

UNITED STATES OF AMERICA ATOMIC ENERGY COMMISSION

In the Matter of

AFFIDAVIT

LONG ISLAND LIGHTING COMPANY

Docket No. 50-322

(License Application, Shoreham Nuclear Power Station Plant, Unit No. 1

STATE OF NEW YORK) : SS .: COUNTY OF SUFFOLK)

IRVING LIKE, being duly sworn, deposes and says:

- 1. I am a partner of REILLY, LIKE & SCHNEIDER, attorneys for intervenor, THE LLOYD HARBOR STUDY GROUP, INC., in the present proceeding, and am fully familiar with all the facts and circumstances of the present application.
- 2. I submit this affidavit in support of intervenor's motion for an order seeking the relief set forth in the annexed Notice of Motion.
- 3. The substance of this motion was previously communicated to the Atomic Safety and Licensing Board at the third pre-hearing conference held in Washington, D.C. on July 16, 1970. The Board thereupon directed intervenor to submit this motion to disqualify in written form.

- 4. In the potition to intervene Par. 36, p. 32) intervenor raised the issue "whether the regulatory program procedures and rules of practice authorized by the Atomic Energy Act of 1954, as amended, may constitutionally and validly be administered by the AEC, which is the very same agency which is given licensing power and which is responsible and committed to speed development of nuclear power . . ."
- 5. The issue of whether the AEC can simultaneously promote and develop atomic power while regulating its use, has been the cause of considerable concert for some time.
- 6. The question of whether the regulatory and licensing functions of the AEC should be separated from those functions which deal with the development of atomic energy and planning of atomic power plants has been considered by the Joint Committee on Atomic Energy on a number of occasions.

 (Joint Committee on Atomic Energy Print "Improving the AEC Regulatory Process", 87th Cong., 1st Sess. Vol. 1, March 1961, pp. 7 & 8; id Vol. 2, Appendix, March 1961; "Licensing and Regulation of Nuclear Reactors", Joint Committee on Atomic Energy Hearings, 90th Cong., 1st Sess., Part 2, September 1967, p. 635)
 - 7. Professor Harold P. Green put the question this way:

act as developers and regulators, it is indisputable that its delegates, the ASLB specifically appointed to regulate and adjudicate the Shoreham license application, may not be persons whose professional or occupational careers are closely intertwined with the nuclear power industry or practical developmental aspects of atomic power.

- 10. We will show, on the basis of their published biographical profiles that the technical members of the ASLB:
- a) are or have been so closely identified with the development of atomic energy and its technology as to invest them with a personal bias in favor of development of nuclear power, and to disqualify them from sitting in judgment of the Shoreham application;
- b) are not technically qualified to evaluate Shoreham's environmental effects, as mandated by NEPA and its implementing directives from the Environmental Quality Council and AEC.

Dr. A. Dixon Callihan

11. Upon information and belief, Dr. Callihan is employed by Union Carbide Corporation, and his address appears on the mailing distribution list in this proceeding as Union Carbide Corporation, P.O. Box Y, Oak Ridge, Tennessee, 37830.

- lication "American Men of Science", llth Edition (p. 727), a copy of which is attached as Exhibit 1, Dr. Callihan is connected with the Oak Ridge National Laboratory, an AEC funded national laboratory, which is operated by Union Carbide. In addition to supplying basic materials, such as uranium concentrates, required for nuclear energy production, Union Carbide is responsible for operation of the nuclear energy facilities at Oak Ridge, Tennessee, and Paduca, Kentucky, which is owned by the U. S. Government. These facilities include plants for producing fissionable uranium, the key material for nuclear energy production.
- 13. In its Annual Report for 1969 (p. 9), Union Carbide states that through its operation of four government owned nuclear facilities for the U. S. Atomic Energy Commission, under a contract just extended for another three years, the corporation continues to make major contributions to pracetime applications of nuclear energy, and it further states that it is doing work on the application of nuclear technology to the generation of economical electric power. It further reports that during 1969, over 3 million pounds of enriched uranium was shipped from the gaseious diffusion plant at Oak Ridge, Tennessee, to fuel nuclear power plants throughout the free world.
 - 14. Union Carbide is a leading producer of nuclear

products essential to the atomic energy program. According to its 1970 product listing, it has a nuclear division, and markets products for nuclear applications, nuclear graphite, uranium concentrates, uranium ores, and zirconium alloys.

Nuclear Power Supply Industry" (NYO-3853-1; T.I.D. UC-2), a report to the Atomic Energy Commission and the Department of Justice, prepared by Arthur D. Little, Inc., December 1968, Union Carbide is shown in Figure 4 (p. 61), Flow Diagram for Light Water Reactors, as one of a number of corporations involved in the mining and milling aspects of the nuclear power industry. In Figure 2 (p. 10), an overview of the nuclear power supply industry, Union Carbide is shown as controlling 7.5% of uranium mining and milling capacity. It is reported (p. 33):

"The annual market for uranium in the past has been the Government. Total AEC purchases to date from domestic sources of about 155,000 tons have been spread out over some 25 companies, with the top 4 (Anaconda, Atlas, Kerr & McGee, Union Carbide) having supplied about 51% of the total U308."

16. Union Carbide is described as a company currently active in uranium exploration or development drilling activity in the United States (pp. 160-161) with uranium ore processing plants located in Colorado and Wyoming, with an

approximate milling capacity of 1800 tons of ore per day. Furthermore, Union Carbide contracted deliveries to the AEC of U₃0₈ of 14% of the total of such deliveries during the period 1967 to 1970 (p. 163).

