#### UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

### BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

PENNSYLVANIA POWER AND LIGHT CO. ALLEGHENY ELECTRIC COOPERATIVE, INC.

(Susquehanna Steam Electric Station, Units 1 and 2)

# ND LIGHT CO. OOPERATIVE, INC. Nectric Station, IDENTITIES, QUALIFICATIONS AND TESTIMONY OF NRC STAFF WITNESSES

In its "Memorandum and Order on Prehearing Conference" dated August 14, 1981 the Licensing Board directed that identities, qualifications, subject matter and substance of testimony of expert witnesses on the first seven contentions (or portions of contentions) to be heard at the evidentiary hearing scheduled to begin on October 6, 1981 be filed by August 25, 1981. The identities of the Staff's witnesses on the first seven contentions to be heard and the subject matter and substance of their testimony are provided below. Copies of the professional qualifications of the witnesses are attached.

#### Contention 1

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Those portions of the contention dealing with the quantities of radon-222 (Rn-222) that will be released during the fuel cycle for the facility and the radiological health effects of those radon releases are the subjects of a motion for summary disposition that was filed by the Applicants on August 7th. If those portions of the contention are

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litigated the Staff's witness on Rn-222 quantities, doses and health effects will be Dr. Edward F. Branagan, Jr. The Staff's witnesses on technetium-99 (Tc-99) will be Dr. Fred D. Fisher on quantities, Dr. Richard K. Struckmeyer and Dr. Branagan on doses and Dr. Branagan on health effects. The testimony of the Staff's witnesses will provide current estimates of Rn-222 and Tc-99 and will demonstrate that the estimates of the potential radiological health effects of those isotopes were conservatively presented in the FES (NUREG-0564). The Staff's witness on the radiological health effects of all other isotopes that are listed in Table S-3 of 10 CFR 51 will be Dr. Branagan. His testimony will demonstrate that the estimates of the potential radiological impacts of those radionuclides were conservatively presented in the FES. Thus, the Staff's testimony will demonstrate that the cost-benefit balance for operation of the Susquehanna facility will not change.

#### Contention 2

Those portions of the contention dealing with the quantities of low-level radioactive releases from the Susquehanna facility and particularly the amounts of cesium-137 and cobalt-60 that will be released into the Susquehanna River are the subjects of a motion for summary disposition that was filed by the Applicants on August 13th. If those portions of the contention are litigated the Staff's witness on quantities of radioactive releases will be Dr. Churles L. Miller. The Staff's witness on doses and health effects will be Dr. Edward F. Branagan, Jr. The terimony of the Staff's witnesses will demonstrate

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that the estimates of releases presented in the FES are reasonable for assessing environmental impacts and that the estimates of potential health effects were conservatively presented in the FES. Thus the Staff's testimony will demonstrate that the cost-benefit balance will not change.

#### Contention 4

The issues raised by this contention (need for power and alternative energy issues) are the subjects of a proposed rule that would amend 10 CFR 51 to preclude consideration of these issues in operating license proceedings. 46 Federal Register 39440-2 (August 3, 1981). If this contention is litigated nevertheless the Staff's witness will be Dr. Raghaw Prasad. His testimon will demonstrate that operation of the Susquehanna facility, regardless of the growth in electrical demand or the assumptions made about conservation or solar energy, will result in substantial economic savings from substitution of electricity generated by the Susquehanna facility for other sources of electricity available to Applicants. The Staff's testimony will further demonstrate that at the operating license stage the only reasonable alternative to granting the license is not granting the license and that even that alternative is not environmentally cost-beneficial.

### Contention 5

This Contention is the subject of a motion for summary disposition that is pending before the Licensing Board. If the contention is litigated the Staff's witness will be Pr. Edward F. Branagan, Jr. His testimony will consist primarily of the information contained in his affidavit supporting summary disposition of the contention.

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### Contention 7(a), 7(b), 7(c), and 7(d)

Concention 7(a) is the subject of a summary disposition motion filed by the Applicants on August 4th. If the contention is litigated the Staff's witnesses will be Dr. Farouk Eltawila and Dr. Chen P. Tan. Dr. Eltawila will testify that the dynamic forces that would be experienced during postulated blowdown of the Susquehanna reactors have been conservatively specified, and Dr. Tan will testify that the containment structures have been designed to withstand those dynamic forces.

