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David A. Shirley
Senior Vice President for Research
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The Pennsylvania State University
207 Old Main
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October 17, 1996

Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Re: Notification of Change in Facility Management as Required by the Breazeale Nuclear Reactor Technical Specifications
License No. R-2, Docket No. 50-5

Dear Sir or Madame:

Effective October 17, 1996, Dr. Warren F. Witzig, retired Head of the Nuclear Engineering Department at The Pennsylvania State University, has been appointed interim Director of the Breazeale Nuclear Reactor. A resume of Dr. Witzig's nuclear experience is attached. It is expected that he will serve as interim director for approximately six months while a search for a permanent director is conducted. Dr. Witzig replaces Dr. Marcus H. Voth who continues as associate professor of Nuclear Engineering at Penn State.

This letter fulfills the Technical Specifications requirement (section 6.6.2.b.) that a written report shall be made within 30 days to the USNRC for a permanent change in the facility organization involving level 1-2 personnel as defined in the Technical Specifications.

Sincerely,

David A. Shirley,
Senior Vice President for Research
and Graduate Education

DAS:TLF/ldb4069.96

Attachment

pc: Region I Administrator

Subscribed to the sworn before me on this 23rd day of October, 1996, Notary Public in and for Centre County, Pennsylvania.

A020 1/1

Francine A. Bosak

Notarial Seal
Francine A. Bosak, Notary Public
State College Boro, Centre County
My Commission Expires July 26, 1999

040037

RESUME

Warren F. Witzig
1330 Park Hills Avenue, East
State College, PA 16803
(814) 238-6885

EDUCATION

1942	Rensselaer Polytechnic Institute, B.S. in Electrical Engineering
1944	University of Pittsburgh, M.S. in Electrical Engineering
1952	University of Pittsburgh, Ph.D. in Physics

EXPERIENCE

1987- Professor and Department Head Emeritus, The Pennsylvania State University, Consultant Nuclear Safety, Radiation Protection, Nuclear Proliferation, Reactor Operator and Crafts Training, Environmental Protection, Regulatory Compliance.

1967-1986

The Pennsylvania State University, Professor and Department Head, Nuclear Engineering.

Responsible for one of the largest student programs in Nuclear Engineering. Nuclear Engineering research is conducted in areas of Reactor Design and Safety, Fuel Cycle, Nuclear Safeguards, Rad-Waste Disposal Emergency Planning and Radiation Monitoring. Also responsible for the Department administration of the Department facilities: The TRIGA Mark II Reactor, the Cobalt-60 Facility, Low Level Radiation Monitoring Laboratory and nuclear laboratories. Established the undergraduate program, the associate degree program and continuous curriculum updating. Initiated the Continuing Education Program on Radiation, Nuclear Safety, and Environmental Effects for Public Education.

1960-1967

NUS Corporation, Senior Vice President, Member of the Board of Directors, and Co-Founder

Responsible for the technical direction, the Corporation grew from a two-man organization to the largest independent group of nuclear consultants. Overall responsibility for technical direction of work related to the application of nuclear energy for the production of electricity, small military reactors, test reactors, the use of nuclear reactors and isotopes in aerospace. Supervision of physics, environmental sciences, mechanical engineering, thermal and safeguards engineering involved. Management responsibilities for professional standards, salaries and marketing.

1942-1960

Westinghouse Research Laboratories and Bettis Plant

Worked on the Manhattan District program on high vacuum systems, heat transfer, mass spectroscopy and ionic centrifuge as a scientist. Served as the first experimenter in the Materials Testing Reactor and later as engineering manager of in-pile tests for the naval reactor program in Hanford, Chalk River, and the MTR-ETR complex. Senior Engineer who took NAUTILUS reactor critical in 1954 and on maiden voyage in 1955. Responsible for the S5W reactor design and engineering used in the SKIPJACK and GEORGE WASHINGTON series of nuclear submarines which have been the backbone of the nuclear navy. Co-author of the first FSAR for the NAUTILUS, and numerous classified reports.

PROFESSIONAL INTERESTS

Technical and administrative review of nuclear operations, nuclear safeguards, reactor operator and crafts training, maintenance, radiation protection, regulatory compliance and safety, environmental protection.

Low Level Radioactive Waste Site Development; Analysis of social, economic, and technical aspects of siting and disposal.

Analysis of the application of NRC safety goals to emergency planning. Studies of precursor events in emergency actions.

Public information programs on the above.

