POWER AUTHORITY OF THE STATE OF NEW YORK

MANAGEMENT AND TECHNICAL RESOURCES

RETURN TO REACTOR DOCKET
FILES

Indian Point 3 Nuclear Power Plant

Docket No. 50-286

James A. FitzPatrick Nuclear Power Plant

Docket No. 50-333

August 13, 1979

OUTSIDE COMPANIES AVAILABLE FOR TECHNICAL SUPPORT

IP3NPP/JAFNPP

The Authority is nearly in whole dependent upon the nuclear steam system vendor and architect-engineer to provide technical services support for its IP3 and JAF facilities. The Authority has entered into agreements with the General Electric Company and the Stone & Webster Engineering Corporation for JAFNPP and with Westinghouse Electric Corporation and United Engineers and Constructors, Inc. for IP3NPP for the provision of certain services as hereinafter described. The support provided by these agreements is currently available and is being used by the Authority whenever required. The agreements with General Electric and Westinghouse provide for services to include technical services and research and development services. Technical services include but are not limited to design services, analytical services, consulting services, quality assurance and other specialized engineering services. Research and development services are research and testing programs for the advancement of nuclear engineering and improvement of plant design, performance and safety.

The services to be performed under the Stone & Webster and United Engineers agreements include engineering, design, estimating, cost control, scheduling, purchasing, coordination, shop inspection, expediting and quality assurance and quality control.

The contracts with General Electric and Westinghouse run for the life of the facilities with cancellation by either party with thirty days notice. The contracts with Stone & Webster and United Engineers run for five years and are renewable with cancellation only by the Authority.

Allocation of the resources of General Electric, Westinghouse, Stone & Webster and United Engineers (and any other outside consulting firm) is done on the recommendation of the Engineer in Charge who is the Assistant Chief Engineer - Projects or the Manager of Fuels, with the agreement of the Chief Engineer, the Executive Director and the Chairman of the Board of Trustees.

The authority to allocate the resources within the aforementioned companies are controlled by said companies' managements; however, primary contacts within those organizations have been designated who are available by phone.

I. Management Resources (Offsite)

A. Provide an organizational chart showing each position for which the capabilities of the person filling the position are such that you could depend upon the individual to provide experienced management functions in the event of an accident. The persons filling these positions would provide management functions, at a senior level, in the areas of engineering management; logistics support; coordination of activities with local, state, and Federal agencies; communication networks; and overall accident response coordination. As further guidance in your selection of positions to show in the chart, the persons filling these positions should have the capability, authority, and responsibility to allocate, on a company wide basis, the company's resources in their respective areas of responsibility, as needed.

Response

The attached Figure I.A.-1 shows the positions the Authority will depend upon to provide experienced management functions in the event of an accident. The Manager of Nuclear Operations is directly responsible for providing overall direction for and monitoring of the normal and emergency operation and maintenance of the Authority's nuclear generating plants. The Manager - Nuclear Operations has been designated by the Executive Director as the corporate management position responsible for the emergency direction of the New York Office Headquarters. An Emergency Support Group is being formally established. The Manager - Nuclear Operations has the capability, authority, and responsibility to allocate the Authority's resources, as needed in the event of an accident. Those resources include any departmental personnel and equipment assigned to the New York Office or any of the other operating Authority projects.

The New York Office Headquarters Emergency Support Group shall have the responsibility to provide:

1) Authority management assistance and technical liaison with the site Emergency Director (normally site Resident Manager).

2) Technical backup and support involved with detailed assessment of environmental conditions based on effluent data, meteorology, and environmental monitoring field measurements and laboratory analyses.

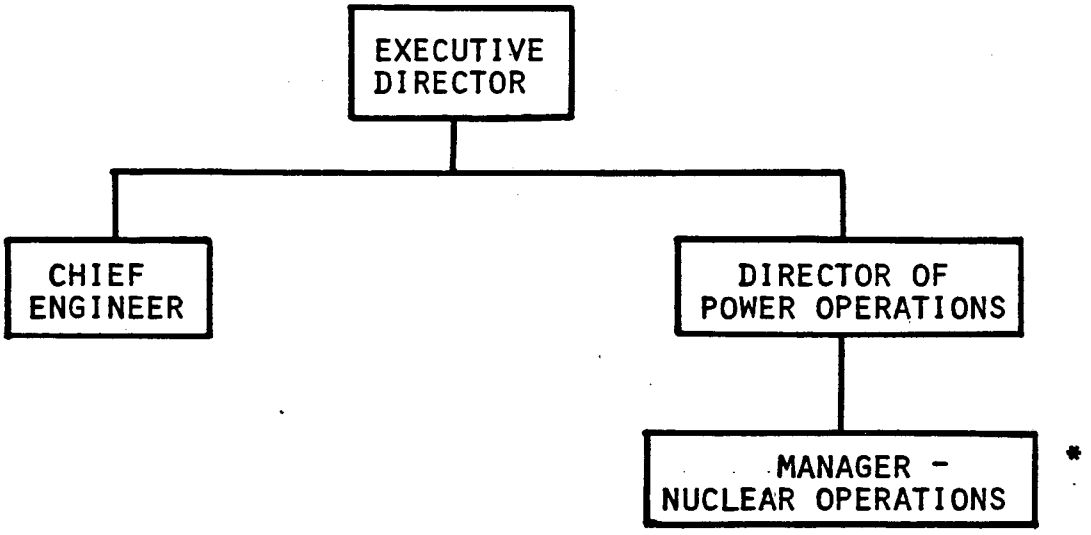
3) Support in obtaining, as needed, specific to the situation, logistics support for emergency personnel, (e.g., transportation, temporary quarters, food and water, field sanitary facilities and special equipment and supplies procurement).

4) Technical support for planning re-entry/recovery operations, and

5) Release of information to the public during an emergency coordinated with cognizant governmental authorities.

FIGURE I.A.-1

MANAGEMENT ORGANIZATION FOR ACCIDENTS
(OFFSITE)



* CORPORATE EMERGENCY PLAN DIRECTOR

I. Management Resources (Offsite)

B. Briefly describe the functions, responsibilities, and authority associated with each of these positions.

Response

The information requested above is presented in Table I.B.-1.

TABLE I.B.-1

MANAGEMENT RESOURCES (OFFSITE)
MANAGEMENT FUNCTIONS, RESPONSIBILITIES AND AUTHORITY

Management Positions

1. Executive Director

As the chief operating officer of the Authority, the Executive Director has overall responsibility, through the Department Heads, for the operations, engineering, public relations, legal and administrative functions.

2. Chief Engineer

Directly responsible for all engineering activities on all Authority Projects. Responsible for providing engineering design, licensing and procurement services for the Authority's operating two nuclear power plants, as necessary, to support safe and reliable operation of these units.

3. Director of Power Operations

Responsible for the operation and maintenance of all Authority nuclear and non-nuclear operating projects, including interconnected transmission system. Responsible for company-wide communication system used for data handling, equipment protection and control. Responsible for electrical system planning (generation and transmission), production and control and marketing. Responsible for nuclear fuel purchases, in-core fuel management, security of nuclear plant facilities and coordination of activities and requirements of operating nuclear plants with other corporate headquarters departments.

4. Manager - Nuclear Operations

Directly responsible for the overall direction and monitoring of the normal and emergency operation and maintenance of the Authority's two nuclear power plants with a total power output capability of 1821 MW. Assures consistent, safe, efficient nuclear plant operation within strict regulatory environment.

I. Management Resources (Offsite)

C. Briefly describe the educational and experience background for the incumbent for each of the designated positions.

Response

The information requested above is presented in Table I.C.-1.

TABLE I.C.-1

MANAGEMENT RESOURCES (OFFSITE)
INCUMBENT EDUCATIONAL AND EXPERIENCE BACKGROUND

Management Positions

1. Executive Director

Educational Background:

B.S. Civil Engineering, Oklahoma State University, 1949. M.S. and M.E. Soil Mechanics and Structural Design, Harvard, 1956 and 1957.

Experience Background:

(1) Contract supervision on construction of IP3 and JAF. Organization of operating staff at IP3 and JAF.

(2) Design work on transmission and switchyard structures and foundations. Design work on hydraulic structures. U.S. Bureau of Reclamation, Sacramento, Calif., 1949-1953.

Structural design for various foreign and domestic hydro and pumped storage projects, including Authority's St. Lawrence and Niagara Projects. C. T. Main/ Uhl, Hall & Rich, Boston, Mass. 1953-1961.

Power utilization engineer and system engineer. Supervisor of maintenance of power plant and transmission facilities of St. Lawrence and Niagara projects. Scheduling and dispatch of power from these projects. PASNY, 1961-1968.

Director of Power Utilization (now Power Operations Dept.). PASNY, 1968-1973.

General Manager and Chief Engineer, PASNY, 1973-1978.

Executive Director, PASNY, 1978-Present.

2. Chief Engineer

Educational Background:

B.S. Mechanical Engineering, Rensselaer Polytechnic Institute, 1949.

2. Chief Engineer (continued)

Experience Background:

(1) Design of electrical, control and instrument systems, prototype start-up and test program for a naval reactor plant (6 years).

Nuclear plant design (mechanical, electrical, instrumentation and control) and procurement activities (17 years).

(2) Utility experience including system stability studies, completion of construction, start-up and testing of high pressure pulverized-coal station, and nuclear power plant operations (7 years).

3. Director of Power Operations

Educational Background:

B. S. Electrical Engineering, Oregon State College, 1958.

Experience Background:

(1) Intensified Executive Training Course on BWR Simulator at Morris, Illinois (4 days).

General familiarity with operating systems of nuclear generating plant. General understanding of BWR and PWR nuclear steam supply systems.

(2) Direct supervisory responsibility for all electrical testing, control systems, instrumentation systems, and protective systems and communications systems at a large (2400 MW) hydro generating facility (11 years).

4. Manager - Nuclear Operations

Educational Background:

U. S. Naval Academy, B. S., 1953.
U. S. Naval Nuclear Power School and Prototype Training, 1966.
U. S. Naval Nuclear Power Prospective Commanding Officer Course.

Experience Background:

(1) Close association with Naval Nuclear Propulsion Program. Almost continuous involvement with various aspects of nuclear power plant operation, maintenance, and construction, 1959-1976.

4. Manager - Nuclear Operations (continued)

Commanding Officer, USS Sculpin (SSN 590), nuclear powered attack submarine, 1966-1970.

Principal Nuclear Operations Engineer - PASNY, 1976-1977.

Manager - Nuclear Operations, 1977 - Present.

II. Technical Resources

A. Plant Staff

Describe the professional level technical resources available on your plant staff. The resources should cover all persons encompassed by the ANSI N18.1 categories of "Managers" and "Professional-Technical" and graduate engineers assigned to the plant staff. Other personnel may be included if you believe their level of expertise will be useful in performing necessary and unique functions for unusual events like the TMI-2 accident. This should be provided by notation on a plant staff organizational chart showing each position that would fall into these categories, the position title, and a brief description of the functions of the position. In addition, provide the following information for each of the individuals assigned to these positions:

1. Briefly describe educational background indicating formal education and training.

2. Briefly describe applicable work experience in the particular field, with emphasis on nuclear reactor related experience, including a breakdown of the experience by reactor types, including U. S. Navy nuclear power plants, BWR's, and PWR's by vendors.