The Staff's witness for Contentions 7(b) and 7(c) will be Felix B. Litton. He will testify that the concerns expressed by these contentions have been resolved for the Susquehanna reactors in that the Applicants will comply to the extent practicable with the recommendations of NUREC-0313, Revision 1, "Technical Report on Material Selection and Processing Guidelines for BWR Coolant Pressure Boundary Piping" and NUREG-0619, "BWR Feedwater Nozzle and Control Rod Drive Return Line Nozzle Cracking," by replacing service sensitive piping and will conduct augmented inservice inspection of or heat treat that service sensitive piping not practical to replace.

Contention 7(d) is the subject of a motion for summary disposition that is pending before the Licensing Board. If the contention is litigated the Staff's witness will be Warren Minners. His testimony will consist primarily of the information presented in the SER on pages C-8 and C-9 and in his affidavit supporting summary disposition of the contention.

#### Contention 8

Contention 8 is the subject of a motion for summary disposition that is pending before the Licensing Board. If the contention is

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litigated the Staff's witness will be Felix B. Litton. His testimony will consist primarily of the information presented in his affidavit supporting summary disposition of the contention.

### Contention 17

Only that portion of the contention dealing with the biological health effects of electrostatic fields on living organisms survives and that is the subject of a motion for summary disposition filed by the Applicants on August 18th. If that portion of the contention is litigated the Staff's witness will be Gerald E. Gears. He will testify that there is no evidence at the present time that electrostatic fields associated with the operation of a 500 KV transmission line will have significant biological health effects on living organisms.

Respectfully submitted,

inter. James M. Cutchin IV

Counsel for NRC Staff

Dated at Bethesda, Maryland this 25th day of August, 1981.

# Professional Qualifications

My name is Edward F. Branagan, Jr. I am a Radiological Physicist with the Radiological Assessment Branch in the Office of Nuclear Reactor Regulation. Presently, I am responsible for evaluating the environmental radiological impacts from nuclear power reactors. In particular, I am responsible for evaluating radioecological models and health effect models for use in reactor licensing. I have been with the Radiological Assessment Branch for about 2

I received a B.A. in Physics from Catholic University in 1969, an M.A. in Science Teaching from Catholic University in 1970, and a Ph.D. in Radiation Biophysics from Kansas University in 1976. While completing my course work years. for my Ph.D., I was an instructor of Radiation Technology at Haskell Junior College. My research work was in the area of DNA base damage, and was supported by a U.S. Public Health Service tranineeship. My dissertation was entitled "Nuclear Magnetic Resonance Spectroscopy of Gamma-Irradiated DNA

Bases."

Since joining the NRC in 1976, I have been with both the Office of Nuclear Material Safety and Safeguards (NMSS), and with the Office of Nuclear Reactor Regulation (NRR). In NMSS I was involved in project management and technical work. I was the project man\_ger for two contracts that the NRC had with Oak Ridge National Laboratory. These contracts were concerned with estimating radiation doses from radon-222 and radium-226 releases from granium mills. part of my work on NRC's Draft Generic Environmental Impact Statement on Uranium Milling (DGEIS), I calculated health effects from uranium mill tailings. Upon publication of the DGEIS, I presented a paper entitled "Health Effects of Upon Publication of the DGEIS, I presented a paper entitled "Health Effects of Uranium Mining and Milling for Commercial Nuclear Power" at a Conference on Health Implications of New Energy Technologies. Since joining NRR, I have worked on several projects: (1) managed and main author of a report entitied "Staff Review of 'Radioecological Assessment of the Wyhl Nuclear Power Plant" (NUREG-0668), (2) served as a technical contact on an NRC contract with Argonne National Laboratory involving development of a computer program to calculate health effects from radiation, (3) served as a technical monitor on an NRC contract with Idaho National Engineering Laboratory involving estimated and measured concentrations of radionuclides in the environment; (4) served as a technical monitor on an NRC contract with Lawrence Livermore Laboratory cr cerning a literature review of values for parameters in terrestrial radionuclide transport models; and (5) served as a technical monitor with Oak Ridge National Laboratory concerning a statistical analysis of dose estimates via food pathways. Presently, I am a member of the Health Physics Society and the American Associ-

ation for the Advancement of Science.