MEMBERSHIPS

National Nuclear Accreditation Board of INPO (1992-)

Hanford International Environmental Institute Board of Directors, Chairman (1992-1994)

Westinghouse GoCo Sites Nuclear Safety & Environmental Oversite Committee - Chairman, (1988-1993)

Penn State University, Reactor Safeguards Committee, (1993-)

Seabrook Blue Ribbon Committee on Emergency Evacuation (1987)

Texas Utilities Operations Review Committee, Commanche Peak (1984-)

TVA Nuclear Safety Review Board, Watts Bar (1986-1991)

Nuclear Oversite Committee to Board of Directors of PSE&G (Public Service Electric and Gas Company), Salem I, II and Hope Creek (1983-1991)

GPUN Board of Directors and Nuclear Safety and Compliance Committee of the Board (1984-1992)

Centichem External Audit Committee (Nuclear Safety), Chairman, (1989-1990)

(IEEE) Institute of Electrical and Electronics Engineers - Past Chairman of the Administrative Committee for Professional Group on Nuclear Science, (1966-1968), presently Senior Member

AAAS (American Association for the Advancement of Science), named Fellow in 1984

Argonne Universities Association - Past Chairman, EBR II Review Committee, member of the Nuclear Engineering Education Committee (1970-1972)

American Nuclear Society - Past Chairman, National Committee on Public Information (1972-1974); Past Chairman, Sub-Committee on Associate Degree Curriculum; member of Executive Committee, Education Division; named a "Fellow of the American Nuclear Society," June 1974

American Physical Society, Senior Member

Washington Academy of Sciences - Joint Board of Science Foundation Nuclear Standards Board Past Member, USASI, N45 Committee, N18 Committee

Registered Professional Engineer, Commonwealth of Pennsylvania #8633 and District of Columbia #4821E

Sierra Club Member (1980-)

University Club of Washington, DC; Centre Hills Country Club, State College, Pennsylvania, Past Member

Pennsylvania Governor's Advisory Committee on "Regulation and Development" - Subcommittee Chairman on "Power;" Subcommittee member on Power Plant Siting (1968-1972)

Pennsylvania Governor's Advisory Committee on "Atomic Energy Development and Radiation Control" (1970-1980)

National Academy of Science - Rad Waste Committee Member (1974-1976)

American Society for Engineering Education - Past Chairman, Nuclear Engineering Division (1970-1972)

Atomic Industrial Forum - Pennsylvania State University Representative Chairman, Access to Enrichment Technology Committee; Fuel Cycle Committee Member (1974-1977)

Who's Who in America - (1972-)

Who's Who in the East - (1975-)

Who's Who in Engineering - (1980-)

HONORS

Fellow, American Nuclear Society (ANS)
Fellow, American Association for the Advancement of Science (AAAS)
Member of Sigma Xi, Sigma Pi Sigma, Eta Kappa Nu
EEI Power Engineering - Special Citation for an Engineering Educator in Excellence in Engineering Education, 1981

PUBLICATIONS

The Value of a Nuclear Safety and Environmental Committee, June 1992, Ukraine Academy of Science and Chelyabinsk State University.

Environmental Impacts of Nuclear Power Production, W.F. Witzig, et al, Chapter in Environmental Consequences of Energy Production, PA Academy of Science, 1987.

Witzig, W.F. and S.D. Weerakkody, "Evacuation Risks: Quantification and Application to Evacuation Scenarios of Nuclear Power Plants," Nuc. Eng. Tech., July 1987.

Weerakkody, S.D. and W.F. Witzig, "A Rational Model for the Off-Site Selection During Nuclear Reactor Accidents," Nuc. Eng. Tech., July 1987.

Voth, M.H., W.F. Witzig, "A Model of Economic Incentives for Volume Reduction of Low-Level Radioactive Waste," Nuc. Eng. Tech., July 1986.

Witzig, W.F., R.J. Bord, J.R. Vincenti, "Public Perception of Low-Level Waste Technologies: Demands on Research and Public Education Programs."

Witzig, W.F., S.D. Weerakkody, "Development and Utilization of the Total Risk Concept for Emergency Planning," Trans. Am. Nuc. Soc. 45:325-327, November 1984.

Shillenn, J.K., J.R. Vincenti, and W.F. Witzig, Low Level Radioactive Waste Overview: A Brief on Low Level Radioactive Waste. 17 pp., February 1984.

Witzig, W.F., S. Weerakkody, S.D. Routh, "Public Protection Strategies for Accident Management," Trans. Am. Nuc. Soc. 45:548-549, November 1983.

Witzig, W.F., D.E. Showers, J.K. Shillenn, "Introducing Nuclear Energy and its Careers to Summer Groups," Trans. Am. Nuc. Soc. 45:585, November 1983.