3. Any other information you believe may be pertinent, including any NRC licenses held or formerly held.

Response

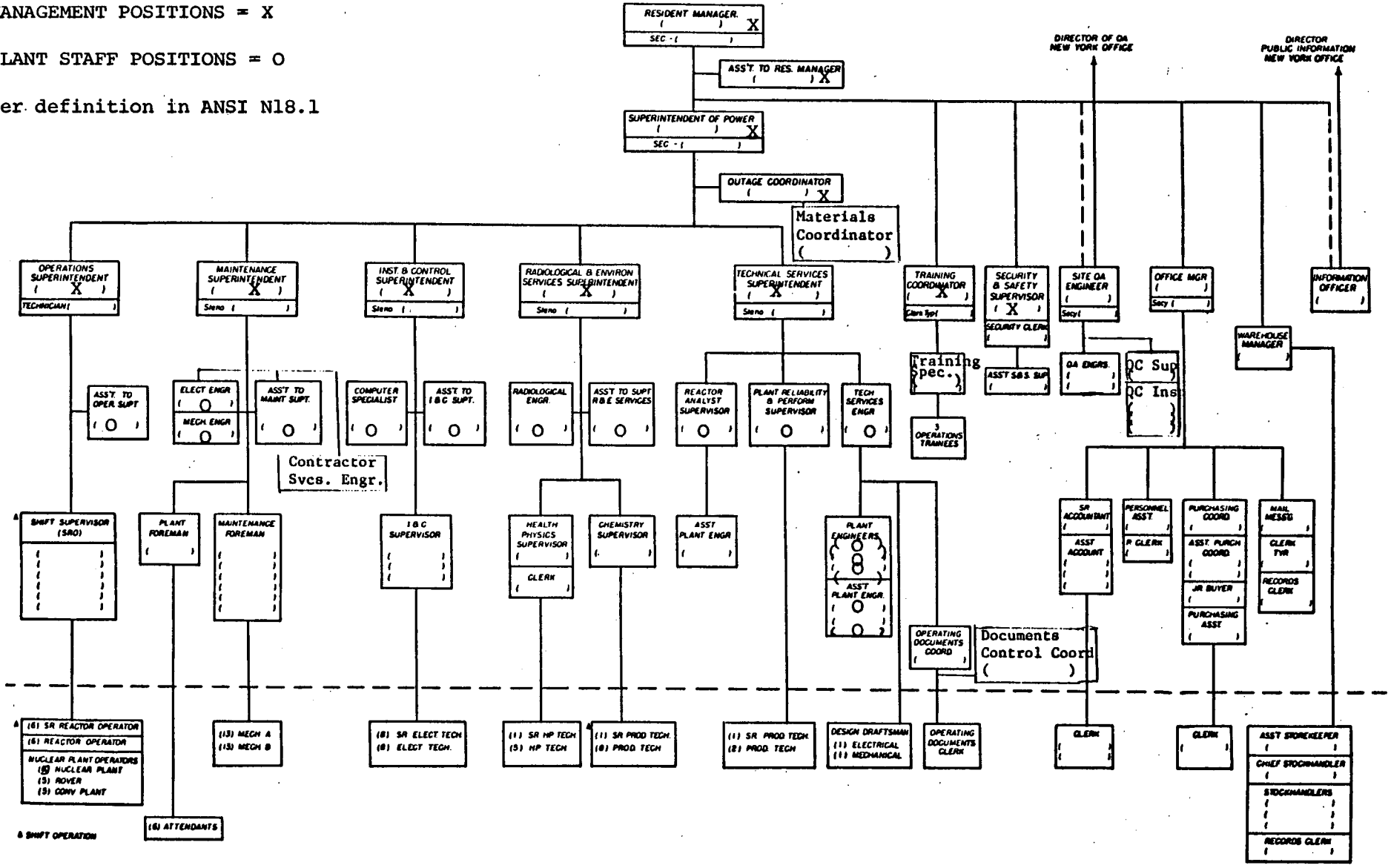
The information requested above is presented in the attached documents for the Indian Point 3 and James A. FitzPatrick facilities.

INDIAN POINT #3
NUCLEAR POWER PLANT

MANAGEMENT POSITIONS = X

PLANT STAFF POSITIONS = O

per definition in ANSI N18.1



June 11, 1979

Management and Technical Resources

A. Management Positions

1. Resident Manager

A. Responsible for the safe, efficient and dependable operation of the plant.

B. U.S. Naval Academy, 1954.
U.S. Naval Nuclear Power Training, one year, 1960. U.S. Naval War College, 1966.
Masters Degree, International Affairs, George Washington University, 1966.

C. (1) Resident Manager of 1000 MWe, Westinghouse PWR, 1976-present.

Commanding Officer of a nuclear submarine repair ship. Provided maintenance and logistic support for ten modern nuclear submarines and one submarine rescue vessel, 1973-1975.

Submarine Division Commander responsible for three nuclear submarines and one rescue vessel, 1972-1973.

Commanding Officer of a nuclear submarine, S5W design, 1969-1972.

Commanding Officer of Navy Nuclear Power School, responsible for the Administration and Training of 250 officers and 1200 enlisted personnel in basic and advanced science, reactor plant engineering and associated subjects, 1966-1969.

(2) Head of the Plans and Requirements Branch of the Attack Submarine Division of the Office of the Chief of Naval Operation, served as a principal advisor to the Director of the Division on matters of long range planning and future requirements, 1975-1976.

Management and Technical Resources

A. Management Positions

2. Superintendent of Power

A. Responsible to the Resident Manager for the functional operation of the plant.

B. B.E.E., Manhattan College, 1963

C. (1) Superintendent of Power on 1000 MWe Westinghouse PWR, July, 1979 to present.

Technical Services Superintendent, on 1000 MWe Westinghouse PWR, 1976-1979

Operations Engineer on 1000 MWe Westinghouse PWR, 1975-1976.

Engineer on 1000 MWe Westinghouse PWR, 1971-1975.

Assistant Chief Nuclear Test Engineer, Navy S5W and S4G Nuclear Power Plants 1967-1969.

Senior Test Engineer on S5W Naval Nuclear Power Plants, 1968.

Test Engineer on S5W Naval Nuclear Power Plants, 1963-1965.

(2) Production Engineer on Gas Turbine Power Station, 1967-1969

Currently licensed as SRO on Indian Point Unit 3.

Management and Technical Resources

A. Management Positions

3. Operations Superintendent

A. Directs the functional conduct of shift operations.

B. Harren High School of Aviation.
Brooklyn Technical School.
American School of Chicago Correspondence School.
Indian Point Unit 1 Reactor Operator Training Program - 1960.
Westinghouse Zion Simulator Training, one week - 1973.

C. (1) Operations Superintendent on 1000 MWe Westinghouse PWR, 1976-present.

Watch Coordinator on 850 MWe PWR Westinghouse Plant, 1973-1976

Senior Reactor Operator and Watch Foreman on 270 MWe B & W, PWR and 850 MWe Westinghouse PWR, 1970-1973.

Senior Reactor Operator on 270 MWe B & W, PWR, 1961-1970.

(2) Electric Mechanic B, Senior Production Operator A, on high and low tension boards in 90 MWe conventional station, 1954-1960.

Currently licensed at SRO level on Indian Point Unit 3. Formerly licensed at SRO level on Unit 1 and 2 also.

Management and Technical Resources

A. Management Positions

4. Maintenance Superintendent

A. Responsible for the maintenance of all mechanical and electrical equipment (exclusive of instrument and control)

B. Engineering and Business Administration, Northeastern University, Evening Division

C. (1) Maintenance Superintendent on 1000 MWe Westinghouse PWR, 1977 to present.

Field Supervisor for construction company, supervised maintenance and repair of power plant equipment in various nuclear and fossil fuel facilities in the New England area 1974-1977.

Maintenance Foreman during construction startup, commercial operation and refueling on Westinghouse, 575 MWe PWR, 1969-1972.

Maintenance Mechanic on Westinghouse, 575 MWe PWR, 1967-1969.

(2) Maintenance Superintendent for an apartment complex, 1973-1974.

Mechanical Assembler for special machinery company, 1965-1967.

Mechanic Millwright, repair and maintenance of paper plant equipment.

Management and Technical Resources

A. Management Positions

5. Instrumentation and Control Superintendent

A. Responsible for the repair, calibration, analysis of system control malfunctions and test work associated with fixed and portable instruments and controls.

B. U.S. Navy Nuclear Power School, 1963.
U.S. Navy Electronics Technician Class B School, 1967.
BSEE, Geneva College (In Progres).
Senior Member of the Instrument Society of America.
12 week Westinghouse NSS Instrumentation Course, 1971.
4 week Westinghouse Design Lecture Series, 1971.
2 week F & P Sequence of Events Computer Course, 1973.
6 week Westinghouse-Hagan Instrument Technician Training, 1973.

C. (1) Insturmentation and Control Superintendent of 1000 MWe, Westinghouse PWR, 1977-present.

Instrument and Control Forman on 852 MWe, Westinghouse PWR, 1971-1977.

Electronics Technician, United States Navy, served aboard Fleet Ballistic Missle Submarine, S5W PWR, qualified as Reactor Operator and Engineering Watch Supervisor, also qualified on SIC, 1961-1970.

(2) Research Technician, performed analysis of chemical compounds undergoing research development.

Management and Technical Resources

A. Management Positions

6. Radiological and Environmental Services Superintendent

A. Responsible for compliance with approved procedures for the radiological control and protection of personnel and the general public from radiological hazards.

B. B.S. in Chemistry, Manhattan College, 1963.
M.S. in Analytical Chemistry, Polytechnic Institute of Brooklyn, 1967
MBA in Management, Manhattan College, In Progress.

C. (1) Radiological and Environmental Services Superintendent of 1000 MWe, Westinghouse PWR, 1976-present.

Station Chemistry Director for three unit site. 270 MWe B&W, PWR; 850 MWe Westinghouse, PWR; 1000 MWe Westinghouse, PWR, 1970-76.

(2) Chief Chemist, Industrial Reactor Laboratories-Rutgers University, responsible for establishment and operation of a neutron activation analysis laboratory to perform trace element analysis for state agencies, the university and industry in the area, 1968-1970.

Chemist for the Atomic Energy Commission, 1962-1968.

Certified by the American Board of Health Physics.

A. Management Positions

7. Technical Services Superintendent

A. Responsible for technical support related to plant operations, including monitoring plant performance, making recommendations for plant improvements, performing field engineering with respect to plant maintenance and modification.

B. Associate Degree in Applied Sciences, Westchester Community College, 1965-1967.
B.S. in Mechanical Engineering Expenses, University of Bridgeport, 1967-1970.

C. (1) Technical Services Superintendent on 1000 MWe Westinghouse PWR, July, 1979-present.

Technical Services Engineer on 1000 MWe Westinghouse PWR, 1977-1979.

Startup Test Engineer on 1000 MWe Westinghouse PWR, 1974-1977.

Nuclear Support Engineer (Startup) on 1000 MWe Westinghouse PWR, 1972-1974

Nuclear Testing Supervisor for Naval S5W PWR at a private shipyard, 1970-1972.

(2) Engineering Aid and Draftsman, for air cargo handling systems.

Currently licensed as SRO on Indian Point 3, formerly licensed also on Indian Point 2.

Management and Technical Resources

A. Management Positions

8. Training Coordinator

A. Responsible for the formulation and implementation of training programs for all classifications of personnel within the plant.

B. U.S. Navy Nuclear Power School, 1962.
Interior Communications Technician, Navy, 1963.
DeVry Technical Institute, 1967
IBM, Office Products Training, 1968.

C. (1) Training Coordinator on 1000 MWe Westinghouse PWR, 1977-present.

Training Engineer at Westinghouse Nuclear Training Center, Zion, Illinois 1974-1977.

Instructor of Simulator Training at Indian Point Simulator, 1973-1974.

AEC Licensed Senior Reactor Operator on Michigan State University 250kw research reactor, 1969-1973.

Naval Nuclear Plant Operator on S3G and S5W plants, 1959-1963.

(2) Currently licensed as SRO at Indian Point Unit 3.

Previously licensed as SRO at Zion Unit 1 and 2 and University of Michigan Research Reactor.

Management and Technical Resources

A. Management Positions

9. Security and Safety Supervisor

A. Responsible for implementing the security plan by insuring that the security implementing procedures are carried out.

B. Certificate of Graduation from Industrial Security Course, Salem Vocational-Technical School, 1974.
B.A. in Law/Justice Studies, Glassboro State College, 1974.
A.S. in Police Science, Brandywine College, 1973.
Graduated from Military Police School, Fort Gordon, Ga., 1968.
Attended Lees-McRae College, Banner Elk, N.C., 1966-1967.

C. (1) Security and Safety Supervisor on 1000 MWe Westinghouse PWR, 1977-present.

Administrator of Security at the Salem Nuclear Generating Station and the Hope Creek Nuclear Generating Station, 1974-1977.

(2) U.S. Army experience was primarily in the Military Police, 1968-1971.

Management and Technical Resources

A. Management Positions

10. Outage Coordinator

A. Responsible to plan and layout a critical path of the work which is to be performed during an outage and to coordinate and monitor the activities of the groups performing the work.

B. B.S. in Nuclear Science, S.U.N.Y. Maritime College, 1972.

C. (1) Outage Coordinator on 1000 MWe Westinghouse PWR, 1977-present.

Associate Engineer on 850 MWe, Westinghouse PWR, 1974-1977.

Assistant Engineer for training on 850 MWe Westinghouse PWR, 1972-1974.

(2) Currently licensed as SRO on Indian Point Unit 3.

Previously licensed as SRO on Indian Point Unit 2.

Currently licensed U.S.C.G. Third Assistant Engineer.

Management and Technical Resources

A. Management Positions

11. Assistant to the Resident Manager

A. Responsible to coordinate and expedite resolution of regulatory and licensing affairs as the site liaison for the Nuclear Regulatory Commission, other regulatory agencies and Con Edison.