Dr. Hugh C. Paxton

- 17. According to Dr. Paxton's bicgraphical resume, also taken from "American Men of Science", (p. 4090), a copy of which is attached as Exhibit 2, he appears to be connected with the AEC funded and operated Los Alams Scientific Laboratory. His address appears on the mailing distribution list in this proceeding as Los Alamos Scientific Laboratory, Box 1663, Los Alamos, New Mexico, 87544.
- involved in the field of reactor and fuel element development. (Annual Report to Congress of the Atomic Energy Commission for 1968 (Jan. 1969) p. 166) and in the potential application of plutonium carbides as fast breeder reactor fuels. (Fundamental Nuclear Energy Research, 1969, a Supplemental Report to the Annual Report to Congress for 1969 of the AEC (Jan. 1970) p. 1200). Los Alamos is a leading weapons development AEC laboratory, and is interested in the development of nuclear power plants for their production of plutonium.

Dr. John C. Geyer

19. Professor Geyer, the alternate technical member of the Board, whose specialty is sanitary engineering, and whose

8. biographical profile is attached as Exhibit 3, is listed in "American Men of Science" as principal investigator of waste disposal projects for the AEC during 1948-1965. He was also connected in 1963 with a cooling water research project for the Edison Electric Institute (a leading utility trade organization). His resume contains references to Philadephia Electric Company (1959), Baltimore Gas & Electric Company, and membership on the Utilities Committee of the Chesapeake section of the American Water Works Association. 20. All three technical members of the Board appear to be intimately connected with the development of the nuclear power technology, and on the theory that actions speak louder than words, must be presumed to have a philosophic and professional bias in favor of the licensing of atomic power projects which further the development of nuclear power as a method of generating electricity. 21. It is hardly likely, irrespective of the conscience and intellectual discipline (which we are not demeaning) of the technical members of the Board, that they are capable of judging this controversy fairly in view of the explicit developmental mission of the Atomic Energy Commission and their own personal history of activities linked with the development of atomic energy. 22. Their task as adjudicators is further complicated,

if not compromised, by the fact that the five-member Atomic Energy Commission itself, the ultimate tribunal which will review the licensing decision of the Atomic Safety & Licensing Board, is composed of two members who come from companies deeply involved in the atomic energy industry.

- 23. According to the New York Times of July 16, 1970 (p. 20), one of the AEC Commissioners, Wilfred E. Johnson, comes from the General Electric Company and another Commissioner, Clarence E. Larson, comes from Union Carbide.
- 24. Thus, we have the strangest of coincidences -- a member of the Atomic Safety & Licensing Board is employed by Union Carbide, and a member of the Atomic Energy Commission comes from Union Carbide. (Incidentally, the same issue of the New York Times reports that Union Carbide is one of the three largest AEC contractors and received 317 million dollars in 1969).
- 25. Furthermore, the company which will build the Shoreham boiling water reactor plant is General Electric Company, and a member of the AEC comes from General Electric Company.
- 26. Lest the connections of AEC Commissioners Larson and Johnson with Union Carbide and General Electric be deemed insufficient evidence of their commitment to the developmental

aspect of nuclear energy, we respectfully call attention to their personal history, which appears in the Joint Committee on Atomic Energy Hearings on "Environmental Effects of Producing Electric Power, 91st Cong., 1st Sess., Part 1 (October & November 1969).

27. A biographical resume of Dr. Larson appears at pages 214 and 215 of the transcript of these hearings. At the time of his nomination to the Atomic Energy Commission in 1969, Dr. Larson was president of the Nuclear Division of Union Carbide Corporation. He first came to Oak Ridge in 1943 from his post at the radiation laboratory of the University of California at Berkeley, where he worked in the development of the electro-magnetic process for separation of uranium 235. In Oak Ridge, during World War II, he headed the technical staff of the Y-12 electro-magnetic plant operated by Tennessee Eastman Co., where he developed new chemical processes vital to the separation and recovery of uranium. In 1946, after Union Carbido had taken over the operation of Y-12 for the Government, Dr. Larson was named Director of Research & Development for the plant. His work included the development of solvent extraction for refinement and purification of uranium, the process for most uranium ore mined today. He was superintendent of the plant from 1948 through 1949. In 1950, Dr. Larson became Director of the Oak Ridge National Laboratory, also operated by Union Carbide for the Government. His projects included pilot plant designs and operations of chemical

Processes for AEC plants at Hanford, Idaha Falls, and Savannah River, as well as development of chemical reprocessing for civilian nuclear reactors. In 1955, he left Oak Ricge to become employed by Union Carbide. In 1961, he became Vice President of Union Carbide Nuclear Division, tharged with administering the firm's operations for AEC. He became President of the Nuclear Division in 1965. Projects under his direction included reorganization of programs of gaseous diffusion plants and administering major installation programs, including a molten salt reactor.

- Dr. Johnson's biographical profile appears at pages 96 and 97. In 1930, he joined the staff of the General Electric Company. From 1945 on he was ranager of several General Electric components before he becare assistant general manager of the Hanford Atomic Products Operations. He became general manager a year later. The development, design and construction of the New Production Reactor, the AEC's first dual purpose reactor, was completed under his leadership. He retired from General Electric on May 1, 1966 and was serving as a consultant at the firm's Atomic Products Division in San Jose, California, when he was appointed as a member of the Atomic Energy Commission.
- 29. The biographical data of an AEC Commissioner, Dr. Theos J. Thompson, appears at pages 153 and 154 of the Hearings transcript, and is worth examining as evidence of his commit-

Dr. Thompson was a staff physicist at Los Alamos Scientific Laboratory, engaged in reactor design and construction. He joined the staff of M.I.T. in 1955 and in 1958 became Pro- fessor of Nuclear Energy and Director of M.I.T.'s nuclear reactor facility. He was serving in this capacity when nominated as a Commissioner of the AEC in 1969. He has made many important contributions to the development of nuclear reactors and, as an engineering consultant to the nuclear power industry, Dr. Thompson has made significant contributions to the design and operation of pressurized and boiling water reactors.