### STATEMENT OF PROFESSIONAL QUALIFICATIONS

#### FRED D. FISHER

My name is Fred D. Fisher. I am the Leader of the Environmental Radiation and Emergency Support Section in The Fuel Cycle Uranium Fuels Branch in the Division of Fuel Cycle and Material Safety in the Office of Nuclear Material Safety and Safeguards, United States Nuclear Regulatory Commission. I joined the Nuclear Regulatory Commission in 1972 and have worked in various nuclear material licensing and policymaking activities since then including several years on the plutonium recycle (GESMO) proceeding. I testified before the GESMO hearing board and subsequently upon fuel cycle costs in the Pilgrim II power reactor construction permit proceeding.

Prior to joining the Nuclear Regulatory Commission, I was employed by Westinghouse Electric Corporation, Nuclear Materials and Equipment Corporation (NUMEC), and The General Electric Company in the development, design and operation of radiochemical processes and facilities.

I received a Ph.D. in chemical engineering from Oregon State University in 1960 and a Bachelor of Arts in chemistr from Linfield College in 1954.

### PROFESSIONAL QUALIFICATIONS

### Dr. R. K. Struckmeyer

My name is Richard K. Struckmeyer. I am an Environmental Analyst employed by the Radiological Assessment Branch in the Office of Nuclear Reactor Regulation. I am responsible for reviewing and evaluating the radiological impacts on the environment from proposed and existing nuclear power plants, and review of utilities' emergency plans with regard to their effectiveness for offsite dose assessment.

I received a B.S. degree in Physics from Bowling Green University in 1970, and M.S and Ph.D degrees in Bionucleonics from Purdue University in 1972 and 1976, respectively.

I have 4 1/2 years of professional experience in health physics and environmentai assessment.

From February, 1977, to April, 1978, I was employed by Ebasco Services, Inc., where my major responsibilities concerned dose calculations, specification of health physics instrumentation, and recommendation of in-plant radiological monitoring instrumentation. For the next three years, until March of 1981, I held a position as a health physicist with the U.S. Environmental Protection Agency, Office of Radiation Programs. My duties included assessment of potential radiation doses due to hypothetical releases from a model high-level radioactive waste repository and preparation of guidance on offsite emergency instrumentation for assessment of radiological impacts of nuclear incidents. Since joining the staff of the Nuclear Regulatory Commission, in March of this year, I have had staff of the Nuclear Regulatory and preparating and proposed nuclear power plants on the radiological impacts of both operating and proposed nuclear power plants on the environment, and evaluation of sections of emergency plans pertaining to offsite radiological impacts.

I am a member of Sigma Xi (Research Society of North America) and the Health Physics Society, and a past member of the American Nuclear Society and the American Association for the Advancement of Science.

### CHARLES LEE MILLER PROFESSIONAL QUALIFICATIONS DIVISION OF SYSTEMS INTEGRATION OFFICE OF NUCLEAR REACTOR REGULATION U.S. NUCLEAR REGULATORY COMMISSION

My name is Charles Lee Miller. I am currently employed by the U.S. Nuclear Regulatory Commission as a Nuclear Engineer, Effluent Treatment Systems Branch, Division of Systems Integration, Office of Nuclear Reactor Regulation. As such, my duties include participation in safety and environmental reviews associated with icensing actions involving the design and operation of radioactive waste treatment systems of nuclear reactor power plants.

I recieved a PhD in Chemical Engineering from the University of Maryland in August of 1974 and a Masters Degree in Chemical Engineering from the University of Maryland in August of 1971. In May of 1968, I received a B.S. in Engineering from Widener College. I am a registered Professional Engineer (District of Columbia).

In 1974, I joined eachtel Power Corporation in the Gaithersburg, Maryland office as a Chemical Engineer in their nuclear staff. I was involved in the review, design, evaluation and selection of systems and components used for treatment of radioactive wastes. I also was responsible for performing chermal-hydraulic analysis for loss-of-coolant accidents.