B. U.S. Navy Electricians Mate Class A and B School.
U.S. Navy Nuclear Power School, 1963
Home Study Course in Electronics, 1969, 1976-1979.
NDT Training, PE, UT and MT, 2 weeks, 1977.
Welding Inspection Training, 1 week, 1979.
PWR General Training Course, 4 weeks, 1977.

C. (1) Assistant to the Resident Manager on 1000 MWe Westinghouse PWR, March, 1979-present.

Quality Control Inspector at 1000 MWe Westinghouse PWR, 1977-1979.

Administrative Assistant to the Engineering Officer on a Nuclear Submarine, S5W design, qualified as Electrical Operator and Engineering Watch Supervisor, 1974-1977.

U.S. Navy Nuclear Power Program 1962-1974, qualified as Electrical Operator on D1G, S3G, and S5W PWR plants. Also Engineering Watch Supervisor on S3G (1972-1974).

Served two separate tours of duty as prototype instructor. (D1G, 1963-1966 and S3G, 1972-1974).

(2) Automobile Mechanic prior to Navy Service, 1954-1958.

Management and Technical Resources

A. Management Positions

12. Information Officer

A. Responsible for supplying information relative to the site to the public, the press and public officials.

B. B.A. in Social Science, State University College at Potsdam, N.Y., 1974. Attaining MBA, RPI, 1981.

C. (1) Information Officer at 1000 MWe Westinghouse PWR, June, 1979-present.

(2) Information Officer at 765 KV transmission line construction project, 1976-1979.

Editor of the Fort Covington Sun, 1975-1976.

Assistant Editor and Acting Managing Editor at the Massena Observer, 1974-1976.

B. Plant Staff Positions

1. Assistant to the Operations Superintendent

A. Assists the Operations Superintendent by performing assigned phases of operation, maintenance and engineering staff work so the plant will function in a safe, reliable and economical manner.

B. B.E. in Marine Engineering, S.U.N.Y. Maritime College, 1966-1970.

C. (1) Assistant to the Operations Superintendent of 1000 MWe, Westinghouse PWR, 1977-present.

Associate Engineer in Power Generation Department of 850 MWe Westinghouse, PWR plant, 1972-1977.

Assistant Engineer in Power Generation Department of 850 MWe Westinghouse, PWR plant, 1971-1972.

(2) Currently licensed as an SRO on Indian Point Unit 3.

B. Plant Staff Positions

2. Electrical Engineer

A. Provides engineering support to the Maintenance Department in order to minimize the scheduled and especially the unscheduled outage of plant mechanical and electrical equipment by resolving technical questions, writing work procedures and requisitioning tools and materials.

B. B.S. in Electrical Engineering, Hofstra University, 1958-1964.

C. (1) Electrical Engineer on 1000 MWe Westinghouse PWR, 1977-present.

Worked as a Millwright with various contractors in the installation of mechanical systems in material handling plants and sewage treatment plants from 1971-1977. For two and one half years this work was done at Indian Point Unit 3, August, 1972 to April, 1975.

(2) Marketing Representative, assisted utilities in the planning and program installation of computer systems, 1969-1971.

Engineer on design and installation of central office telephone equipment for a telephone company, 1956-1969.

Member of IEEE.
Holder of Laser Operator Certificate.
Electronic Lab Assistant for two years while in college.

B. Plant Staff Positions

3. Mechanical Engineer

A. Provides engineering support to the Maintenance Department in order to minimize the scheduled and especially the unscheduled outage of plant mechanical and electrical equipment by resolving technical questions, writing work procedures and requisitioning tools and materials.

B. B.E. in Marine Mechanical, S.U.N.Y. Maritime College, 1967-1971.

C. (1) Mechanical Engineer of 1000 MWe, Westinghouse PWR, 1978-present.

Field Service Engineer, Class B, Steam Turbine Generator erection and repair, 1973-1978.

(2) Assistant Engineer, Hydrospace Research Corp., 1971-1972.

Licensed U.S.C.G. 3rd Assistant Marine Engineer.

B. Plant Staff Positions

4. Assistant to the Maintenance Superintendent

A. To manage the operations of the in-plant maintenance department to achieve the most efficient and productive completion of all maintenance activities.

B. B.S. Mechanical Engineering, New York Institution of Technology.

C. (1) Assistant to the Maintenance Superintendent on 1000 MWe, Westinghouse PWR plant, 1977 to present.

Maintenance Engineer on 1000 MWe, Westinghouse PWR plant, 1975-1977.

Maintenance Foreman on 1000 MWe, Westinghouse PWR plant, 1973-1974.

(2) Maintenance Foreman on conventional large power generating plant, 1971-1973.

Cadet Engineer, assisted Watch Foreman in the operations of two 400 MW conventional units.

B. Plant Staff Positions

5. Computer Specialist

A. Responsible for the hardware and software associated with the process computer and other computer services required for the plant.

B. A.A.S. in Electronics, Westchester Community College, 1971-1972.
Study in Computer Field, New York Institute of Technology, 1968-1970.

C. (1) Computer Specialist on 1000 MWe Westinghouse PWR, 1977-present.

Electrical Technician, on three unit site; 270 MWe B&W PWR, 850 MWe Westinghouse PWR and 1000 MWe Westinghouse PWR, 1972-1977.

(2) Q.A. Inspector at an electronics manufacturing firm, 1970.

Presently holds an F.C.C. license in Amateur Radio-General Class.

B. Plant Staff Positions

6. Assistant to the Instrumentation and Control Superintendent

A. To assist the Instrument and Control Superintendent in performing his assigned responsibilities.

B. U.S. Navy Nuclear Power School.
U.S. Navy Interior Communications Technician Course.
U.S. Navy Advanced Electronics Technician Course.
5 Week S5W crew training by Westinghouse Corporation for the Atomic Energy Commission.

C. (1) Assistant to the Instrumentation and Control Superintendent of 1000 MWe, Westinghouse PWR, 1978-present.

Supervisor, Reactor Instrumentation and Control on S5W PWR, 1974-1978.

Instrumentation and Control Technician/Supervisor on various S5W PWR's, 1963-1974.

B. Plant Staff Positions

7. Radiological Engineer

A. Responsible to provide a continuous review of procedures, equipment and facilities from the radiation safety standpoint. Maintains a program for practical reduction of employee radiation exposures and releases of radioactive materials to the environment.

B. B.S. in Marine Engineering, U.S. Merchant Marine Academy, 1972.
M.S. in Environmental Engineering Radiological Health, Rensselear Polytechnic Institute, 1974.
Student Health Physics Summer Program, Brookhaven National Laboratory, 1973
Short Course-Environmental Surveillance for Nuclear Power, Howard School of Public Health, 1975.
Short Course-Health Physics, Rockwell International Nuclear Training Center, 1976.

C. (1) Radiological Engineer of 1000 MWe, Westinghouse PWR, 1977-present.

Radiological Control Environmental Engineer at a private shipyard, responsible for radiological environmental monitoring program, 1975-1977.

Radiological Control Operations Engineer at a private shipyard, cognizant of operational health physics aspects of waste processing/decontamination facility, radiological storage/shipping facility, 1973-1975.

(2) Cadet Marine Engineer aboard several U.S. Merchant Vessels, 1970-1971.

Certified by the American Board of Health Physics.

Plenary Member, Health Physics Society

B. Plant Staff Positions

8. Assistant to the Superintendent of Radiological and Environmental Services

A. Responsible to assist the RESS in the overall department administration, provide technical expertise for the development of radiological controls and techniques and maintain the IP-3 Site Emergency Plan and Implementation Procedures.

B. Courses leading to a degree in Biology, South Georgia College, 1967-1969.
Certificate, Radiological Health Science, Manhattan College, 1971-1973.
Courses leading to a B.S. in Radiological Health Science, Manhattan College, 1975-1979.

C. (1) Assistant to the Superintendent of Radiological and Environmental Services of 1000 MWe, Westinghouse PWR, June, 1979-present.

Senior Production Technician in Chemistry Division of Radiological and Environmental Services Department at 1000 MWe, Westinghouse PWR, 1977-1979.

Nuclear Environmental Technician and Health Physics Technician at 1000 MWe, Westinghouse PWR, 1973-1977.

(2) Research Analyst for television advertising agency, 1969-1973.

Ward Clerk in hospital reporting to Nursing Supervisor, summer job 1967, 1968.

Plenary Member of Health Physics Society

B. Plant Staff Positions

9. Reactor Analyst Supervisor

A. Responsible for the operational management of the Reactor Core such that the reactor is operated safely and efficiently and in accordance with NRC regulations.

B. B.S. in Nuclear Engineering, Columbia University, 1963-1969. M.S. in Nuclear Engineering, Massachusetts Institute of Technology, 1969-1971.

C. (1) Reactor Analyst Supervisor of 1000 MWe, Westinghouse PWR, 1977-present.

Computer Engineer on three reactor site; 270 MWe B & W PWR, 850 MWe Westinghouse PWR and 1000 MWe westinghouse PWR, 1973-1977.

Assistant Plant Engineer at same site as above, 1971-1973.

Supervised the installation of the following major equipment, 1971-1977;

a) two Westinghouse, PRODAC-250 Computer Systems
b) Nuclear training simulator
c) computer based, multi-channel, nuclear spectrums analyzer for use by chemistry group.

B. Plant Staff Positions

10. Plant Reliability and Performance Supervisor

A. Responsible for monitoring overall plant performance to ensure optimum efficiency of plant potential.

B. A.A.S. in Chemistry, Junior College of Albany, 1965-1967.
U.S. Navy Nuclear Power School, 1969.
A.B. in Business, Westchester Community College, 1974-1976.
B.S. in Business, Iona College, 1976-1977.

C. (1) Plant Reliability and Performance Supervisor of 1000 MWe, Westinghouse PWR, 1978-present.

Senior Production Technician on 1000 MWe Westinghouse PWR, 1978.

Nuclear Plant Operator on 1000 MWe Westinghouse PWR, 1974-1978.

U.S. Navy Machinist qualified on S3G and S5W PWR's, 1968-1974.

B. Plant Staff Positions

11. Technical Services Engineer

A. Responsible for providing all aspects of engineering services required to support the continued safe operations and maintenance of the plant.

B. Attended Staten Island Community College, Majored in Pre-Engineering Electrical, 1967-1969.
B.S. in Engineering Science Electrical, Richmond College, City University of New York, 1970-1974.

C. (1) Technical Services Engineer of 1000 MWe, Westinghouse PWR, July, 1979 to present.

Plant Engineer on 1000 MWe, Westinghouse PWR, 1976-1979.

Associate Engineer, Testing on 1000 MWe and 850 MWe, Westinghouse PWR, 1974-1976.

Performance Technician on same units, 1972-1974.

Engineering Technician on same units, 1970-1972.

B. Plant Staff Positions

12. Plant Engineers

A. Provide support to the Unit 3 staff in developing engineering documents, recommendations and modifications in an orderly and expeditious manner such that the unit will be operated in a safe, reliable and economic manner.

12.1.B. B.S. in Mechanical Engineering, Northeastern University, 1974

12.1.C (1) Plant Engineer on 1000 MWe Westinghouse PWR, 1977-present.

Test Engineer for Architect Engineer, assignments included work on various PWR and BWR projects, 1974-1977.

Assistant to Chief Maintenance Engineer, Assistant to Instrument Engineer, Assistant to Head Of Training School; these positions held at various times from 1971-1974 under a Co-Operative Education Experience program primarily on a 650 MWe General Electric BWR.

(2) Quality Assurance Inspector for instrumentation manufacturing company, 1970-1971.

B. Plant Staff Positions

12. Plant Engineers (Continued)

A. Same as for 12.1.A

12.2.B. B.S. in Nuclear Engineering, Lowell Technological Institute, 1969-1973.

12.2.C. (1) Plant Engineer on 1000 MWe Westinghouse PWR, 1977-present.

Field Engineer for Architect Engineer, Assignments included work on various PWR and conventional plants, 1973-1977.

Acting Test Engineer on 850 MWe Westinghouse PWR, 1976-1977.

Field Engineer on 850 MWe Westinghouse PWR, 1974-1976.

Field Engineer on 900 MWe Westinghouse PWR, during construction, 1973-1974.

Chemical Laboratory Technician, worked on development of radioactive sources, 1973.

Laboratory Technician, assisted in R & D of projects in connection with accelerator and neutron bombardment experiments.

(2) Field Engineer on conventional 600 MWe plant, developed control verification packages and instrument loop calibration procedures for the various power plant systems.

B. Plant Staff Positions

12. Plant Engineers (Continued)

A. Same as for 12.1.A

12.3.B. B.E. in Electrical Engineering, City College of New York, 1965-1970

12.3.C. (1) Plant Engineer on 1000 MWe Westinghouse PWR, March, 1979-present.