- 30. Due process requires resolution of the contested Shoreham matter by an impartial and fisinterested tribunal. The instant Atomic Safety & Licensing Board, composed as it is of members professionally and occ.pationally interested in or associated with atomic power development and presumptively predisposed thereby to exercise their decision making power in favor of the issuance of a permit to construct Shoreham cannot be deemed a fair and impartial judicial body.
- 31. We advance this premise in the basis of the cited sources of information.
- 32. We have no knowledge whether the Board members have any other interest, past, present or contemplated, in the development of atomic power,

- a) through ownership of a stock or financial interest in any utility or other company doing business with the AEC or involved in the nuclear energy industry;
- b) through consultant contracts, or other contractual benefits or compensation arrangements with such companies or the AEC or in respect of any matter which directly involves the AEC, or in which the AEC is directly interested.
- 33. We respectfully request that the members of ASLB disclose any such interest or connection, direct or indirect, past, present or contemplated, with the development of nuclear energy, or its commercial or practical application.
- 34. In view of this motion to disqualify, the Board is under a duty to disclose, at or before the time it acts upon such motion, any information which bears upon their qualifications and ability to preside over the Shoreham proceeding fairly and impartially.

National Environmental Policy Act of 1969

35. NEPA, Sec. 103, requires all agencies of the Federal Government to review their present statutory arhority, administrative regulations, and current policies and procedures for the purpose of determining whether there are any deficiencies or inconsistencies therein which prohibit full compliance with the purposes and provisions of the Act, and to propose to the President, not later than July 1, 1971, such measures as

1 40 0 may be necessary to bring their authority and policies into conformity with the intent, purposes and procedures set forth in the Act. 36. The President's Executive Order 1151, dated March 5, 1970 (Fed. Register, Vol. 35, No. 46-- March 7, 1970) directs all Federal agencies to report to the Council on Environmental Quality the results of their review and their proposals to bring their authorities and policies into conformity with NEPA no later than September 1, 1970. Similar provisions are contained in the Interim Guidelines issued by the Environmental Quality Council (Fed. Register, Vol. 35, No. 92, May 12, 1970). 37. NEPA, Sec. 102(2) provides that all agencies of the Federal Government shall a) utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment; b) identify and develop methods and procedures, in consultation with the Council on Environmental Quality established by title II of this Act, which will insure that presently unquantified environmental amonities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations; c) study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources;

- nuclear power, and fairly and impartially regulate its licensing with the sensitive regard for its environmental impact as mandated by NEPA.
- 39. To properly carry out the purposes of NEPA, the ANC must end its split personality and separate its functions of development and regulations from top to bottom. Until it does so - its licensing procedures as presently practiced violate due process and NEPA.
- 40. The composition of the Shoreham ASLB reflects the contradictions of its AEC parent. Worse yet, the Shoreham technical members represent the actual personification of the development oriented technician cast as regulator. Thus, they are the living ultimate proof of the fundamental disorder at the heart of the AEC agency process.
- 41. The AEC appointment of the Shoreham ASLB technical members, drawn as they are from the field of nuclear power development, and its related engineering disciplines, violates Sec. 102 of NEPA.

narrow meaning of a technician concerned only with the issue of reactor safety. If an ASLB is to be deemed "technically qualified" to adjudicate under the mandate of NEPA, it must have an interdisciplinary makeup and must be free of connection with or interest in nuclear energy development.

- 46. The Atomic Safety & Licensing Appeal Board appointed in the Shoreham proceeding (Algie A. Wells, Chairman, Dr. John H. Buck, and Lawrence R. Quarles) are drawn from the Atomic Safety & Licensing Board Panel. One of the technical members of the Appeal Board, Dr. John H. Buck, is connected with an industrial corporation, and the other member, Dr. Lawrence R. Quarles, is Dean of the School of Engineering and Applied Sciences of the University of Virginia.
- 47. Thus it is apparent that the Atomic Safety & Licensing Appeal Board for the Shoreham proceeding is also not qualified under NEPA to review the Shoreham proceeding and any decision rendered therein.
- 48. The same defect appears to prevail in the composition of the Advisory Committee on Reactor Safeguards. (See attached Exhibit 5 containing the list of members during 1968 of the Advisory Committee on Reactor Safeguards Annual Report to Congress of the Atomic Energy Commission for 1968 Jan. 1969, p. 285)

49. To sum up therefore, the main components of the AEC regulatory scheme for Shoreham -- the Atomic Safety & Licensing Board, the Atomic Safety & Licensing Appeal Board, and the AEC, are not properly constituted and qualified to render a fair, impartial and just decision in accordance with the mandate of NEPA; nor is their statutory advisory body -- the ACRS -- qualified to advise the Commission with regard to the environmental hazards of proposed reactor facilities, as required by NEPA.

50. In conclusion, the intervenor, The Lloyd Harbor Study Group, Inc., is confronted with what, in the vernacular, might be described as a "stacked deck", and does not have available to it an administrative remedy which accords with the requirements of due process.

WHEREFORE, intervenor respectfully requests that the relief set forth in the Notice of Motion be granted.

Sworn to before me this 28th day of July 1970.