Witzig, W.F., J.R. Vincenti, Peach Bottom Community Access to Science and Energy Education Project, Philadelphia Electric Company, 15 pp., September 1983.

Aron, G., R.J. Bord, F.A. Clemente, W.P. Domsife (Bureau of Radiological Health, Harrisburg, PA), A.R. Jarrett, W.A. Jester, R.F. Schmalz, W.F. Witzig, Low Level Radioactive Waste Disposal Siting: A Social and Technical Plan for Pennsylvania, Final Report to U.S. Dept. of Energy. 1:73 pp.; 2:108 pp.; 3:199 pp.; 4:67 pp., August 1983. (In cooperation with the Depts. of Sociology, Agricultural Engr., Nuclear Engr., and Geology). Witzig editor.

Witzig, Warren F., L. Wang, "Energy Gains of a Variable Void Lattice Design for PWR's," Trans. Am. Nuc. Soc., November 1982.

Witzig, Warren F., J. McKee, S. Boyle (PECo), "For Nuclear Education--It Takes More Than One," Trans. Am. Nuc. Soc., November 1982.

Witzig, Warren F., A. Baratta, S. Levine, G. Robinson, E. Kenney, I. McMaster, J. Penkala, "A Pedagogical Review of Reactor Operator Training at the Beaver Valley Power Station," Duquesne Light Company, July 1982.

Witzig, Warren F., J. Shillenn, "Community Access to Science and Energy Education Project (Annual Report)," Philadelphia Electric Company. August 1982.

Witzig, Warren F., "How Does Nuclear Energy Fit Into a National Technology Policy?," or "Does Nuclear Energy Have the Patience and Confidence of the Old Testament's Tale of Job?," IEEE 1982 Conference on U.S. Technology Policy ("Charting the National Course") February 24-25, 1982, pp. 15-20.

Witzig, Warren F. and V. Serradell, "The Economics of Plutonium-Uranium Recycling to the Nuclear Program in the Country of Spain," Nuc. Tech., Vol. 58, No. 1, July 1982.

Witzig, Warren F., and G. Robinson, "The Value of an Engineering Degree for Nuclear Plant Operation," Engineering Education, April 1982, pp. 747-750.

Jowzani, A. and W.F. Witzig, "A Geometrical Shadowing Factor in Multi Region Annular Cells for Closely Packed Lattices," Trans. Am. Nuc. Soc., 39:916, November 1981.

Matchick, David and W.F. Witzig, "Included Void Design Nuclear Fuel Assembly for Pressurized Water Reactors," Nuclear Science and Engineering, December 1981.

Witzig, Warren F., "And Now ...?," editorial published in the American Nuclear Science Teachers Association (ANSTA) Newsletter, Fall 1981 edition.

Witzig, Warren F. and G. Robinson, "The Value of An Engineering Degree for Nuclear Plant Operation," Trans. Am. Nuc. Soc., 35:34, November 1980.

Witzig, Warren F., and P. Huang, "Merits of PWR with Natural Uranium Reflector," Trans. Am. Nuc. Soc., 34:437, June 1980.

Thomas, R.T. and W.F. Witzig, "A Model for the Prediction of Shutdown Margin for Boiling Water Reactors," published in Nuclear Science and Engineering 69:251-263, 1979.

Urbanski, J., G.C. Geisler, and W.F. Witzig, "Ice Pond Cooling of a Power Plant," published in Nuclear Technology, 40, October 1978.

Cenko, M., S.H. Levine, and W.F. Witzig, "A High-Speed In-Core Management System for PWR's," Trans. Am. Nuc. Soc., 26, November 1977.

Witzig, Warren F., "Statement to the Mines and Energy Management Committee," of the Pennsylvania House of Representatives, Harrisburg, PA, published by The Pennsylvania State University, October 21, 1977.

Witzig, Warren F. and S.H. Levine, "Teaching Fuel Management at Penn State," 1977.

Thomas, Ross T. and W.F. Witzig, "A Regression Model for the Prediction of Shutdown Margin for Boiling Water Reactors," Trans. Am. Nuc. Soc., November 1977.

Witzig, Warren F., and M.E. Foster, "Nuclear Wastes as a Heat Source," presented at the Topical Meeting on Low Temperature Nuclear Heat on August 24, 1977 in Helsinki, Finland.

Witzig, Warren F., and D.R. DeWalle, "A Summary of U.S.A. Activities in Low Temperature Nuclear Heat," presented at the Topical Meeting on Low Temperature Nuclear Heat on August 22, 1977 in Helsinki, Finland.