In 1976, I joined Science Applications Inc. located in McLean, Va. as a Senior Engineer. My responsibilities included evaluation of Nuclear Waste Disposal Alternatives, Nuclear Facility Safeguards, and Alternative Reprocessing schemes for Nuclear Fuel.

I have held my position with the Commission since April, 1980.

## PROFESSIONAL QUALIFICATIONS

### Raghaw Prasad

# Argonne National Laboratory

I am an Economist with the Environmental Impact Studies Division of the Argonne National Laboratory at Argonne, Illinois. My responsibilities consist of financial evaluation, cost-benefit analysis, analyzing the demand and supply of different energy resources, and transport network analysis, as part of the preparation of environmental impact statements. I joined the Division in May, 1979, and since have participated in the preparation of about half a dozen statements.

I have a Bachelor of Science degree (1961) in Electrical Engineering from Ranchi University, India, a Master of Business Administration degree (1973), a Master of Arts (1977) in Economics, and a Ph.D. Candidacy in Economics from Temple University, Philadelphia. My dissertation topic is "Evaluation of Time-Temple University, Philadelphia. My dissertation of Electricity Demand". I of-day and Lifeline Rate Structures and Estimation of Electricity Demand". I have completed all requirements of a Ph.D. degree.

From 1961 to 1970, I worked as an operations research analyst. My responsibilities involved production scheduling, inventory control, cash management, and capital budgeting.

From 1971 to 1973, I was a consultant at a community mental health center, Albert Einstein Hospital, Philadelphia. I directed a program which utilized Eastern philosophy, yoga, and meditation to help individual's and family's mental and physical problems.

From 1973 to 1974, I was a senior systems analyst with Combustion Engineering Refractory Division at Valley Forge, Pennsylvania. I developed and managed a Management Information System, and Business Planning Model.

From 1974 to 1977, I worked as a senior systems planner with Sperry Univac, Blue Bell, Pennsylvania. As a part of my responsibilities I designed and developed a financial and accounting inventory control system to handle the flow of computer parts to and from their subsidiaries located throughout the world.

From 1977 to 1978, I was employed as a senior economist with General Public Utilities, New Jersey. My responsibilities included development of residential and industrial electricity demand models, regional economic impact analyses and electricity demand forecast.

Since joining Argonne, I have performed a number of cost-benefit analyses, financial evaluations, and energy supply and demand analyses to be incorporated into the environmental impact statements. I developed a production and financial model for estimating the natural gas production and financial viability of U.S. Lake Erie Gas Development Program. The results of the model were utilized in the preparation of draft environmental impact statement of U.S. Lake Erie Natural Gas Development Program. I was asked to defend the production and financial data before a public hearing at Buffalo, New York.

I also developed a levelized cost model for comparing per unit cost of generation of electricity using different primary energy fuels. The results were utilized for the Pebble Springs project. I also developed a model to evaluate the need for the Pond Hill Reservoir to supply the consumptive needs of Susquehanna Steam Electric Station during periods of low river flow.

As a part of my responsibility in the preparation of the Northeast Regional EIS, I provided the coal supply/demand scenario to evaluate the impact of incremental coal demand resulting from conversion of power plants from oil to coal. Presently, I am involved in developing a Northeast Regional Transportation Model.

I am a member of the American Economic Association.

### Farouk Eltawila Professional Qualifications Containment Systems Branch Division of Systems Integration Office of Nuclear Reactor Regulation

I am a Senior Containment Systems Engineer and am responsible for the safety review of containment systems and associated features of the proposed design, and operating procedures. The objective of these reviews is to assure no undue risk to the health and safety of the general public.

I graduated from Alexandria University (Egypt) in 1965 with a Bachelor of Electrical Engineer degree. I then accepted a position with the Egyptian Atomic Energy Establishment. Following graduate studies at the University of Georgia and the Virginia Polytechnic Institute and State University, I graduated in 1974 with a Doctor of Philosophy degree in Nuclear Science and Engineering.

I then accepted a position with Bechtel Power Corporation; I have done work and supervised work associated with the design of containments to accommodate loads from postulated loss-of-coolant accidents.