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CALLIS, DH. CLAYTON F(OWLER), 30 D. ion Estatou, Creve Coour, Mo. NORDANIC CHEMISTRY. Sodatia, Mn. F. io. 25, 23, m. 49; c. 2, A.B., Cent. Col. (Mo), 44, M.S., Rimois, 46, de Font fel. 47-48, Ib.D. (mory, chem) 48. Instr. physics & chem. Cent. Col. (Mo). 44-45; assi, Tilmois, 45-47; res. chemist, Gen. Elice Co., 48-50; res. physicaler, MOJSANTO CO. Ala, 51-52, Ohio, 57-57. MO, 57-59, sc. res. physicaler, MOJSANTO CO. Ala, 51-52, Migh. RES, 62. Civilian with Alice Energy Com., 44-50. AAAS; Chem. Soc. Phosphorus chemistry, uses a physiplorus compounds; detergents; destructed.

CALLIS, DR. MENRY ARTHUR, 2006 F. St. N.E., Washington, D.C. CLEDICAL MEDICINE. Rocke teer, N.Y., Jan. 14, 87 m. 27; c. 2. A.B., Cornell, 05; Pennsylvania, 10-13; Chicago, 13-15; M.C. 21. Sr. bacteristicist. City Dent. Health, Chicago, 20; attend. physicism, Provident Hosp, 14-27; authologist, Vet. Admin. Hosp, Ala, 27-20; assoc. pr. med. Hospital, 30-02; Practiceing physicism, 30-02; RETIPED, Vis. Lett., F. Philip Post Crad. Cim, Med. Col. of Va., 31, 32; med. consult, Turkerier lest. Dipl., Am. Bd. External Med. 40. AAAS, Nat. Med. Assoc. pr. med. ed., jour. J. fel. Col. Cardiol; N.Y. Acad.

CALLOW, THE ACLIAN DIAMAL THERE IN AND DISTORDED IN MICH. SIRE-GERY DEMOCRACIE, MISS., April 2, 16, 18, 18, 2011. Self-tell at Miss., 46, Ph.D., 56, Mill. Rev. att., 12, And print Miss., Mill. Bull. Till research., 52, 56, and print Miss., 51, 52, and chief gen. Surg., 52, Dupl. Mat. But. Mod. v. 18, 46, Apr. Bull. 1012, 52

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- PAYION, Inc. JUNIA, h. Cleveland, Olso, Dec. 20, 27, m. 53, c. 1. ORGANIC CHEMISTERY, BlackBullettry, B.S., Western Process, 53, M.S. 54, Ph.D. (erg. chem) 60, Feb. Blacken, Albert Finstein Cal. Steel, 59-65, res. 2884, prof. 62, 2884, prof. 61, M. Baylis & Elikhia Coll., 63-65, AS-50, PhOF. 65, U.S.A, 46-46, AAAS, Chem. Soc. Storad and popule synthesis, free radical aromatic submittees. Address: 315 Harpertown 46, Fikins, W.Va. 2624).
- PAYLOVIC, DR. ARTHUR S(TEPHEN), b. Bedford, Ohio, Dec. 2, 25, ct. 47, c. 4. SOLID SPATE MYSICS. R.E., Yale, 40; M.S. Case Inst. Tech. 49; Columbia, 49-51; Garnalli, Glass Co. fel., Ph. State, 52, Ph.D. Grysics), C.L. Pran. physicst, Intelle Mem. Inst. 51-53; p. cnpr. Goudyan Aircraft Corp. 32; pr. chysicst, Intelle Mem. Inst. 51-53; p. cnpr. Goudyan Aircraft Corp. 32; pr. chysicst, Nov. Cartafe Metals Co. 56-56; p. cas. Physics, 53-53; pr. prof. Physics, Abs. Physics Teachers, Terromagnatism; patamognitism, delectric materials. Address: Dept. of Physics, West Virginia University, Margantown, W. Va. 20566.
- PAYONE, DARIELL, b. Inswer, Colo, Nov. 20, 24. PHYSICAL METALLURGY MOLT, Colo, Sch. Mones, 48, M.Sc., 51, MPM, STAFF, LOS ALLIVO, BCI. LAN, CALD DINIA, 52. U.S.A., 44. 45. See Metals. Metallograms, color motal reactions, solid conditional color motify. Address: 3714 Gold St., Apl. 1, Lan Alamon, S.Mcx. 87514.
- PAWEL, INC. RICHARD F. b. Glens Falls, N.Y., Mar. 12, 32, m. 55, s. 2.

 PRINCAL SETALLUMY B.S. Temerado, 53, M.S. 51, Ph.D. (1982).