Witzig, Warren F., "Statement to the Mines and Energy Management Committee," of the Pennsylvania House of Representatives, Harrisburg, PA, September 16, 1976.

Jester, W.A., J.R. McKee, and W.F. Witzig, "Nuclear Science Education and Technology Transfer Programs at The Pennsylvania State University," Trans. Am. Nuc. Soc., June 1976.

Witzig, Warren F., (contributor), "Interim Storage of Solidified High-Level Radioactive Wastes," National Academy of Sciences, Panel on Engineered Storage, Committee on Radioactive Waste Management, National Research Council, Washington, DC, 1975.

Witzig, Warren F., (contributor), "Energy Parks and the Commonwealth of Pennsylvania - Issues and Recommendations," Volumes 1 and 2, Report to the Pennsylvania Government Energy Council, Center for the Study of Environmental Policy, 1975.

Witzig, Warren F., "American Nuclear Society Public Information Activities," Nuclear Technology, Vol. 27, September 1975.

O'Brien, William (Duquesne Light Company), J.L. Penkala (The Pennsylvania State University), and W.F. Witzig (The Pennsylvania State University), "Reactor Operator Screening Test Experiences," presented to EPRI Workshop on Operator Selection Methods, Palo Alto, CA, June 1975.

Schultz, M.A. and W.F. Witzig, "The Agro-Power-Waste Complex," European Nuclear Conference, Paris, France, April 21-25, 1975.

Naughton, W.F., M.J. Cenko, S.H. Levine, and W.F. Witzig, "TRIGA Core Management Model," Nuclear Technology, Vol. 23, September 1974.

Interdisciplinary Research Team, Institute for Land and Water Resources, "An Agro-Power-Waste Water Complex for Land Disposal of Waste Heat and Waste Water," The Pennsylvania State University, NSF Grant GI-35100, June 1974.

Dade, Thomas B. and W.F. Witzig, "Container Ships: Oil Fueled Versus Nuclear Powered," Nuclear Technology, Vol. 22, May 1974.

Witzig, Warren F. and W.H. D'Ardenne, "Nuclear Controversy in the U.S.A. Power Reactor Safety," AIF International Workshop, Lucerne, Switzerland, May 1972.

Witzig, Warren F., Committee Chairman, AIF Report on Access to Enrichment Technology, AIF Meeting on Nuclear Fuel Cycle, Dallas, TX, January 1972.

Witzig, Warren F. and L.M. Girvin, "Economic Analysis of the Nuclear Fuel Cycle," Nuclear Technology, Vol. 13, January 1972.

Witzig, W.F., (contributor), "An Evaluation of the Concept of Storing Radioactive Wastes in Bedrock Below the Savannah River Plant Site," National Academy of Sciences, Report by the Committee on Radioactive Waste Management, National Research Council, Washington, DC, 1972.

Witzig, Warren F., Book Review, "Poisoned Power," AIF, Inc., INFO, June 1971.

Numerous Classified Topical Reports on reactor physics, thermal and hydraulics and mechanical design of nuclear reactors, Bettis Plant.

Witzig, Warren F., "Curriculum Development," Education for Peaceful Uses of Nuclear Explosives, University of Arizona Press, 1970.

Witzig, Warren F. (co-author), Nuclear Power Plants in Maryland, Governor's Task Force on Nuclear Power Plants, December 1969.

Witzig, Warren F., "University Activity and Fast Reactor Development," Fast Reactors and the University, proceedings of an ASEE-AEC short topical conference conducted at Rensselaer Polytechnic Institute, August 28-30, 1968.

Numerous NUS Reports for clients covering diverse fields of nuclear energy applications.

Witzig, Warren F., "Safety Analysis of Nuclear Power Plants," presented at the 12th Nuclear Science Symposium, IEEE, published February 1966.

Witzig, Warren F., "Predicting Criticality and Nuclear Characteristics," Nucleonics, Vol. 23, No. 3, March 1965.

Witzig, Warren F., "Nuclear Power Today and Tomorrow," IEEE Spectrum, July 1964.

Witzig, Warren F., "Analytical and Experimental Techniques in Nuclear Design," AIEE Transactions, 1960.

Witzig, Warren F., "Irradiation Effects Cu Au," Phys. Rev. 1952 and 1953.

Witzig, Warren F., "Creep of Copper Under Deuterium Bombardment," Ph.D. Thesis, JAP, 1952.

KAPL Reports on beryllium thermal cycling and noble gas solubility in sodium-potassium alloy, 1949.

Witzig, Warren F., "Heat Transfer to Boiling Freon," ASRE, 1945.

Witzig, Warren F., "Induction Heating," AIEE Transactions, 1944.