I joined the Nuclear Regulatory Commission staff in August 1975. My responsibilities included the review and evaluation of the safety aspects of containment systems for commercial nuclear power plants.

I was responsible for the containment systems reviews of the following construction permit and operating license applications: Summer, Three Mile Island 2, North Anna 1 & 2, LaSalle, Zimmer, Hanford 2, Susquehanna, Shoreham, and Duke Project 81. In addition to the above casework assignments, I was assigned to work on NRC Generic Technical Activity A-8 "Mark II Containment Poor Dynamic Loads".

### CHEN P. TAN PROFESSIONAL QUALIFICATIONS STRUCTURAL ENGINEERING BRANCH

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I am a Structural Engineer in the Structural Engineering Branch of Nuclear Regulatory Commission. I am responsible for the review and evaluation of adequacy of criteria used in the structural design and analysis of Seismic Category I structures, systems and components of nuclear power plants assigned to the branch.

I received a B.S. degree in Civil Engineering from National Tang Shan College of Engineering in 1948. I received the degree of Master of Science in Structural Engineering from Oklahoma State University, Stillwater, Oklahoma in 1957 and the degree of PH.D. (Structural Engineering) from the University of Pennsylvania in 1966.

From 1948 to 1955 I worked as an assistant engineer on the design, analysis and supervision of construction of highway bridges in Taiwan Highway Bureau, Taiwan, China. During the years 1957 to 1961 when under employment at the consulting engineer firm of Yule, Sticklen, Jordan and McNee in Philadelphia, Pennsylvania I worked as a senior Structural Engineer on the design of highway bridges for the states of Pennsylvania, Ohio and Connecticut.

From May 1965 to March 1966, I worked as a senior Structural Engineer in Catalytic Construction Company on the structural design and analysis of buildings in a polymerization plant for a major chemical company and also on the structural design of a V/Stol wind tunnel.

Since 1966 I have served in the structural engineering area including research, design and analysis for the construction and power industries. During the years (1966-1970) of my association with the Franklin Institute Research Laboratories as a senior staff engineer, I was responsible for a research program to study the state of the art of the technology of prestressed concrete reactor pressure vessels and to review the design and construction practices of prestressed and reinforced concrete containment vessels. I also performed stress analysis of concrete containments for nuclear power plants as well the study the effect of airplane crash on liquified natural gas tank.

From December 1970 to April 1972 I worked as engineering specialist and as a staff member of the civil group in the Gaithersburg, Md. division of the Bechtel Power Corporation. My assignments related to the structural design and analysis of concrete containments for varthe structural design and analysis of concrete containments for various nuclear power plants. I also reviewed drafts of PSAR and FSAR for nuclear power plants and assisted in drafting responses to questions from Regulatory agencies.

As a member of Structural Engineering Branch, I have participated in developing criteria for structural design and analysis of Seismic Category I structures in nuclear power plants, performed evaluation of technical reports concerning structural behavior under accident loading conditions and reviewed the safety analysis reports of nucloading conditions of Fulton, Summit, McGuire, Washington Nuclear Tear power plants of Fulton, Summit, McGuire, Washington Nuclear iear power Projects Nos. 1 and 4, Blue Hills, Wisconsin Utilities Pro-Power Projects Nos. 1 and 4, Blue Hills, Wisconsin Utilities Progiect, Palo Verde, etc. in the areas relating to the design and analysis of Seismic Category I structures.

I am a member of the American Society of Civil Engineers, the American Concrete Institute and the Society of Sigma XI. I am a member of the following committees: ACI-ASME 359 technical committee on concrete pressure components for nuclear service, ACI-224 committee-on creacking and ASCE committee on nuclear structures and materials.

I am a registered professional engineer in the state of Pennsylvania. I have published technical papers and discussions in the Journal of American Concrete Institute and the Journal of the Structural Engineering Division of the American Society of Civil Engineers.

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### PROFESSIONAL QUALIFICATIONS FELIX B. LITTON

I am a Senior Materials Engineer in the Materials Engineering Branch of the Office of Nuclear Reactor Regulation, Nuclear Regulatory Commission. I am attached to the Materials Integrity Section and am responsible for the review and evaluation of materials and processes used in the construction and operation of components in the nuclear power industry.