 56. METALLUMENT, CAR RICKE DAT. LAW, NUCLEER BLV. UNION
 CARDEN. COOP, 59. U.S.A.F. 37-59, Capt. Soc. Metris. Reaction mechanism in metals. U. road properties and measurements, thermoelectric baterials, electron microacopy, gas metal reactions; curface phenomena, diffusion is refractory metals and onsides; properties of this films. Address: Africas & Coramos Decaron, Oak Ridge National Lab, P.O. Box X, Oak, Ridge, Tenu 27830.
- FAMILEY, INC. MYRON C. b. Actury Park, N.J. Sept. 15, 99; m. 28; c. 2. ELECTHORICS. E.S., Carrett, 20, M.S., 23, Ph.D.(physics), 32. India, math. Renascher Polytech, 24, and, prof. math. 2 couplys. Colo. Sch. Mines, 30, 42; electronics engr. U.S. Naval Res. Lab. D.C. 83-46, Nat. Bur. Sta. mards. 46-53; head in accommission div. U.S. Naval Ord. Lab. Calif. 53-62; RE-TIRID. Sr. norm. Inst. Elec. 6 Frequence Eng. Guided missile instrumentation, dist transaction on handline systems; telemistering. Address: 3683 San Simeon Way, Riversude, Calif. 92306.
- PAWLOWSEI THE ANTHONY T. b. North Abuston, Mass, Nov. 11, 22; ac. 52; c. 4. PHYSICAL CHEMISTRY. 10.5, Carnon Col., 51, Int. Nickel Co. fel., Boaton Col., 54, M.S., 55, Anome Favery fel., Rutgers, 57, Ph.D. Itharman diffusion), 65. Posts often, Calinat Conter, Purque, 50-50; Rutgers, 60-65; Abert. PhOF. Phys. Chi.M. PHOVID NCE COL. 65- Nat. Evid. Healthest, C. art., 75. Contact. Previous Monato Inc. Mat., 65- USAF, 40-46. Chem. Suc., Phys. Suc., Florit spharers sac. Thermal difform, transport phonomeral electron healthy, a generally abeliable processes. Additional Phys. Co. Chem. Suc., Phys. Suc., Florit spharers sac. Thermal difform, transport phonomeral electron healthy, a generally abeliable processes. Additional Dept. of Chemistry, Phys. Suc., Stept., 91, Capterior College, River Ave. 4, Earlin St., Providence, R. 1, 07918.
- PAWAGESTEI, STEVEY HAPOLD, b. Vilna, Alta, Can. Arc. 4, 28, m. 5., c. 3, B. 5c, Alberta, 5t, M. c., 19. Super, Hustrali e. ata, CAN. HEPT. ACH. 54-56, PLANT SPEEDLE, 58. Address: Research Station, Canada Doct. Agr. Lettering, Alta, Can.
- PAWORI, DR. DAVID HILD, B. Napor, N. Z. Oct. 5, 53, m. 61. ZODLOKAY, B. Se, Violoria, N. Z. 60, M. Se, 61, Pa D. L. Stati, M. L. Domenster, root, Violoria, N. Z. 10, M. Se, 61, Pa D. L. Stati, M. L. Domenster, root, Violoria, N. Z. 10, 62, to show for f. 20 at least, 71, a. a. c. c. c. c. c. d. v. c. c. c. d. c. c. c. c. d. C. CUPATION N. C. A. Allente, F. L. C. S. A. B. C. CUPATION N. C. A. Allente, F. C. S. A. B. C. CUPATION N. C. C. A. Allente, D. V. F. R. Parishon of the first of the control of the control
- Stawulla, DR. Balling Frances, b. Chicago, Ill. May 17, 26. Contained.
 Calledon B.S. Ill. Inst. Tech. 69, Stanfol, 68 S. M. Maria Inst. Tech. 61,
 Ragher Ed. & Dr. D. Cher. and, Calif. Link Tech. 67. Techniq. at A. cher.
 eng. Calif. Lad. Tech. 61, 62, norm. Ech. C. ., Ragher Air vall Co. 62-65;

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- PANSON, DR. E. W(COLMAN), b. Canidon, N. J., Oct. 23, 13 12, 22, MATHEW B.S. Calif. Inst. Tech. 34, fel. 24-67, Ph. 7-137. From instr. 1381, prof. math, Wayne, 37-42, head math. c. 12-64, 44-45, head math. c. 12-64, h
- PANSON, DR. NE. OF FEB.11. b. Philadelphia, Pa. Sept. 10, 95 m. 11, 42 ONSTRETRICS C. COLOGY, A.B. Cent. High Sch. Philadelphia C. Hawerford Co. 11 M.D. Eastermagn Med. Col. 10. Incern. History and Particle Philadelphia Colored Review and Particle Philadelphia Colored Review and Particle Philadelphia Colored Review and Colored Review and Particle Philadelphia Col
- PAXTON, CHARLES & ORMAN), Mech. Eng. sec 10th ed. Phys. & E. S. Vers
- PAXTON, EARLE & . RR), see 10th ed, Phys. & Biol. Vols, deceases 60
- PAXTOIL DR. HIS SUMMALIAM, b. hng. Feb. 6, 22, nat; m; c. 4. PHYS. 1CAL METALL B. Sc., Muchester, 47, M.S., 43, feb. Birn 22, 50-55, Ph.D. hng. Feb. 8, 24, nat; m; c. 4. PHYS. 50-55, Ph.D. hng. Feb. 8, 25, nat; m; c. 4. PHYS. 50-55, Ph.D. hng. Feb. 8, 22, nat; m; c. 4. PHYS. 50-55, Ph.D. hng. Feb. 8, 22, nat; m; c. 4. PHYS. 50-55, Ph.D. hng. Feb. 8, 22, nat; m; c. 4. PHYS. 50-55, Ph.D. hng. Feb. 8, 22, nat; m; c. 4. PHYS. 50-55, Ph.D. hng. Feb. 8, 22, nat; m; c. 4. PHYS. 50-55, Ph.D. hng. Feb. 8, 22, nat; m; c. 4. PHYS. 50-55, Ph.D. hng. Feb. 8, 22, nat; m; c. 4. PHYS. 50-55, Ph.D. hng. Feb. 6, 22, nat; m; c. PHYS. 50-55, Ph.D. hng. Feb
- PAXTON, DR. HI TAMPREILD, b. Los Angeles, Calif. Apr. 29, 17 c. 2. NUCLEAR M. ICA. A.B. California, Los Angeles, 30: fe faire forma, 32-35, 31: Gowey fel. 35-38, Ph.D. Iptysical, 37. Mem feet, 51-48, Bell Tel. L. 20-37, res. assoc, lab. miclear chem, Col. Ferrica, 71-38, matr. pl. 20-37, res. assoc, lab. miclear chem, Col. Ferrica, 71-38, matr. pl. 20-37, res. assoc, lab. miclear chem, Col. Ferrica, 71-38, matr. pl. 20-37, res. assoc, lab. miclear chem, Col. Ferrica, 71-38, matr. pl. 20-37, res. assoc, lab. miclear chem, Cor. 71-34, physicist, res. 25, Samples Corp., 51-38; MEM. STAFF, Los Associates College and control of college chamber st. 20-38, precision casting refractories; critical associated Address: 1229 4.5 P. Los Alamos, N.Mex. 87514.
- PANTON, DR. JACY LUNTURS, b. Oakland, Calif. Feb. 17, 26, m. 8: s. I. PLANT PATHOLOGY, MOCH MISTRY, B.S. California, Bernaley 53, Ph. Dighant path. 52 forms, Davis, 64. Res. assoc. PLANT PATHOLOGY, MRDANA, 6-53, ASST. PhOF. 63- Phytopath. Soc. Phys. 3 for the parameter interactions. Address: R.R. 2, Bro. 1872 Usbara, Ill. 61801
- PAXTON, DR. RIALTIN RIGHTICTI, b. Zien, RI, Mar. 4, 20; m. 40; I. CHEMICAL ENGLASHING. R.S. Dilmits, 40; Swope fel, Mass. Lt. 7, 48; Sc.D. 40. Jr. 1990. engl., res. dept., Stindard Oil Co. (field, 41, 12); chem. eng. Color. 146-47; avst. Mass. Inst. Tech., 41-49; avst. 1901. ford, 49-55; cogr. 19, pt. 30 develop, Cen. Elec. Cu, 55-50 C. E. ENGR, PURK Co. 19, 100, 58. Chem. Soc. Flectrochem. Suc. 59: 1.75; cation Eng. Inst. Com. Fig.. Reaction kinetics, research management of the communication of the communic
- PAXTON, DR. T(i)