Lead Electrical Engineer on 1300 MWe B & W PWR, two unit site, responsible for design of safety related systems and Class IE equipment qualification, 1978-1979.

Senior Electrical Engineer on same site as above, 1977-1978.

Electrical Engineer in Electrical Generation and Controls Division for three unit site, including a 270 MWe B&W PWR, a 850 MWe Westinghouse PWR and a 1000 MWe Westinghouse PWR, 1973-1977.

Electrical Field Engineer and Assistant Superintendent assigned to nuclear plant construction site for two units, Combustion Engineering PWR's 845 MWe each.

(2) Professional Engineer - Registered in the State of Michigan.

B. Plant Staff Positions

13. Assistant Plant Engineers

A. Provide support to the Unit 3 staff in developing engineering documents, recommendations and modifications in an orderly and expeditious manner such that the unit will be operated in a safe, reliable and economic manner.

13.1.B. B.E. in Marine Engineering, S.U.N.Y. Maritime College, 1969-1973.
U.S. Navy Nuclear Power Training - one year.

13.1.C. (1) Assistant Plant Engineer on 1000 MWe Westinghouse PWR, February, 1979 to present.

U.S. Navy Nuclear Power Experience, 1973-1977, qualified on S5G plant, served on S5W submarine as Main Propulsion Assistant. Responsibilities included; maintenance and operation of propulsion plant and reactor systems, analysis and control of primary and secondary water chemistry, radiological procedures and practices, training of enlisted personnel.

(2) Engineer, engaged primarily in the design and testing of high speed centrifugal machinery, 1977-1979.

Licensed 3rd Assistant Engineer by U.S.C.G.

B. Plant Staff Positions

13. Assistant Plant Engineers (Continued)

A. Same as for 13.1.A

13.2.B. B.S. in Marine Engineering, United States Merchant Marine Academy, 1971-1975.

13.2.C (1) Assistant Plant Engineer on 1000 MWe Westinghouse PWR, March, 1979-present.

(2) Licensed 3rd and 2nd Assistant Engineer with U.S.C.G., served on various ships responsible for operation of various ships equipment, 1975-1978.

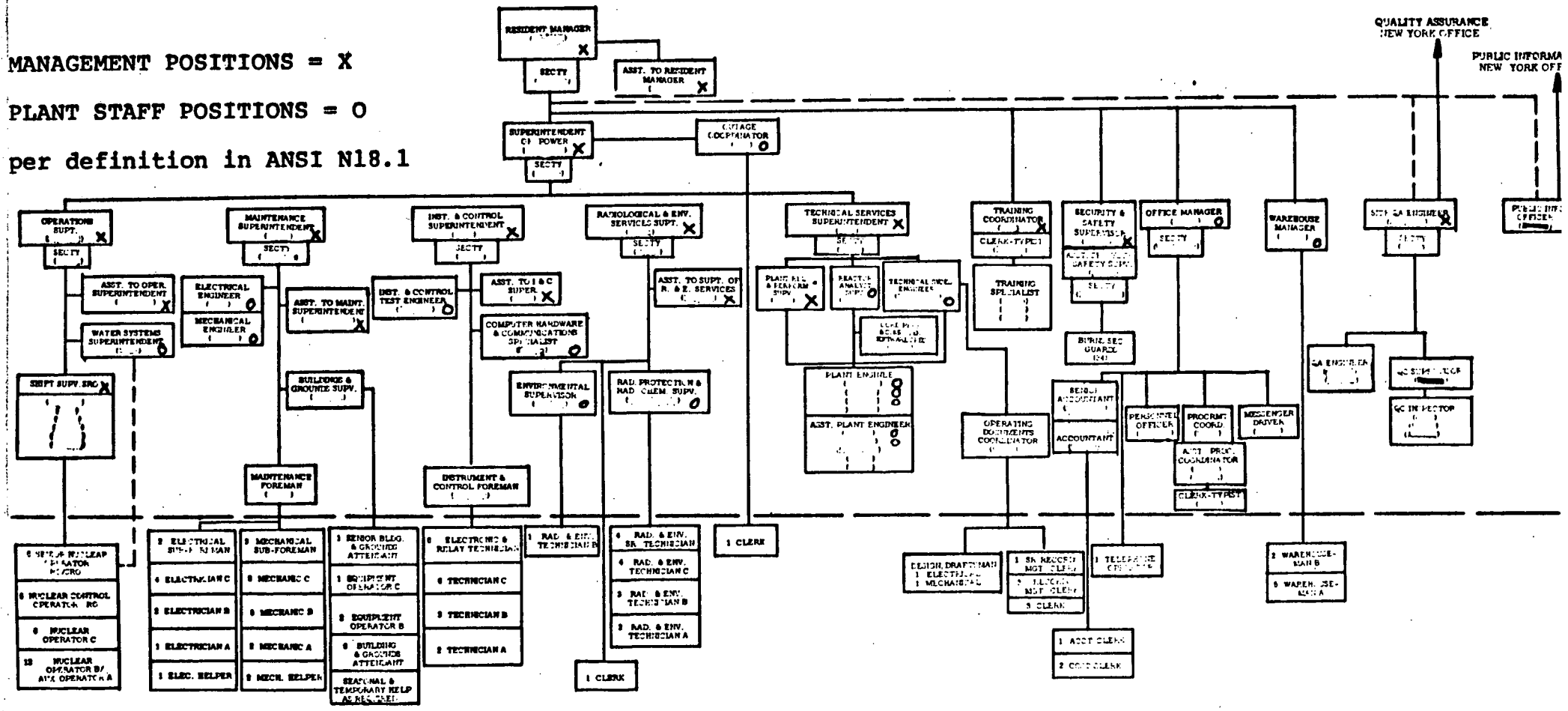
Holds a U.S.C.G. Steam Engineers License and a Diesel Engineers License with no restrictions or limitations.

FITZPATRICK NUCLEAR POWER PLANT

MANAGEMENT POSITIONS = X

PLANT STAFF POSITIONS = O

per definition in ANSI N18.1



TITLE: RESIDENT MANAGER

A) FUNCTIONS, RESPONSIBILITIES AND AUTHORITY

Chief executive officer and administrative officer of the Power Authority at the James A. FitzPatrick Nuclear Power Plant (JAFNPP), reporting directly to the Executive Director. Responsible for the safe operation of the nuclear power plant. Controls and administers an operating staff established at a present level of two hundred and five persons including engineers, mechanics, instrument and control technicians, radiation protection technicians, radio chemists, electricians, NRC licensed operators, security guard forces, administrative and clerical personnel. During refueling maintenance outages, controls and administers an additional organization ranging normally from three to ten contractors, including engineers, technicians and craft labor. The additional technician and craft labor manning during this two to three month period ranges normally from two to five hundred persons depending upon the amount of work involved. Serves as Chairman of the Plant Operations Review Committee (PORC) and in this position approves all plant procedures relating to nuclear safety, environmental protection, and radiological safety. Serves as the plant Emergency Plan Director coordinating the activities of plant personnel with local law enforcement agencies, and other local and state government agencies in the case of a radiological incident affecting areas exterior to the JAFNPP site boundaries. On twenty-four hour call for plant operational problems or emergency situations. After initial engineering evaluation and initial cost-benefit evaluations are completed on proposed plant modifications, approves or disapproves these modifications for further final detailed design and implementation. Provides administrative and technical guidance to the Superintendent of Power, and when required to subordinate department heads. Approves purchase orders and contracts either directly or after obtaining concurrence of the Executive Director. Represents the Authority and deals directly with the Nuclear Regulatory Commission Inspection and Enforcement Branch (Region I) involving JAFNPP matters. Represents the JAFNPP position concurrently with the Authority's Licensing group to the Nuclear Regulatory Commission Licensing Branch when plant specific technical expertise is required. Represents the Authority in the local area in dealings with local and state government agencies. Represents the Authority in the local area in dealing with Niagara Mohawk Power Corporation in matters of joint concern. Coordinates with the Authority's local public relations representative at the Nine Mile Point Energy Information Center media, releases concerned with activities at the JAFNPP. Acts as a member of the Authority's labor contract negotiating team in dealings with the IBEW locals. Represents the interest of the Authority in labor matters between Authority contractors and their craft labor. With the concurrence of the Executive Director, establishes position descriptions and organizational relationships. Has the delegated authority to hire and release personnel. Advises the Executive Director on salary schedules relating to the JAFNPP. The Superintendent of Power, Security and Safety Supervisor, Site Quality Assurance Engineer, Office Manager, Warehouse Manager, and Training Coordinator report to the Resident Manager. He is assisted in the performance of his duties by a confidential Secretary and an Assistant to the Resident Manager. In the absence of the Resident Manager, the Superintendent of Power acts for the Resident Manager.

B) EDUCATIONAL BACKGROUND

M.S. Physics/Nuclear Engineering 1962 with minor in Radiation Biology — U.S. Naval Postgraduate School, Monterey, California

B) EDUCATIONAL BACKGROUND - Continued

Research thesis in plasma physics bearing on thermonuclear fusion plasma containment delivered before American Physics Society, Seattle 1962 meeting and published in abstract	Under sponsorship of Dr. Norman Oleson U.S.N.P.G.S.
B.S. Physics 1953 followed by one year graduate work	Duke University
Prospective Commanding Officers Course (Nuclear Submarine) 3 Months - 1969 Note: This consisted of detailed study of S-5-W reactor construction, operation, procedural implementation and maintenance management	Headquarters Director Division Naval Reactors A.E.C.
Navy Nuclear Power Training (12 Months) 1964-65	U.S. Navy Nuclear Power School and S-1-C reactor prototype
Nuclear weapons specialist training 6 weeks. Blast, shock, fallout effects covered during this period	Sandia Base

C) EXPERIENCE

Resident Manager, James A. FitzPatrick Nuclear Power Plant (January 1976 to present) Selected key personnel to permit the transfer of the facility Operating License from Niagara Mohawk Power Corporation to the Power Authority of the State of New York. Operating License granted by the Nuclear Regulatory Commission on June 4,1977. Managed the completion of post-startup construction and modification. Established approved Security and Automated Record Management System. Achieved significant reductions in Operation and Maintenance budget; instituted positive administrative control of various Regulatory Agency interfaces.

One and one-half years organizing the operational Quality Assurance Section for the Virginia Electric and Power Company. This group conducted on-site surveillance, procedural enforcement and audit activities. Was formed from an experienced group (21) of Navy nuclear operational personnel with expertise in various fields such as mechanical maintenance, electronics, oeprations, etc.

One year as alternate member on the System Nuclear Safety and Operating Committee for the Manager of Licensing and Quality Assurance of Virginia Electric and Power Co

Five years command of two nuclear submarines U.S.S. Abraham Lincoln and U.S.S. Benjamin Franklin.

Three years executive officer of nuclear submarine U.S.S. Sam Houston.

C) EXPERIENCE - Continued

Qualified Engineering Watch Officer S-1-C reactor.

Served in nuclear submarines for a total of twelve years.

Served for nine months on Admiral's Staff (COMSUBGRU TWO) conducting reactor safeguards inspections, including examination of personnel qualifications, reactor operations, maintenance procedures, health physics procedures, chemistry control and overall management.

Supervised operation and maintenance of main propulsion turbines, turbo-generators, diesel electric generators, hydraulic systems, pneumatic systems, electric distribution systems, digital and analog computer controlled systems, submarine electric storage battery installations and numerous other submarine auxiliary systems.

Responsible as C.O. for final examination and approval of Engineering Watch Officers, Engineering Watch Supervisors, Reactor Operators and Electric Plant Operators.

Responsible as C.O. for preparation and preliminary examination of Chief Engineers for certification by VADM Rickover.

NAME: W. WAYNE CHILDS

TITLE: ASSISTANT TO THE RESIDENT MANAGER

A) FUNCTIONS, RESPONSIBILITIES AND AUTHORITY

Coordinate, draft and/or review responses to I&E Bulletins, Circulars, and licensing items to or from NRR. Performs "Licensing Engineer" function at plant. Assists the Resident Manager in plant administration. Acts as project manager for projects assigned by the Resident Manager. For example: Fire Protection Program from initial review of branch technical position 9.5.1 through the implementation of numerous modificatons, administrative controls and review of the fire protection safety evaluation report. Serves as On-Call Supervisor on a rotating basis with other plant personnel such as the Operations Superintendent. The authority assigned with these items includes directing operations personnel to perform plant shutdown and cool down if required. Plant Operations Review Committee (PORC) Secretary; PORC reviews all plant items related to nuclear and environmental safety. Represent the Resident Manager at Headquarters organization Safety Review Committee Meetings. Holds USNRC Senior Reactor Operator License.