My education consists of a B. S. (1936) and M. S. (1937) degree in Physical Chemistry from Virginia Polytechnic Institute, Blacksburg, Va. I have completed additional study in Material Science (1967) at the University of New Mexico and have taken special courses in Fracture Mechanics (1977) at George Washington University.

Prior to joining the Nuclear Regulatory Commission, my experience consists of metallurgical research related to the preparation, fabrication and alloy formation of new structural materials for nuclear, advanced aircraft and high temperature application. I have published in technical journals on the environmental behavior, thermodynamic stability and mechanical properties of uranium, plutonium, vanadium, zirconium, titanium, hafnium and silicon and their alloys. My experience in ferrous metallurgy relates to the cause of failure in service.

### Professional Qualifications

#### Warren Minners

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### Education

BS Mechanical Engineering, 1955, Cornell University MS Mechanical Engineeri 1962, Stanford University

### Experience

Frocess Engineer, Combustion Engineering, 2 years

Supervised the fabrication of fuel plates for naval reactor cores.

Design Engineer, Combustion Engineering, 2 years

Performed analyses of turbin cycle, heat transfer systems, safety and performance of a nuclear ship propulsion plant.

Design Engineer, Westinghouse Electric, 2 years

Performed thermal and hydraulic analyses of the NERVA nuclear rocket.

Project Manager, USNRC, f years

Coordinate the review of construction permit and operating license applications.

Section Leader, USNRC, 2 years

Supervised the review of reactor coolant and emergency core cooling systems.

Technical Assistant, USNRC, 5 years

Assisted in the development and evaluation of policies and programs related to the technical review of license applications.

#### PROFESSIONAL QUALIFICATIONS GERALD E. GEARS NUCLEAR REGULATORY COMMISSION WASHINGTON, D.C.

I am corrently employed as a Senior Land-Use Analyst in the Office of Nuclear Reactor Regulation, Division of Site Safety and Environmental Analysis, in the Environmental Specialists Branch, USNRC. As a member of the Terrestrial Resources Section of this branch since 1974. I have responsibility for the review of applicants' Environmental Reports at both Construction Permit and Operating License Stage for completeness and environmental acceptability of proposed projects as they may affect natural ecological resources, agricultural resources, land use pattern and other impacts on the terrestrial environment. It is also my responsibility to provide written evaluation of terrestrial resources for inclusion in both FES-CP and FES-OL Stages. I also act as a consultant to other NRC branches and provide analyses of terrestrial problems through technical "sistance requests from other groups. Review and modifications of applicants' environmental technical specifications at the operating license stage is another of my responsibilities. My work also involves the preparation of environmental standard review plans, regulatory guides and staff position papers dealing with terrestrial resources. As a Terrestrial Ecologist I have among other tasks in recent months prepared analyses on alternate site selection and alternative transmission corridors for the Palo Verde Nuclear Generating Station Units 1, 2, and 3, written the terrestrial resource-related sections for the Palisades Nuclear Generating Station and Arkansas One, Unit 2, Environmental Impact Statements (EIS), and the Indian Point, Unit 2, and Incian Point, Unit 3, EISs pertaining to closed-cycle cooling alternatives, and the Watts Bar-OL EIS. I have prepared and presented testimony as the staff's expert witness in the contested North Anna Nuclear Power Station, Marble Hill and Seabrook environmental hearings. I am a member of the Intergency Advisory Committee on Electric Field Effects from High Voltage Lines which is charged with the task of funding research to develop safety guideline: for transmission lines. I am also the NRC representative on a Fish and Wildlife Service Review Committee charged with the development of a ranual for improving transmission system rights-of-way construction and ation practices.

I have a Bachelor of Science in Agronomy from Oregon State University (1972), a Bachelor of Arts and Science in German and Russian from Villanova University (1966), and a Master of Science in Agronomy from the University of Florida (1974). While at the University of Florida (1972-1974), I undertook research in the areas of Resource Management and Ecosystem Modeling. My formal education program has encompassed and emphasized studies in agriculture, economics, botany, soil fertility, including tropical and arid soils, plant physiology, crop production, range resources, aquatic plant ecology, computer modeling and resource assessment techniques. Using analog and digital computer hardware combined with an energy based resource analysis language, I developed and expanded various ecosystem models for the study of alternative uses of native vegetation and urban wastes in cooperation with members of the Department of Agronomy, the Department of Forestry (Resource Management Section) and the Department of Environmental Engineering of the University of Florida.