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- PANTON, W(ADL): 1011), b. California, Pa., Aug. 24, 21, m., 44, c., Physical, Schooley Inc., 47, physical, 47, physical, Schooley Inc., 47, physical, Schooley Inc., 47, physical, Schooley Inc., 47, physical, Schooley Inc., 47, physical, 4
- PAYDOU, PROF. J. TOH F(PDH AY), b. Wheeling, Mr. Jane 19, 17 C. 2. MATHUMAY.

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- PAYOF, DE. ANOTA: b. Farbrube, Cormony, Nov. 24, 26, U.S. et m. 49, c. 2. Head: "Cathy, Phys. JULIGY, A.B. Caldesto, B.

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CFYER PROF ROTERT I (MINO), Device Netration, Harvard University School of Public Fourth, From March, 1 (ACPI MIN, RV. Hood., Wis., Sept. 28, 18; m. 41, c. 2, 1 d. Wiscowskin, 41, M.S. 43, fol. 4 f. U. (blochmi), 46, 1cl. 804 Fil. LIAMTH, HARVARD, 40-40, assi, prof. NI-TRIT, 49-81, ASSOC, 1917 59- Feb. AMS, Chem. Soc. Acc. Cancer Residual, Noterla, 1, see Full 18; and Advisor and California an

GEYTERG, DEL F(RANDITT) TANS), Port De 286 Del Morriotosa, N.J. EN-GINFERDA MELLAN ES. Demain, China, 1924, 7, 50; rain r. Gire, 1. B.s., Santala, 13, M.S. S. Demain, China, 1924, 51. Pr. 17, Santala, 100-52; mentitata real formation of Field and Land. Section 40 AD ANAL. 4 AEROSPACE MICH. 62. Fig. Mach. Final Los. Exp. Sires Anal. Band. Actual China and Mach. 1 June. France & Struct. Fog. Calesial and struc-Acrament & April 1 1 1 tural machine ta, a largert

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reports thereon, advises the Commission with regard to the hazards of proposed or existing reactor facilities and the adequacy of proposed reactor sufet, standards, and performs such other duties as the Commission may request. The commisses reports on applications for facility licenses become a part of the record of the application and available to the public except for security material. Members are appointed by the Commission for a term of 4 years each, and one member is designated to the committee as its chairman. This committee was established as a statutory body to 1957.

Dr. Cannota, W. Zacat, Chataman; Director of Research and Associate Dean of the

Graduate School, University of Nouston, Houston, Tex.

Dr. STEPHEN H. HANAULE, Vice Chairman; Professor of Nuclear Higgseering, University of Tennessee, Knowylle, Tenn.

Dr. Spencer H. Bustt, Consultant to the Director (Metallurgy), Buttelle Memorial Institute, Pucine Northwest Laboratory, Richland, Wash.

Hanoth Etherington, Consulting Engineer (Mechanical Reason Engineering), Jupiter, Fla.

Dr. William L. Faren, Consultant (Air Pollution Control), San Maria, Calif.

1r. Joseph M. Henbaul, Physicist, Brookhaven National Laborat . Upton, NY.

Dr. Hassmar S. Ismis, Professor of Chemical Engineering, University of Minnesota, Minneapolts, Minn.

Handel G. Mangel Spore, Chairman of the Board, Crown Cruttal Petroleum Corp., Short Hills, N.J.

Dr. Harry O. Monson, Senior Engineer, Laboratory Director's Office Argonne National Laboratory, Argonne, Ill.

Dr. Anna A. O'Kenay, Consultant (Chemical Engineering), Littleton, Colo.

Dr. David Oknest, Senior Physicist, Laboratory Director's Off x. Argume National Laboratory, Argume. III.

Dean Nuszio J. Patuaniao, College of Engineering, The Pennsylvania State University, University Park, Pa.

