynamic Stiffness of Embedded Foundations," with F. Elasbee and E. Kausel, Proceedings, Second National Engineering Mechanics Conference, ASCE, North Carolina, May 1977.

"Nonlinear Behavior in Soil Structure Interaction," with E. Kausel and J. T. Christian, Journal of the Geotechnical Division, ASCE, November 1976

"Semianalytic Hyperelement for Layered Strata," Journal of the Engineering Mechanics Division, ASCE, Aug. 1977. with E. Kausel

"Transmitting Boundaries: A Comparison," International Journal for Numerical and Analytical Methods in GeoMechanics, Vol. 1, 1977 with M. M. Ettouney

"The Effect of Non-linear Inelastic Connection Behavior of Precast Panelized Shear Walls," with J. B. Becker and C. Llorente, Proceedings, ACI Symposium on Mathematical Modelling of Reinforced Concrete Structures, 1978

"The Seismic Response of Precast Concrete Panel Buildings," with J. M. Becker, C. Llorente and K. Lanham, Proceedings 6th European Conference on Earthquake Engineering, Dubrovnik, Yugoslavia, Sept. 1978

"Effect on Inplane Slab Flexibility on the Dynamic Response of Shear Buildings," Proceedings ACI Symposium on Mathematical Modelling of Reinforced Concrete Structures, 1978.

"Plane Strain Soil-Structure Interaction for Seismic Response," with G. Gazetas, Proceedings 6th Symposium on Earthquake Engineering, Roorkee, India, Oct. 1978

"Nonlinear Effects in Soil Structure Interaction," with J. Scaletti, Proceedings 3rd International Conference on Numerical Methods in Geomechanics, Aachen, Germany, April 1979.

"Dynamic Stiffness of Piles," with D. Angelides, Proceedings International Conference on Numerical Methods in Offshore Piling, London, England, May 1979

"Soil Structure Effects in Nuclear Power Plants," Proceedings 6th PanAmerican Symposium on Structures, Cordoba, Argentina, July 1979.

"Boundary Matrices for Semi Infinite Problems," Proceedings 3rd Engineering Mechanics Specialty Conference, ASCE, Austin, Texas, Sept. 1979

"Vertical Vibrations of Machine Foundations," Journal of the Geotechnical Engineering Division, ASCE, Dec. 1979 with G. Gazetas, pp. 1435-1454.

"Computer Models for Soil Structure Interaction Analysis," Journal of the American Society of Mechanical Engineers, C2, PVP-130, 1980.

"Boundary Matrices for Seim-Infinite Problems," Proceedings, Engineering Mechanics Division Specialty Conference, The University of Texas at Austin, Sept. 17-19, 1979, pp. 384-387.

"The Use of Simple Models in Soil Structure Interaction," Proceedings, Specialty Conference on Civil Engineering and Nuclear Power, Knoxville, Tennessee, Sept. 15-17, 1980.

"Stiffness and Damping Coefficients of Foundations," Proceedings, American Society of Civil Engineers Annual Meeting, Hollywood, Florida, October 26-30, 1980

"Computer Models for Soil Structure Interaction," Proceedings, Annual Meeting, American Society of Mechanical Engineers, San Francisco, California, January 21-23, 1981.

(with D. Angelides) "Nonlinear Lateral Dynamic Stiffness of Piles," Journal of the Geotechnical Division, American Society of Civil Engineers, Vol. 107, GT 11, November 1981, pp. 1443-1460.

"Stiffness Matrix Approach for Layered Soils," Proceedings of 7th World Conference on Earthquake Engineering, Istanbul, Turkey, September 8-13, 1980

"Modal Analysis of Nonlinear Systems," Proceedings, 7th World Conference on Earthquake Engineering, Istanbul, Turkey, September 8-13, 1980.

(with R. Dobry, E. Vicente and M. O'Rourke) "Horizontal Stiffness and Damping of Single Piles," Journal of the Geotechnical Division, American Society of Civil Engineers, Vol. 108, GT 3, March 1982, pp. 439-459.

(with E. Kausel) "Stiffness Matrices for Layered Soils," Bulletin of the Seismological Society of America, Vol. 71, No. 6, 1981, pp. 1743-1761

(with E. Kausel and J.L. Tassoulas) "Consistent Boundaries for Semi-Infinite Problems," Computational Methods for Infinite Domain Media-Structure Interaction, American Society of Mechanical Engineers, Vol. 46, 1981, pp. 140-166.

"Soil Effects in the Seismic Response of Structures," in Spanish, Ingenieria Sismica, Vol. 1, 1981, pp. 41-75.

"Recent Advances in the Use of Computers in Civil Engineering," Proceedings, Symposium on the Use of Computers in Civil Engineering, Santander, Spain, August 15-22, 1982.

"Solution of Nonlinear Problems in Civil Engineering," Proceedings, Symposium on the Use of Computers in Civil Engineering, Santander, Spain, August 15-22, 1982.

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

In the Matter of)
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PACIFIC GAS AND ELECTRIC COMPANY)

(Diablo Canyon Nuclear Power)
Plant, Units 1 and 2))
_____)

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

CERTIFICATION

I, Susan L. Durbin, hereby certify:

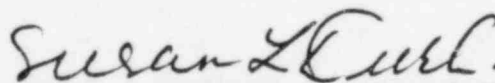
1. I am one of the attorneys for Governor George Deukmejian in the above entitled matter and, as such, am authorized to execute this certification.

2. I have read the foregoing Governor Deukmejian's Answers to Applicant's Third Set of Interrogatories and know the contents thereof.

3. I am informed and believe said answers to be true and correct.

I certify under penalty of perjury that the foregoing is true and correct.

Executed at Los Angeles, California, on August 31,
1983.



SUSAN L. DURBIN