B) EDUCATIONAL BACKGROUND

High School Graduate 1956
Iowa State University, 1 Year, Science Curriculum
U.S. Navy Schools and Training (1959-1969)

Electronics Technician 28 Weeks	
Submarine School and related submarine equipment schools	14 weeks
U.S. Navy Nuclear Power School and Training	52 weeks
Westinghouse (S5W-PWR) Submarine Propulsion Plant Training (Bettis)	5 weeks
Advanced Electronics Schooling, including Electronics Technician Class B School	56 weeks
U.S. Armed Forces Institute College Level Examination Program - Completed entire series with satisfactory results	

1970 through Present

General Electric BWR Techology Courses	6 weeks
General Electric Simulator Training	1 week
JAFNPP Cold License Training (Classroom portion) -Approx.	400 hours
Preconditioning Interim Operating Management Recommendations	1 week
Cayuga County Community College Courses (Parttime) Science Curriculum	

C) EXPERIENCE

1) NUCLEAR

a) Directly Related

1960-1961 Training and qualification as Reactor Operator, U.S. Navy S3G-PWR Prototype, including 3 months as In-Plant Instructor. This time period included initial criticality of S3G Core 2 and testing to confirm the transient analysis of the core. In addition, a number of tests utilizing the natural circulation mode and some testing utilizing a control rod free core controlled by a Gadolina-Cell, were conducted.

TITLE: ASSISTANT TO THE RESIDENT MANAGER

1961-1964 New construction on the U.S. Navy submarine using a S5W-PWR core. Served as a Reactor Operator during pre-operational testing and initial criticality. Served as Reactor Operator during the first "rapid restart and emergency heat up" conducted in an operating U.S. Navy ship. Served as a Reactor Operator for initial solid plant (pressurizer isolated) tests.

1966-1969 Leading Petty Officer, Reactor Controls Division and Engineering Watch Supervisor (S5W-PWR). This time period included overhaul, refueling and post refueling tests. Assisted in the development of a planned maintenance system for S5W nuclear components. This activity was conducted on only three reactor plants to form the basis of the planned maintenance system presently utilized on nuclear powered ships.

1970-1972 Niagara Mohawk Power Corporation (NMPC) - Nine Mile Point Nuclear Station (BWR-2). Technical Assistant to the Superintendent. Assisted operating supervisor primarily in the Rad Waste Area. System modification follow-up. Revision/update of operating procedures and special (emergency) procedures. Supervised refueling floor operations.

1972-1976 NMPC-JAFNPP (BWR-4). Performed preliminary work on pre-operation test and operating procedure layout/format. Participated in the writing of operating procedures and pre-operational tests. Drafted numerous surveillance tests including Logic Functional Tests. Station Shift Supervisor; included the supervision of performance of pre-operational tests, on the job training of shift operators, initial fuel loading, initial criticality and power ascension testing, core modification for resolution of "LPRM Vibration" problem and installation of the "Vermont Yankee Fix" modification to the low pressure injection system.

1976-1978 Power Authority of the State of New York, James A. FitzPatrick Nuclear Power Plant, BWR-4
Assistant to the Operations Superintendent
Act for Operation Superintendent in his absence. Plan or review conduct of plant operations. Review Surveillance Test data for accuracy and technical specification compliance. Monitor performance and training of plant's shift operating personnel.

1978 to Present Power Authority of the State of New York, James A. FitzPatrick Nuclear Power Plant, BWR-4
Assistant to the Resident Manager
Assist the Resident Manager in plant administration and act as project manager for assigned projects. Represent the Resident Manager at meetings of the Headquarters organization Safety Review Committee. (See Item A) above).

TITLE: ASSISTANT TO THE RESIDENT MANAGER

C. 1) b) Other

1969-1970 General Dynamics Electronic Division, Rochester, New York
Inspector and Test Supervisor
Supervised 3 test engineers, 25 electronic technicians and 15 repair personnel in the final test of state of art electronic equipment utilized for on-ground test of F-111 aircraft.

2) Other Pertinent Information

Entire adult working experience except for 1 year, has been associated directly with nuclear power. Continuously assigned to JAFNPP since July 1971 (construction 60% completed at that point).

Have performed in excess of 150 reactor criticals, observed an estimated 200 additional.

Directed or performed a plant startup and heatup (from cold to operating temperature) an estimated 50 times, observed an estimated 50 additional.

Directed or performed a plant shutdown and cooldown (from operating temperature to cold shut down) an estimated 20 times, observed an estimated 10 additional.

SUPERINTENDENT OF POWER
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
POWER AUTHORITY OF THE STATE OF NEW YORK

RESPONSIBILITIES:

The Superintendent of Power is responsible to the Resident Manager for the functional operation of the Plant. —He assures that it is operated and maintained in a safe, efficient manner within the bounds of the Plant Operating License, Technical Specifications, and other Regulatory requirements. He acts for the Resident Manager in his absence. Principal duties include:

1. Provide general supervision to the Operations, Instrumentation and Control, Maintenance, Radiological and Environmental Services and Technical Services Superintendents and Outage Coordinator, under general direction provided by the Resident Manager.

2. Member of Plant Operations Review Committee and in the absence of the Resident Manager, serve as Chairman.

3. Establish policies and procedures for assuring safe, efficient plant operations.

4. Implement established PASNY policies with regard to Administrative matters.

5. Provide a liaison between Plant Staff and other PASNY Departments such as: Power Operations for operational status and Engineering for Design Modification and Licensing.

6. Provide a liaison between Plant Staff and non-PASNY organizations such as the Architect-Engineer, Contract Maintenance Service Contractor and various Regulatory agencies.

EDUCATION:

Syracuse University - Syracuse, New York
Degree - Bachelor of Mechanical Engineering (1963)

TRAINING:

Western Nuclear Research Center - University of Buffalo
Reactor Engineering Course

Oswego Steam Station - Oswego, New York
Three months - observation of power plant operation

Dresden Nuclear Power Station - Morris, Illinois
Three months - observation of station operation
One week - observation of station start-up following refueling

General Electric - San Jose, California
Mechanics and Theory of Nuclear Instruments Course
Station Nuclear Engineers' Course
Technology Course - Nine Mile Point

General Electric - James A. FitzPatrick Nuclear Power Plant
Technology Course - JAFNPP

EXPERIENCE:

1976 To Date — POWER AUTHORITY OF THE STATE OF NEW YORK
James A. FitzPatrick Nuclear Power Plant
Superintendent of Power

Responsible to the Resident Manager for the functional operation of the plant.

Currently hold and maintain a Senior Reactor Operator License.

1974 - 1976 — NIAGARA MOHAWK POWER CORPORATION
James A. FitzPatrick Nuclear Power Plant
Operations Supervisor

Responsible to the Plant Superintendent for operation of the James A. FitzPatrick Nuclear Power Plant. Directed the functional conduct of Shift Operations. Performed the duties of Station Shift Supervisor, when required.

1967 - 1974 — NIAGARA MOHAWK POWER CORPORATION
Nine-Mile Point #1
Reactor Analyst Supervisor

Responsible to the Results Supervisor for the start-up, operation and refueling of the Nine-Mile Point Reactor and initial planning of the James A. FitzPatrick Nuclear Power Plant's start-up.

1965 - 1967 — NIAGARA MOHAWK POWER CORPORATION
Nine-Mile Point #1
Licensing Engineer - System Project Engineering Department

Assignments included the Nine-Mile Point Design Review, nuclear safety evaluations, and preparation of technical documents related to the licensing of Nine-Mile Point.

1963 - 1965 — NIAGARA MOHAWK POWER CORPORATION
Gas Engineer

In charge of design of natural gas transmission and distribution systems.

J.A.F.N.P.P.
OUTAGE COORDINATOR UPDATE

July 12, 1979

TITLE: OUTAGE COORDINATOR

A. Function: To develop the definition, scheduling, control, post outage auditing and evaluation for all plant outages, with the objective of causing efficient utilization of resources.

Responsibilities & Authority:

a) Initiate and supervise a program to allow efficient utilization of manpower, tools and material during all outages;

b) To coordinate and monitor all vendor and outside engineering modifications as they relate to plant outages;

c) To coordinate and monitor all outage related work requests;

d) To coordinate the work packages of all department heads into a complete outage picture.

e) To incorporate New York Office Engineering plans into Plant Outage Schedules;

f) To assist with the coordination and resolution of NRC and other regulatory agencies' comments as they relate to plant outages;

g) Assist Accounting and Audit personnel with the preparation of a specific budget accounting for all outages;

h) Prepare daily and weekly outage summaries for Management presentation; (during major outages).

i) As requested, serve as advisor to the Plant Operations Review Committee.

B. Educational Background:

Bachelor Science - Marine & Electrical Engineering Degree

C. Nuclear Experience:

Bettis Atomic Power Lab

1. Established setpoints and operational guidelines for nuclear prototypes at Idaho.

2. Developed nuclear power school system descriptions.

3. Proposed a revolutionary new method for alerting nuclear reactor operators to potential problem areas. The system was proposed for future use aboard naval nuclear vessels.

4. Developed new methods for monitoring incident occurence and reactor awareness at the nuclear prototype in Idaho.

5. Assisted in developing a preventative maintenance orientated plant system trend analysis program to improve plant availability.

Stone & Webster

1. Developed work packages for nuclear site plant modifications which ensure efficient and accurate implementation.

2. Investigated and developed a report for PASNY indicating the applicability and resolution of generic BWR problem areas at the James A. FitzPatrick Nuclear Power Plant.

3. Reviewed nuclear plant designs for operability, maintainability and reliability.

4. Conducted pre-op and start-up activities during initial fuel-load and plant start-up at J.A.F.N.P.P.

5. Provided engineering coordination between nuclear plant site and major A/E. Coordinated interfare between construction forces and operations to effect timely completion of plant modifications during major outages and daily operations.

D. Other Experience:

Licensed Marine Engineer for American Export Isbrandtsen Lines.

TITLE: OPERATIONS SUPERINTENDENT

EDWARD C. ABBOTT

FUNCTION:

The primary purpose and responsibility of the Operations Superintendent is to coordinate the plant operators and equipment to assure maximum plant availability and safety.

RESPONSIBILITIES AND AUTHORITIES:

The Operations Superintendent shall establish and perform periodic reviews of operating procedures (ST's, OP's, SP's, etc.) to insure compliance with:

1) Nuclear Regulatory Guides
2) "As-built" plant conditions
3) Operating License
4) Plant Administrative Procedures

He shall establish and review procedures for the conduct of the shift to comply with:

1) Nuclear Regulatory Guides
2) Chapter 13 of the FSAR, "Conduct of Operations"
3) Administrative Procedures
4) Union Contract

The Operations Superintendent shall establish, implement and review operator logs in order to accomplish:

1) Routine visual inspection of all equipment in the plant
2) Logging of alarms outside the Control Room and the necessary actions to clear those alarms
3) Adequate turnover of information during shift change

The Operations Superintendent shall periodically review each operators training file to assure he:

1) Meets the minimum job classification requirements
2) Has completed requalification in a timely manner
3) Receives the necessary advancement training attention if he so desires

The Operations Superintendent shall establish, review and maintain operator performance evaluations. These evaluations shall be used to correct operating deficiencies, define individual strengths and advance represented personnel to a management position.

The Operations Superintendent shall be cognizant of those Operating License requirements which affect plant power production (such as thermal limits, surveillance and operability requirements on safety related equipment). He shall coordinate power plant productions within those operating limits to minimize the number and length of power reductions. With the assistance from the Load Dispatching Supervisor, he shall coordinate plant power reductions to minimize the effect on the grid.

As the Operations Superintendent deems necessary, he may delegate any of the above duties to qualified assistants.

The Operations Superintendent is responsible for personnel selection with the Operations Department and is responsible for dealing with personnel problems within the department.

The Operations Superintendent is a member of the Plant Operations Review Committee.

The staff reporting to the Operations Superintendent includes an Assitant to the Operations Superintendent, a Water Systems Supervisor, a Stenographer and six (6) Station Shift Supervisors.