Dr. CHESTER P. Siess, Professor of Civil Engineering, University of L. Louis, Urbana, Ill. Louisano Squines, Manager, Atomic Energy Division, E. I. du Pout & Nemours & Co., Wilmington, Del.

Dr. William R. Stravion, Physicist, Los Alamos Scientific Laboratory, Los Alamos, N. Mex.

During 1968, the committee met 14 times: January 11-13, February 8-10, March 7-9, April 4 d, April 27, May 9-11, June 5-8, July 11-13, July 21, August 8-15 September 5-7, October 3 5, October 31 November 9, and December 5-7, all in Washington 10.C.

Atomic Solety and Licensing Board Ponel

Section 191 of the Atomic Energy Act of 1954 authorizes, in addition to other matters, the Commission to establish one or more atomic safety and licensiar courts, each to be composed of three numbers, two of whom are to be technically qualified and one of whom is to be qualified in the conduct of administrative proceedings. Technically qualified alternates may be appointed to atomic safety and licensing boards, to serve in the event that a board member should become unavailable before the start of a hearing. The boards conduct such hearings as the Commission may direct and make such in mediate or final declaring as it may authorize in proceedings with respect to granting, see ending, receding, or anomaling because or authorizations. The Commission has appointed a a following panel to serve on atomic safety and licensing board as assigned.

A. A. Wellis, Panel Chairman, U.S. Alonde Energy Commission, W. Shington, D.C.

 D. Baxo, Hearing Evaminer, U.S. Monde Fuergy Commission, W. Saington, D.C.
 R. B. Bandas, Director, Molten Salt Reactor Program, Oak Ridge Not and Laboratory, Oak Ridge, Tenn.

Dr. John Henry Dr.Ck. Group Vice President, Automation In Arries, Inc., Los Augoles, Calif.

Dr. A. Dixox g'artenax, Union Carbide Corp., Oak Ridge, Tenn.

JACK M. CAMPRICE, Partner in law firm of Stephenson, Campbell 4 Olinstead, Santa Fe, N. Mex.

VALENTING B. DEALE, Attorney at law Washington, D.C.

Dr. Militon C. Floot St. Director, Middle East Study Group, Ook B. Sc. Tenn.

Dr. Rotr Edusson, Professor of Environmental Engineering, 8: Ford University, Pulo Alta, Calif.

Ir. Steam Gomes Pounts, Assistant Manager, Vectorology, A. in Energy Div., Phillips Petroleum Co., Idaho Falis, Idaho.

Dr. Joux C. Geven, Chairman, Department of Saultary Englover is and Water Remonroes, The Johns Hopkins University, Baltimore, Md.

James P. Greason, Attorney at-law, Washington, D.C.

Advisory Committee on Reactor Safeguards

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Dr. Clank Goodman, Professor of Physics and Department Comman, University of Honston, Houston, Tex

Dr. BUDENE GRIULING, Professor of Physics, Duke University 1 - m., Dr. David B. Hald, Los Alamos Scientific L. Peratery, Los Alamos 1 Nex.

SAMUEL W. JESSCH, Chief Hearing Framitier, U.S. Atende Photo Commission, Wash-Ington, 1).C.

ARTHUR W. MURCHY, Columbia University School of Law, New Y ... City. Dr. Rugh Paxtox, Los Alamos Scientific Laboratory, Los Alamos & Mex.

Dr. THOMAS H. Piurono, Professor of Nuclear Engineering, Ut asity of California.

Berkeley, Calif. Dr. Lawrence R. Quartes, Dean, School of Engineering and ... Hed Science, Uni-

versity of Virginia, Charlottesville, Va.

REUKE C. STRATEON, Consulting Engineer, Harriord, Conn. Dr. CLARKE WILLIAMS, Research Administrator, Regional Mar Resources Council,

Nassan-Suffolk Regional Planning Board, Hauppauge, Long 1 and, N.Y.

Dr. Charles E. Winters, Parma Research Center, Union Carleia Corp., Cleveland,

Dr. Ann. Wolman, The Johns Hopkins University, Daltimore, Mc

HOOD WORTHINGTON, retired, F. I. du Pont de Nemours Co. Seit and Administrator, Wilmington, Del.

Seventeen new beards were drawn from the panel in 1968 for regulatory proceedings. A general ASLE Panel meeting was held with the AEC Commissions on July 10-11 in the Chicago area, and numerous meetings on specific problems were and with groups of panel members throughout the year.

APPEALS EDARDS

Board of Contract Appents

On August 25, 1964, the Commission established the AEC Board of Contract Appeals under the supervision of a chaleman, who reports directly to the Commission. The Board of Contract Appeals considers and finally decides appeals from finding. If fact or decisions of contracting officers in disputes arising under AEC prime contract containing a disputes provision and certain subcontracts containing such a provision The board, in addition, conducts hearings and finally decides debarment cases in which a hearing has been hold. The rules of practice of the board were published in the Teleral Register on September 11, 1964, and codified as part 2 of Tale 10, Code of Ped . Regulations.

PAUL II. CANTY, Chairman; U.S. Atomic Livergy Commission, 1 Lington, D.C. Jons G. Romers, Vice Chairman; U.S. Atomic Energy Commis-Washington, D.C. CARMINE S. BELLINO, Certified Public Accountant, Wright Lets Co., Washington, D.C.

LAWRENCE R. CARUSO, Legal Counsel, Office of Research Adm a strution, Princeton University, Princeton, N.J.

VALENTING B. DEALE, Attorney at Law, Washington, D.C.

Dr. G. KENNETH CHEEN, Chairman, Accelerator Department, Brookhaven National Inhorntory, Coton, N.Y.

HENRY P. Krisen, Attorney at Law and President, Pederal Publications, Inc., Washhigton, D.C.