From 1969 to 1970, I was employed as a teacher at Aquinas Institute, a secondary school in Rochester, New York.

From 1966 to 1969, I was employed as an agricultural extension agent by the Indian Government in cooperation with the Peace Corps in the State of Maharashtra. I organized and conducted demonstration projects in this capacity in order to investigate the feasibility of employing alternative methods of crop production in village level situations. This assignment provided experiences in the utilization and evaluation of alternative agricultural resource management methods in a unique cultural setting.

### UNITED STATES OF AMERICA NUCLEAR REGULATORY CONMISSION



# BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

### In the Matter of

Docket Nos. 50-387 50-388

PENNSYLVANIA POWER AND LIGHT CO. ALLEGHENY ELECTRIC COOPERATIVE, INC.

(Susquehanna Steam Electric Station, Units 1 and 2)

### CERTIFICATE OF SERVICE

I hereby certify that copies of "IDENTITIES, QUALIFICATIONS AND TESTIMONY OF NRC STAFF WITNESSES" dated August 25, 1981, in the above-captioned proceeding has been served on the following by deposit in the United States mail, or as indicated by an asterisk, through deposit in the Nuclear Regulatory Commission's internal mail system, this 25th day of August, 1981:

James P. Gleason, Cnairman Administrative Judge 513 Gilmoure Drive Silver Spring, Marylard 20901

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

Dr. Paul W. Purdom Administrative Judge 245 Gulph Hills Road Radnor, Pennsylvania 19087

Jay Silberg. Esq. Shaw, Pittman, Potts and Trowbridge 1800 M Street, N.W. Washington, D.C. 20036

Bryan A. Snapp, Esq. Pennsylvania Power & Light Company Two North Ninth Street Allentown, Pennsylvania 18101 Dr. Judith H. Johnsrud Co-Director Environmental Coalition on Nuclear Power 433 Orlando Avenue State College, Pennsylvania 16801

Mr. Thomas M. Gerusky, Director Bureau of Radiation Protection Department of Environmental Resources Commonwealth of Pennsylvania P. O. Box 2063 Harrisburg, Pennsylvania 17120

Ms. Colleen Marsh Box 538A, RD#4 Mountain Top, Pennsylvania 17120

Mr. Thomas J. Halligan Correspondent: CAND P. O. Box 5 Scranton, Pennsylvania 18501

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\*Richard S. Salzman, Esq., Chairman, Administrative Judge Atomic Safety and Licensing Appeal Board

U.S. Nuclear Regulatory Commission Washington, D.C. 20555 \*Dr. John H. Buck, Administrative Judge

- Atomic Safety and Licensing Appeal Board U.S. Nuclear Regulatory Commission Washington, D.C. 20555
- \*Mr. Thomas S. Moore, Administrative Judge Atomic Safety and Licensing Appeal Board U.S. Nuclear Regulatory Commission Washington, D.C. 20555
- \*Atomic Safety & Licensing Board Panel U.S. Nuclear Regulatory Commission Washington, D.C. 20555
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\*Secretary U.S. Nuclear Regulatory Commission ATTN: Chief, Docketing & Service Branch Washington, D.C. 20555 Susquehanna Environmental Advocates c/o Gerald Schultz, Esq. P.O. Box 1560 Wilkes-Barre, PA 18703

Mr. Robert M. Gallo Resident Inspector P.O. Box 52 Shickshinny, Pennsylvania 18655

Robert W. Adler Dept. of Environmental Resources 505 Executive House P.O. Box 2357 Harrisburg, Pennsylvania 17120

Mr. DeWitt C. Smith, Director Pennsylvania Emergency Management Agency Transportation and Safety Building Harrisburg, Pennsylvania 17120

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James M. Cutchin, IV Counsel for NRC Staff