EDUCATIONAL BACKGROUND:

B.S. in Physics from Bates College, Lewiston, Maine (1967)

M.S. in Physics from Clarkson College of Technology, Potsdam, New York (1969)

BWR Technology Course presented by General Electric - 5 weeks

Station Nuclear Engineer's Course presented by General Electric - 5 weeks

FitzPatrick Technology Course presented by General Physics - 4 months

Senior Reactor Operator's License Class presented by the PASNY Training Department - 4 weeks

Naval Nuclear Propulsion Course - 6 months

Naval Nuclear Prototype Training - 6 months

Naval Officer Candidate School - 4 months

Naval Submarine School - 1 month

EXPERIENCE:

NUCLEAR

Reactor Controls and Electrical Division Officer on the U.S.S. John Adams SSBN620

Engineering Officer of the Watch on the U.S.S. John Adams SSBN620

Damage Control Assistant on the U.S.S. John Adams SSBN620

Acting Resident Manager - James A. FitzPatrick Nuclear Power Plant

Operations Supervisor for Niagara Mohawk Power Corporation at James A. FitzPatrick Nuclear Power Plant

Licensed Senior Reactor Operator James A. FitzPatrick Nuclear Power Plant - SOP-2853

RECENTLY SELECTED AS A SENIOR FOLLOW BY THE ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

OTHER: PUBLICATION: Physica Status Solidi: A short note on magnetic spin resonance in the alkaline earth flourides doped with divalent manganese.

TITLE: WATER SYSTEM SUPERVISOR

FUNCTION:

The primary purpose of the Water System Supervisor is the overall responsibility for the performance of management of the radwaste system and auxiliary boilers. Water System Supervisor ensures that Technical Specifications are met concerning liquid effluents, so plant is not forced to shutdown.

RESPONSIBILITIES:

The Water System Supervisor shall schedule the operations of the radwaste system on a daily basis and integrate them with the various planned station operations, such as:

Condensate demineralizer resin generation
Shutdown and startup operations.

Maintenance activities which would cause substantial water input to radwaste due to equipment draining, flushing, cleaning, decontamination, etc. Transfers within radwaste should be scheduled on the basis of need for tankage space and best use of available space.

He shall ensure maintenance operations are forecasted and scheduled to the extent possible so radwaste operations won't interfere and cause lack of process capability when needed (e.g., periodic steam cleaning of filters, calibration of instruments, pump and valve inspections and maintenance, changing of demineralizer resins, etc.).

He shall maintain the necessary management controls to ensure chemical, resin and filter aid inventories are adequate and moved in a controlled and timely manner to radwaste for use.

He shall perform periodic audits of his assigned operators, to ensure adherence to operating procedures.

He shall charge or otherwise follow the radwaste system performance to detect trends and abnormalities.

The Water System Supervisor shall maintain station water balance to ensure an adequate supply of condensate and demineralized water for the various requirements. He shall establish guidelines to avoid high inventories since space is needed in condensate storage for returning treated radwaste and to reuse treated wastes in the station to reduce makeup water processing and cost.

For planning and recording daily activities for the best possible operation and management of the radwaste system, he shall establish and review the following:

Operating log sheet
Daily operating planning sheet
Water valance summary sheet
Auxiliary boiler log.

He monitors auxiliary boiler operation and ensures the timely repair of faulty equipment.

AUTHORITY:

Water System Supervisor has the authority to make all decisions for radwaste movements. If, however, he has a problem that would limit plant power production, he would go to the Operations Superintendent, not for resolution but for approval. He has the authority to have his own personnal within the limits of the assigned number of positions.

EDUCATIONAL BACKGROUND:

High School Diploma
Class "A" Electricians School - 14 weeks
Damage Control and Fire Fighting School - 2 weeks
Navy Nuclear Power School - 24 weeks
400 Cycle Motor Generator School - 2 weeks
Preventive Maintenance School - 2 weeks
Navy Instructor Shcool - 4 weeks
Radiological Control Refresher Training - 2 weeks
Leadership Training and Human Relations - 2 weeks
Rutger's University Advanced Management Program - 1 week
Radioactive Waste Management - 1 week

EXPERIENCE:

NUCLEAR

U.S. Navy Prototype S1C - 24 weeks - PWR
U.S.S. Tulliber S8N597 - 4 years, 6 months - PWR
U.S.S. James K. Polk SSBN645 - 3 years, 6 months - PWR
U.S.S. Stonewall Jackson SSBN634 - 2 years - PWR
Jersey Central Power & Light - Oyster Creek Nuclear Power Plant - 3 years, 8 months - BWR - Senior Operators License
James A. FitzPatrick Nuclear Power Plant - 2 years - BWR Senior Operators License

In present position, the Water System Supervisor fills in for the Station Shift Supervisor for vacations on an occasional basis.

TITLE: ASSISTANT TO THE OPERATIONS SUPERINTENDENT

FUNCTION:

The primary purpose of the Assistant to the Operations Superintendent is to assist the Operations Superintendent with his duties and perform his duties in his absence.

FUNCTION OF THE OPERATIONS SUPERINTENDENT:

The primary purpose and responsibility of the Operations Superintendent is to coordinate the plant operators and equipment to assure maximum plant availabilty and safety.

RESPONSIBILITIES OF THE OPERATIONS SUPERINTENDENT:

The Operations Superintendent shall establish and perform periodic reviews of operating procedures (ST's, OP's, SP's, etc.) to insure compliance with:

1) Nuclear Regulatory Guides
2) "As-built" plant conditions
3) Operating License
4) Plant Administrative Procedures

He shall establish and review procedures for the conduct of the shift to comply with:

1) Nuclear Regulatory Guides
2) Chapter 13 of the FSAR, "Conduct of Operations"
3) Administrative Procedures
4) Union Contract

The Operations Superintendent shall establish, implement and review operator logs in order to accomplish:

1) Routine visual inspection of all equipment in the plant
2) Logging of alarms outside the Control Room and the necessary actions to clear those alarms
3) Adequate turnover of information during shift change

The Operations Superintendent shall periodically review each operators training file to assure he:

1) Meets the minimum job classification requirements
2) Has completed requalification in a timely manner
3) Receives the necessary advancement training attention if he so desires

The Operations Superintendent shall establish, review and maintain operator performance evaluations. These evaluations shall be used to correct operating deficiencies, define individual strengths and advance represented personnel to a management position.

The Operations Superintendent shall be cognizant of those Operating License requirements which affect plant power reduction (such as thermal limits, surveillance and operability requirements on safety related equipment). He shall coordinate power plant productions within those operating limits to minimize the number and length of power reductions. With the assistance from the Load Dispatching Supervisor, he shall coordinate plant power reductions to minimize the effect on the grid.

As the Operations Superintendent deems necessary, he may delegate any of the above duties to qualified assistants.

The Operations Superintendent is responsible for personnel selection with the Operations Department and is responsible for dealing with personnel problems within the department.

The Operations Superintendent is a member of the Plant Operations Review Committee.

The staff reporting to the Operations Superintendent includes an Assistant to the Operations Superintendent, a Water Systems Supervisor, a Stenographer and six (6) Station Shift Supervisors.

EDUCATIONAL BACKGROUND:

Basic Nuclear Power School - 6 months
Nuclear Prototype (SIC) - 6 months
Interior Communications "A" School - 18 weeks of Basic Electricity Training
Submarine Equipment - 12 schools of one to two week durations

Mohawk Valley Community College - need approximately 10 weeks to complete requirements for an Associates Degree in Electrical/Electronics Technology

BWR Technology Course presented by General Electric - 3 months

BWR Licensing Course presented by General Physics - 6 months

EXPERIENCE:

Reactor Operator in Nuclear Navy for 7 years
Operator at Niagara Mohawk's Nine Mile 1 BWR for 1 year
Operator at James A. FitzPatrick BWR for 4 years
Received Operator's License in 1974
Received Senior Operator's License in 1977
Water Systems Supervisor at JAF for 1 year
Assistant Operations Superintendent - present time

Have attended BWR Simulator for one week per year every year since licensing. The week's training consisted of reactivity manipulations and reacting to accident conditions.

TITLE: STATION SHIFT SUPERVISOR

FUNCTION:

The primary purpose of the Station Shift Supervisor is the responsibility for the safe and efficient operation of a nuclear generating station in accordance with Nuclear Regulatory Commission and Environmental Regulations.

RESPONSIBILITIES:

The Station Shift Supervisor's principal duties include but are not limited to the following:

1) Directs the normal, transient and emergency operation of the station.
2) Ensures that all NRC and Environmental regulations are complied with.
3) Coordinates maintenance activities.
4) Trains subordinates on normal and emergency operation of the station.
5) Develops operating, emergency and temporary procedures.
6) Has the overall station responsibility in the absence of higher supervisor (i.e., back shifts).
7) Directs refueling activities.
8) Performs or directs special trouble shooting activities.
9) Performs special projects as assigned by the Operations Superintendent.
10) Ensures that station systems are maintained and tested in accordance with Quality Control and Federal Standards.
11) Is responsible for the operation of Radioactive Waste Processing Systems with technical direction from the Water Systems Supervisor.
12) Performs shiftly audits of station operating and administrative conditions.

EDUCATIONAL BACKGROUND:

High School

NAVY
- Basic Nuclear Power School - 6 months
- Nuclear Prototype (55G) - 6 months
- Machinists Mate A School - 12 weeks
- Attended approximately 15 other naval schools of short duration (from 1 week to 4 weeks) which were concerned with Submarine Nuclear Power Plant Systems and Secondary Systems
- BWR Course presented by General Electric - 2 weeks
- BWR Licensing Class presented by General Physics - 4 months

EXPERIENCE:

Mechanical Operator in the Nuclear Navy - 6 years (55W)
Operator at James A. FitzPatrick Nuclear Power Plant - 4 years
Received Reactor Operator's License after two years - 6/75
Received Senior Operator's License (10/77) at which time I assumed duties as Shift Supervisor for PASNY. I have attended BWR Simulator for one week per year since licensing. The training consists of reactivity manipulations and accident conditions.

TITLE: STATION SHIFT SUPERVISOR

FUNCTION:

The primary purpose of the Station Shift Supervisor is the responsibility for the safe and efficient operation of a nuclear generating station in accordance with Nuclear Regulatory Commission and Environmental Regulations.

RESPONSIBILITIES:

The Station Shift Supervisor's principal duties include but are not limited to the following:

1) Directs the normal, transient and emergency operation of the station.
2) Ensures that all NRC and Environmental regulations are complied with.
3) Coordinates maintenance activities.
4) Trains subordinates on normal and emergency operation of the station.
5) Develops operating, emergency and temporary procedures.
6) Has the overall station responsibility in the absence of higher supervision (i.e., back shifts).
7) Directs refueling activities.
8) Performs or directs special trouble shooting activities.
9) Performs special projects as assigned by the Operations Superintendent.
10) Ensures that station systems are maintained and tested in accordance with Quality Control and Federal Standards.
11) Is responsible for the operation of Radioactive Waste Processing Systems with technical direction from the Water Systems Supervisor.
12) Performs shiftly audits of station operating and administrative conditions.

EDUCATIONAL BACKGROUND:

Bachelor of Science in Ocean Systems Engineering - U.S. Naval Academy

BWR Technology Course presented by General Physics - 6 months

Navy Officer's Nuclear Prototype - 6 months

Navy Officer's Nuclear Power School - 6 months

EXPERIENCE:

1 Year as a Shift Supervisor of a 2436 MW BWR

4 Years as Engineering Officer of the Watch on 55W type PWR

1 Year as Plant Engineer in the Technical Services Department of a BWR

5 Years as a Division Officer of various electrical and mechanical divisions on a 55W type PWR

Hold a current Senior Reactor Operators License on a 2436 MW BWR.

TITLE: STATION SHIFT SUPERVISOR

ROGER A. LOST

FUNCTION:

The primary purpose of the Station Shift Supervisor is the responsibility for the safe and efficient operation of a nuclear generating station in accordance with Nuclear Regulatory Commission and Environmental Regulations.

RESPONSIBILITIES:

The Station Shift Supervisor's principal duties include but are not limited to the following:

1) Directs the normal, transient and emergency operation of the station.
2) Ensures that all NRC and Environmental regulations are complied with.
3) Coordinates maintenance activities.
4) Trains subordinates on normal and emergency operation of the station.
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10) Ensures that station systems are maintained and tested in accordance with Quality Control and Federal Standards.
11) Is responsible for the operation of Radioactive Waste Processing Systems with technical direction from the Water Systems Supervisor.
12) Performs shiftly audits of station operating and administrative conditions.

EDUCATIONAL BACKGROUND:

NAVY Machinist Mate "A" School - engineering principles, maintenance and operation of propulsion plants and other associated shipboard machinery. - certificate of completion 5/66.

Basic Nuclear Power School - Mathematics, Physics, Metallurgy, Heat Transfer and Fluid Flow, Mechanical Theory, Reator Principles, Neutron kinetics, Reactor Plant Technology, Electrical Theory, Basic Electronics, Radiation and it's effects, Chemistry - received certificate of completion 4/67.

Naval Reactor Prototype - operation of a nuclear reactor as well as operation and maintenance of reactor plant fluid systems - received certificate of completion 10/67.