LEGNARD J. Koch, Director, Reactor Engineering Division, Arg : "? National Laboratory, Arguine, 111.

JOHN T. KOURGER, Attorney at Law, Butler, Kochler & Tausic, Wishington, D. C. JOHN A. McINTHE, Consulting Attorney, Office of Judge Advocate General, U.S. Navy, Washington, D.C.

RALPH C. NASH. Jr., Associate Dean for Graduate Studies. Emearch and Projects of National Law Center, George Washington University, Was auton, D.C. Thomas J. O'Toone, Dean, Northeastern School of Law, Baston, Mass.

HAROLD C. PETROWILL, Professor of Law, Washington College of Law, American University, Washington, D.C.

CHARLES G. Sonney, Private Consultant, Oak Eldge, Tenn.

Joux M. Svoy, Certified Public Accountant, Stoy, Malone & Co. Washington, D.C.

ARBENE TUCK ULMAN, Attorney at law, Washington, D.C.

ROBERT M. UNIONBUILL, Vice President and Treasurer Emeritus University of Callfornia, Berkeley, Calif.

CAPT. DANIEL B. VENTRES, Consulting Engineer, Haddam, Conn.

John W. Whitlan, Professor of Law, University of California at Daris School of Law, Davis, Calif.

Beveral meetings of panels designated to hear, consider, and dec appeals were held during 1968



UNITED STATES OF AMERICA
ATOMIC ENERGY COMMISSION

LONG ISLAND LIGHTING COMPANY

(Shoreham Nuclear Power Station Unit 1)

Docket No. 50-322

ANSWER OF AEC REGULATORY STAFF TO THE "NOTICE OF MOTION" OF THE LLOYD HARBOR STUDY GROUP, INC.

In a "Notice of Motion" dated July 28, 1970, and supported by an accompanying affidavit, the intervenor The Lloyd Earbor Study Group, Inc. (Study Group) requested alternatively that the Atomic Energy Commission "disqualify itself and dismiss the Shoreham proceeding," or that the atomic safety and licensing board (board) and the Atomic Safety and Licensing Appeal Board (Appeal Board) either disqualify themselves or be discharged by the Commission, or that the Appeal Board, board, and Advisory Committee on Reactor Safeguards (ACRS) be reconstituted by the Commission. In addition, as part of the last alternative, the Study Group requested that the Shoreham application be referred back to the ACRS, as reconstituted, for a revised report.

We believe that the biographical information set forth in the affidavit which accompanies the "Notice of Motion" not only fails to support the Study Group's allegations of personal bias, but

clearly establishes that the members of the Commission, and the board, $\frac{1}{}$ because of their experience in atomic energy matters, are well qualified to perform their respective roles in this proceeding under the Atomic Energy Act of 1954, as amended (Act). $\frac{2}{}$

In the affidavit which accompanies the "Notice of Motion," the Study Group advances certain policy reasons why it believes that the Commission should not be vested with both regulatory and developmental responsibilities in the peaceful atomic energy program. Such matters of policy are not germane to the instant "Notice of Motion" since the issue was decided by the Congress in enacting the Atomic Energy Act of 1954. 3/

There does not appear to be any assertion in the accompanying affidavit, as we construe it, that the members of the Appeal Board and ACRS are disqualified on grounds of personal bias. In any event the affidavit does not support any allegations of personal bias with respect to members of the Appeal Board or ACRS.

The material set forth in the accompanying affidavit suggests that the instant "Notice of Motion" was interposed primarily for delay. Most, if not all, of the biographical material set forth in the affidavit was available to the Study Group at the time its petition for intervention was granted by the board on March 13, 1970.

The subject of AEC's dual role in the peaceful atomic energy program has been discussed extensively in hearings before the Joint Committee on Atomic Energy (JCAE) and in JCAE studies of the AEC regulatory program. Numerous policy reasons have been advanced in favor of such a combination of functions in the AEC and against a separation of the AEC's regulatory functions into another agency. The advantages of a combination of functions in the AEC include the close contact and interaction between those engaged in regulatory activities and those engaged in safety research programs that is facilitated. See "Licensing and Regulation of Nuclear Reactors," Hearings before the

The assertion is made in the affidavit which accompanies the "Notice of Motion" that because of its dual role the AEC's licensing procedures violate due process and the National Emironmental Policy Act of 1969 (NEPA). Since it is clear that NEFA does not repeal existing law, 4/ the combination of regulatory and developmental responsibilities in one agency by the Act cannot violate NEPA. The assertion that the AEC's licensing procedures violate due process is also without legal merit.

Pinally, the Study Group's assertion in the accompanying affidavit that the Appeal Board, board, and ACRS are disqualified under NEPA is without legal merit. NEPA does not require any change in the qualifications necessary for members of the Appeal Board and board under section 191 of the Act or for members of the ACRS under section 29 of the Act.

4/NEPA 8105; Conference Report /to accompany S. 10757, H.R. Rep. No. 91-765, 91st Cong., 1st Sess. (1969) at 10.

JCAE, 90th Cong., 1st Sess. (1967) at 7, 18; "Improving the AEC Regulatory Process," Vol. II, JCAE Print, 87th Cong., 1st Sess. (1961) at 417, 551; "Improving the AEC Regulatory Process," Vol. I, 87th Cong., 1st Sess. (1961) at 5, 64, 67. Disadvantages of a separation of AEC's regulatory activities into another agency include difficulty in staffing the other agency with qualified technical personnel, and the fact that the other agency could not develop a substantial safety research program of its own without costly duplication of the AEC's research activities. "Improving the AEC Regulatory Process," Vol. I, JCAE Print, 87th Cong., 1st Sess. (1961) at 5, 65.