BWR Technology - General Electric - Principles of Operating BWR Systems, Metallurgy, Chemistry and Nuclear Theory - received certificate of completion 12/15/72.

Iowa State University, Ames, Iowa-Training Course on Test Reactor - received certificate of completion 12/21/72.

BWR Power Plant Training Center - Operation of BWR, 12 week simulator training, safety analysis report and other plant manuals; - received Senior Operator Certification 4/16/73.

Site Training Programs, Duane Arnold Energy Center - numerous programs for R.O. cold licensing and requalification. License number OP-3424-1. License upgrade program to S.R.O. hot license. License Number SOP-2849.

EXPERIENCE:

U.S.S. Enterprise - Nuclear Powered Aircraft Carrier - Chief Reactor Auxiliary Operator - responsible for all reactor mechanical watchstanders, equipment and systems in a critical plant. In charge of all evolutions on a shutdown plant. November 1967 through April 1972.

Active participation in minor overhaul at Bremerton, Washington - July through September 1968.

Active participation in overhaul of propulsion plant and refueling two pressurized water reactors. Supervised maintenance and responsible for plant fluid and steam systems. Took active part in pre-critical and initial power range testing. August 1969 through February 1971.

Operations Department - Duane Arnold Energy Center - Active participation in final construction, start-up test program, initial fuel inspection and loading, initial criticality, turbine roll and precommercial testing.

LPRM vibration repairs, fuel channeling, retrieving dropped fuel bundle, control rod replacement and various maintenance and refuel tool experience. June through July 1975.

Several refuel outages of Duane Arnold Energy Center Unit 1, turbine overhaul, LPRM replacement, CRD removal both above and below decoupling, incore inspections and various maintenance.

Shift Supervisor at James A. FitzPatrick Nuclear Power Plant.

Attended BWR Technology Class given by General Electric - 2 weeks

Attended BWR Simulator School 3 times - reactivity manipulations and accident conditions.

Attended BWR Technology Course presented by General Physics - 5 months

TITLE: STATION SHIFT SUPERVISOR

FUNCTION:

The primary purpose of the Station Shift Supervisor is the responsibility for the safe and efficient operation of a nuclear generating station in accordance with Nuclear Regulatory Commission and Environmental Regulations.

RESPONSIBILITIES:

The Station Shift Supervisor's principal duties include but are not limited to the following:

1) Directs the normal, transient and emergency operation of the station.
2) Ensures that all NRC and Environmental regulations are complied with.
3) Coordinates maintenance activities.
4) Trains subordinates on normal and emergency operation of the station.
5) Develops operating, emergency and temporary procedures.
6) Has the overall station responsibility in the absence of higher supervision (i.e., back shifts).
7) Directs refueling activities.
8) Performs or directs special trouble shooting activities.
9) Performs special projects as assigned by the Operations Superintendent.
10) Ensures that station systems are maintained and tested in accordance with Quality Control and Federal Standards.
11) Is responsible for the operation of Radioactive Waste Processing Systems with technical direction from the Water Systems Supervisor.
12) Performs shiftly audits of station operating and administrative conditions.

EDUCATIONAL BACKGROUND:

High School Graduate
Naval Nuclear Power School
Naval S1C Prototype
USAFI Courses in Engineering
Health Physics Tech. Millstone Unit I - 6 months
Management Training Course - N.U.S. Co. - 4 weeks
Niagara Mohawk Fire School
Limitorque Valve School
PWR Simulator Training - 5 weeks
BWR Simulator Training Course - three one-week courses
BWR Simulator Training Course - one two-week course

EXPERIENCE:

Naval S5W Plant, EWS, EOOW Qualified - 5 years

Plant Initial Criticality and Power Ascension Testing and Senior Reactor Operator Millstone Unit II - 4.5 years

Director of Connecticut Yankee Information Center - 7 months

Supervised BWR Refueling Activities

Senior Reactor Operator - FitzPatrick

TITLE: STATION SHIFT SUPERVISOR

FUNCTION:

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RESPONSIBILITIES:

The Station Shift Supervisor's principal duties include but are not limited to the following:

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10) Ensures that station systems are maintained and tested in accordance with Quality Control and Federal Standards.
11) Is responsible for the operation of Radioactive Waste Processing Systems with technical direction from the Water Systems Supervisor.
12) Performs shiftly audits of station operating and administrative conditions.

EDUCATIONAL BACKGROUND:

High School - 1964 - Academic
Navy Schools:

Electronic Technician Class "A" - electronic design fundamentals, electronic circuit maintenance - 48 weeks - 1965

Electronic Technicial Class "B" - advanced electronic circuit design equivalent to an associates degree in electronics. This included the required math to go along with the circuit design. - 48 weeks - 1969.

Nuclear Power School - studied design and theory of operation of Navy pressurized water reactors and propulsation plants. - 26 weeks - 1966.

D1G Nuclear Prototype - studied the practical operation of the Navy's D1G reactor and propulsation plant. Qualified as Reactor Operator - 26 weeks - 1966.

Navy Fire Schools

EXPERIENCE:

-NUCLEAR

NAVY

Reactor Operator D1G prototype PWR
Reactor Operator - Reactor Technician - U.S.S. Enterprise CVAN-65 PWR
Fire Fighting Scene Leader of repair party on U.S.S. Enterprise CVAN-65-
Engineering Watch Supervisor A1W prototype - staff operator/instructor PWR

COMMERICAL

Auxiliary Operator/Control Room Operator/Radwaste Operator/Shift Foreman - Brunswick Steam Electric Plant, Carolina Power and Light Company, Southport, North Carolina. This was during construction, startup, startup testing, and commerical operation of Brunswick #1 and #2. Held NRC Senior Reactor Licenses on both reactors.

Shift Supervisor - James A. FitzPatrick Nuclear Power Plant

EDUCATION

BSEE - 1962	Rensselaer Polytechnic
1/65 - 6/65 Reactor Technology	Western New York Research Center at the University of Buffalo
3/66 - 8/66 Reactor & Plant Technology and Nuclear Instrumentation	GE, San Jose, California

PROFESSIONAL QUALIFICATIONS

Licensed Professional Engineer N.Y. State	#044645
Member of IEEE	#1664465

PROFESSIONAL EXPERIENCE

10/64	Accepted the position of Assistant to the Station Superintendent of Nine Mile Point Nuclear Power Station. This commenced a comprehensive training and work program extending from 1/65 - 7/69.
10/64 - 7/65	Assigned to 4-100 MW Units at Albany Steam Station.
1/65 - 7/65	Attended Reactor Technology Course alternate weeks. Worked at Albany Steam on the alternate week.
7/65 - 9/65	Assigned to NMPC Project Engineering Department. Designed electrical control circuits for Nine Mile Point Station.
9/65 - 12/65	Assigned to the Dresden Nuclear Power Station at Morris, Illinois to gain operating experience at a boiling water type reactor.
10/65 - 2/66	Returned to Project Engineer at Buffalo. Assigned to design of Process Control Systems for Nine Mile Point.
2/66 - 3/66	Six weeks technology course in boiling water reactors given by the General Electric Company at San Jose, California. The course covered nuclear heat transfer theory and design consideration of all the major plant systems.
3/66	Selected to attend a 2 week theory course in Nuclear Instrumentation (San Jose, California).
4/66 - 8/66	Work experience at GE's Nuclear Instrumentation Department, San Jose, California. Time was spent in learning the design, operation, and calibration of all nuclear instruments to be used at the Niagara Mohawk Plant. Many of the systems were still under quality control checks, which I also participated in.

POSITION: MAINTENANCE SUPERINTENDENT

DATE: JULY 12, 1979

FUNCTIONAL RESPONSIBILITIES AND AUTHORITY —

The Maintenance Superintendent is responsible for the maintenance of all mechanical and electrical equipment and reports directly to the Superintendent of Power. He will coordinate extensive overhauls, inservice inspection, direction of contract maintenance personnel and Authority maintenance personnel. He will develop a list of spare parts needed to assure safe and reliable operation of the plant.

The Maintenance Superintendent is responsible for preparation, implementation, and compliance of all procedures necessary in the discharge of his duties. These documents include:

1. Title 10 Code of Federal Regulation
2. Technical Specification
3. Administrative Procedures
4. Union Contract
5. Safety Handbook
6. Plant Preventative, Corrective and Special Process Procedures
7. Personnel Training and Qualification

The Maintenance Superintendent is responsible for personnel selection within the Maintenance Department including professional, technical, mechanical staff and is also responsible for dealing with personnel problems within the department.

The Maintenance Superintendent provides supervisory functions in dealing with various contractors used by the Authority at the James A. FitzPatrick Nuclear Power Plant.

The Maintenance Superintendent coordinates the maintenance functions of his department with the other operating departments to insure that maintenance is conducted in a safe manner on equipment and systems involved.

The Maintenance Superintendent is a member of the Plant Operations Review Committee.

The staff reporting to the Maintenance Superintendent includes an Assistant to the Maintenance Superintendent, Mechanical Engineers, Electrical Engineers, Supervisor of Building and Grounds and Stenographer.

8/66 - 4/67	Returned to Project Engineering at Buffalo to assist further in plant instrumentation design.
4/67	At site of construction, followed plant construction and wrote nuclear instrumentation operating procedures. At this time some heavy equipment was being installed. The reactor vessel was not in place yet as reactor building concrete was being poured.
3/68	Two week school at General Electric's Lynn, Mass. Plant. This was a course in theory, maintenance and operation of GE/MAC Electronic Process Control Systems.
6/68	Names Assistant Instrumentation and Control Supervisor. Responsible for supervision of five technicians, the work of which encompassed all the instrumentation in the plant.
2/69	Oyster Creek Nuclear Station - This is a sister plant to Nine Mile Point. I stayed two weeks during calibration of nuclear instrumentation to gain experience and to hasten our own start-up by being familiar with problems encountered at Oyster Creek.
2/69	Relieved of supervision of technicians. Supervised and coordinated pre-operational testing of two 2.5 MVA GM emergency diesel generating units.
4/69	Oyster Creek - A general informational trip to gain knowledge of any problems they were having.
4-7/69	Systems pre-operational testing at Nine Mile Point in preparation for fuel loading. Responsible for Reactor Protection pre-operational test and Neutron monitoring system.
5/69	Returned to Oyster Creek. Observed first critical of their reactor, again to gain experience and provide information for our own facility.
7/69 - 9/69	Responsible for the complete pre-operational functional and operational testing of the Reactor Protection System.
9/69 - 1/70	Initial fuel loading and first critical was accomplished in September. Start up testing commenced in October and continued until the station reached full load capacity in December. I was involved with the many problems associated with start-up during this period.
8/70	Attended General Electric's Air Blast Circuit Breaker School at Philadelphia for one week.
9/70 - 12/70	Reviewing the design of James A. FitzPatrick Station, an 800 MW boiling water reactor which is presently under construction on the same site as Nine Mile Point Station.

12/70 - 6/71 Involved in the day to day operation of Nine Mile Point Nuclear Station and some major modifications which have been made to the station. I've been reviewing the design of the James A. FitzPatrick Nuclear Station which is owned by the Power Authority of the State of New York and will be operated by Niagara Mohawk. I wrote some sections of the final Safety Analysis Report for the James A. FitzPatrick Nuclear Station.

6/71 Involved in day to day operation of Nine Mile Point. Review of instrument and control for James A. FitzPatrick Nuclear Station. Involved in a new design emergency diesel power system for James A. FitzPatrick.

12/71 - 8/74 Performed the factory tests of the emergency diesel system at Rocky Mount, N.C. This new system is the forced paralleling of the 2600 KW 900 RPM machines which are started together. Review of Unit #2 at Nine Mile Point which is in preliminary design phase. I am presently a technical advisor to the Site Superintendent of Nuclear Generation. I investigate problems outside the routine of the normal station staff. One of these problems was the special task of investigating the feed water control system. The scope of the problem involved many operating BWR's. After a year of investigation and working with General Electric Company, a re-design of the control system has been made which has vastly improved system performance. Some of the changes are also being made at other plants. I have also been involved in designing a station security system as well as other station design changes.

8/75 - 1/75 Assistant Site Maintenance Supervisor at Nine Mile Point site. Assisted in Supervising the maintenance at both Nine Mile Point and James A. FitzPatrick plants.

1/75 - 6/76 Site Maintenance Supervisor for both Nine Mile Point and James A. FitzPatrick Nuclear Power Plants.

6/76 - Present Maintenance Superintendent, James A. FitzPatrick Plant employed by PASNY. Responsible for all mechanical and electrical maintenance.

3/77 Attended vibration seminar by MTI (5 days).

Has drafted many of the procedures used for maintenance.

POSITION: ASSISTANT TO MAINTENANCE SUPERINTENDENT

NAME: [illegible] ER ANDEL II DATE: JULY 12, 1979

FUNCTIONAL RESPONSIBILITIES AND AUTHORITY

Assist the Maintenance Superintendent in carrying out his assigned duties. Assumes the responsibilities and duties of the Maintenance Superintendent in his absence.

Assisting the Maintenance Superintendent in the maintenance of all mechanical and electrical equipment and the supervision of a maintenance staff of up to 40 men.

The coordination and supervision of the Inservice Inspection Program, which involves the review and issuance of revisions and, interfacing between various contractor and NRC personnel; the Snubber Surveillance Program which has involved the coordination between various contractor personnel, engineering study and supervision of inspection and overhaul.

EDUCATION

9/64 - 6/68	Bachelor of Science in Mechanical Engineering, Rensselaer Polytechnic Institute, Graduated in upper 1/3 of class. Courses include heat transfer, fluid flow and production Management.
3/69 - 3/70	Naval Nuclear Power School and Prototype - one year program encompassing all facets of nuclear power plant theory, design, engineering, operation and management. Equivalent to Master in Nuclear Engineering.
11/72 - 5/74	Additional Education - 24 (of 30) graduate hours toward Master of Ocean Engineering, University of Rhode Island. Courses include power plant site requirements, acoustics and radiological health physics. (Graduate work interrupted due to military transfer).
78 - present	Continuing MBA Program through Syracuse University.

PROFESSIONAL QUALIFICATION

Navy Nuclear Power Plant Chief Engineer, by Atomic Energy Commission, 1972.

PROFESSIONAL EXPERIENCE

4/70 - 9/71 Electrical and Reactor Control Officer, Nuclear Submarine

Directed operation and maintenance of reactor control and instrumentation systems and radiation monitoring systems.

Supervised operation and maintenance of the electrical plant and associated equipment including all electrical power generating and distribution systems.

Directly supervised the training, qualification and work output of 25-30 men.

Organized and supervised the overhaul, alteration and testing on all electrical systems and equipment.

9/7 - 10/72 Main Propulsion Assistant & Radiological Controls Officer, Nuclear Submarine

Directed operation and maintenance of all propulsion equipment, reactor and its associated fluid systems.

Supervised radiological control and nuclear propulsion plant water chemistry and radiochemistry.

Directly supervised the training, qualification and work output of 16-18 men.

11/72 - 5/74 Director Sonar Section, U.S. Naval Submarine School

Established, prepared and taught sonar curricula and lesson plant. Included areas of acoustics and structure-borne vibration measurements. Taught 5 courses for about 500 students/year.

5/74 - 76 Chief Engineer, Nuclear Submarine

Nuclear power plant superintendent and chief engineer. Selected, trained, evaluated, and supervised a staff of 110 engineers and technicians involved in the overhaul, testing, and operation of a submarine nuclear power plant.

Manager the operation, overhaul, and maintenance of reactor, propulsion plant, auxiliary machinery, piping systems, and casualty control equipment; electrical and electronic systems; repairs to ship's hull; propulsion plant water chemistry and radiochemistry; radiological and environmental control and safety.

Supervised nuclear refueling.

Organized and supervised nuclear and propulsion plant testing including initial reactor criticality and power range testing.

Organized, established and conducted an extensive training and qualification program for over 100 men which culminated in Nuclear Regulatory Commission certification of staff and administration.

7/76 - Present James A. FitzPatrick Nuclear Power Plant. Assistant Maintenance Superintendent.

Drafted many administrative procedures used in the control of the FitzPatrick Plant.

Drafted many maintenance procedures.

Responsible for hydraulic snubber program.

Has coordinated ISI inspection program during two outages.

Developed and prepared the JAF Welding Program.

3/22/79	One day detail description on operation and maintenance of Limitorque valve operators.
1/23/79	One day classroom session on the complete overhaul of an actual Reactor Recirc. Pump Seal.
5/22-26/79	One week electrical maintenance seminar. Course included maintenance of electrical switchgear, motors & controls.
3/13, 14/78 & 26/79	GE ATB 345,000 volt air blast circuit breaker school.
8/8 - 10/77	Bergen-Paterson snubber school.
4/6/79	40 hour course in NDE offered by Hartford Steam Boiler.

POSITION: MAINTENANCE DEPARTMENT - MECHANICAL ENGINEER

DATE: JULY 12, 1979

FUNCTIONS, RESPONSIBILITIES, AND AUTHORITY

Assist the Maintenance Superintendent in carrying out his assigned duties of maintaining mechanical plant equipment at design performance level.

May act as the Maintenance Superintendent in his absence.

Assisting the Maintenance Superintendent in the Maintenance of mechanical equipment and the supervision of a mechanical staff of 20 men.

Specific duties include:

a) review approved work requests ascertaining present equipment/system status to determine required maintenance.

b) research appropriate technical manuals and vendors specifications to determine if present performance is meeting design level of operation.

c) obtaining special equipment, ordering repair parts and developing necessary procedures to perform required maintenance.

EDUCATIONAL BACKGROUND

B.S.M.E., U.S. Naval Academy, 1966
Submarine Basic School, July 1966 to December 1966
U.S. Naval Nuclear Power School, January 1967 to July 1967
Naval Nuclear Power Training Unit (DIG Prototype), July 1967 to February 1968

PROFESSIONAL QUALIFICATIONS

February 1968 - November 1976

Served on board Naval Nuclear Submarines being completely responsible for the supervision, maintenance, and operation of a Naval Nuclear Propulsion Plant.

Qualified as Engineering Officer of the Watch, Command Duty Officer and Engineer Officer.

November 1976 - Present

Served as JAFNPP Maintenance Department - Mechanical Engineer.

2/7-25/78 General Electric: Generic BWR-4/Mark II Design Orientation Course

3/27-31/78 EMD: Diesel Maintenance Course

5/16-18/78 Rockwell: Main Steam Isolation Valve (MSIV) Design, Operation and Maintenance Course

5/22-26/78 - 6/5-9/78 General Electric: Electrical Maintenance Course

1/23-24/79 Byron Jackson: Reactor Recirculation Pump Seal Operation Maintenance and Replacement Course

3/22/79 Limitorque: Valve Actuator Operation and Maintenance

3/26-30/79 George Washington University Continued Engineering Education Program
Electrical Equipment Maintenance (Course No. 277)

POSITION: MAINTENANCE FOREMAN

[redacted] FITZGERALD DATE: JULY 13, 1979

FUNCTION

Maintain and repair operating and non-operating equipment as quickly and safely as possible. Minimize down time, and insure the safety of the employees under my supervision from both radiation and industrial standpoints.

RESPONSIBILITIES

1. To provide first line supervision of plant maintenance personnel to ensure work is performed as quickly and efficiently as possible and in accordance with plant procedures.

2. Allocate necessary personnel commensurate with assigned maintenance tasks to utilize effectively available manpower resources.

3. Accurately prepare and review all job assignments to insure that all pre-job requirements are satisfied and to be sure that all tools and materials are at job site.

4. Supervise performance of the maintenance process to ensure completed work is accomplished in accordance with approved procedures and that materials used for repair and maintenance are certified for use in the applicable system/components.

5. To train and motivate the personnel under my supervision in proper maintenance techniques.

6. Promote proper safety practices through direct monitoring of production work.

7. Analyze on a cyclic nature the stocked repair parts to ensure adequate coverage and necessary depth.

8. Coordinate with outside contractors in maintenance performed at plant.

AUTHORITY

General scheduling and supervision of requested maintenance with respect to its priority, plant operational requirements, and assignment of personnel.

Ordering repair parts not previously stocked, increasing existing stock, or adding new maintenance capabilities (requisitions exceeding $500 require higher authority's approval; however justification and initiation of the requisition rests at this level).

EDUCATION

Long Beach High School 1954 - 1958

Electronics Technician Class "A" school, U.S.N. 4/59 - 12/59

Submarine School, U.S.N. 1/60 - 2/60

Nuclear Power School and Phototype Training, U.S.N. 1/61 - 1/62

Damage Control School, U.S.N. 7/64

Instructor Training & Leadership School, U.S.N. 1/67 - 2/67

BWR Simulator, 12 week program, GE, 4/74 - 7/74

BWR Lecture Series, GE, Completed in fall 1974

EXPERIENCE (NUCLEAR)

2/62 - 11/66	U.S.S. Tinosa SSN 606, U.S. Navy Reactor Technician/Reactor Operator
3/70 - 6/73	U.S.S. Skate SSN 578, U.S. Navy Leading Petty Officer Reactor Control Division (8 Technicians). Leading Petty Officer Engineering Department (40 sailors).
1973 - 1979	General Electric Company, Installation and Service Engineering, Mechanical and Nuclear Division advanced from Field Representative to Service Supervisor. Responsible for mechanical maintenance and construction at boiling water reactor power plants in the Empire District.
1974	Millstone - Field Representative Feed Water and drywell piping.
1975 - 1976	Peach Bottom - Field Representative, Unit #3 Internals Installation and Rad/Waste Start Up.
1975	Oyster Creek - Field Representative, Rad/Waste and Off Gas Piping.
1976	Pilgrim - Field Representative, Feed Water Sparger Replacement. Project Manager and in vessle I.S.I.
1976 - 1977	Peach Bottom - Field Engineer, Assistant to Plant Maintenance Superintendent.
1976	Peach Bottom - Field Engineer, Feed Water Sparger Replacement, Project Manager.
1976	Knolls Atomic Power Lab. Field Engineer - Assistant Project Manager ECCS System Installation.
1977	J. A. FitzPatrick - Field Engineer, Assistant to Outage Coordinator and GE Site Manager for LLRT Valve and MSIV Repair.

1978 J. A. FitzPatrick - Service Supervisor, GE Site Manager Feed Water Sparger Replacement and Nozzle Clad Removal.

1979 Nine Mile #1 - Service Supervisor, Site Manager. Clean up Piping Replacement and Isolation Condensor Safe End Replacement.

OTHER

1/60 - 1/61 U.S.S. Grouper, AGSS214, U.S. Navy
Electronics Technician

2/67 - 3/70 U.S. Navy Training Station, Treasure Island, CA
Instructed electronics technician "A" school. Remedial study supervisor. Instructional section leader of 35 civilian and military instructors.

Certified Senior Operator by General Electric Company in 1974.

POSITION: ELECTRICAL MAINTENANCE ENGINEER

DATE: JULY 12, 1979

FUNCTIONAL RESPONSIBILITIES AND AUTHORITY

Assist the Maintenance Superintendent in carrying out his assigned duties of maintaining electrical plant equipment at design performance level.

May act as Maintenance Superintendent in his absence.

Assisting the Maintenance Superintendent in the maintenance of electrical equipment and the supervision of an electrician staff of 10 men.

Specific duties include:

a) review approved work requests ascertaining present equipment/ system status to determine required maintenance.

b) research appropriate technical manuals and vendors specifications to determine if present performance is meeting design level of operation.

c) obtaining special equipment, ordering repair parts and developing necessary procedures to perform required maintenance.

EDUCATION

9/67 - 5/71 Tulane University
New Orleans, Louisiana

7/71 - 6/72 U. S. Naval Postgraduate School
Monterey, California

Master of Science Degree in Electrical Engineering including thesis work.

7/73 - 1/74 Bettis Atomic Power Laboratory
Reactor Engineering School
West Mifflin, Pennsylvania

School is operated by Westinghouse Electric Corporation for ERDA and provides graduate level training in nuclear engineering and power plant design.
Examples of subjects studied were nuclear physics, heat transfer and fluid flow, stress analysis, shock and vibration, and power plant design.

3/78 Completed three week course for General Electric in BWR Design Fundamentals.

1/79 Classroom overhaul of a Reactor Recirc. Pump Seal by the pump manufacturer.

3/79 Classroom overhaul of Limitorque valve operators presented by Limitorque.

3/79 Attended a one week course in Plant Electrical Preventative Maintenance and Testing conducted by George Washington University in Washington, DC.

PROFESSIONAL QUALIFICATIONS

1977 Engineer in Training #6131 Commonwealth of Virginia since 1974. FCC Amateur Extra class license Member of Eta Kappa Nu.

PROFESSIONAL EXPERIENCE

7/72 - Energy Research and Development Administration (ERDA), Division of Naval Reactors, Washington, D.C. (Technical Staff of ADM. H. G. Rickover)

Worked as a mechanical/power plant systems engineer.

Initially worked in the area of design, construction, testing, and operation of nuclear reactor propulsion plants for naval surface ships. After six months was promoted to lead engineer responsible for all fluid and mechanical (including reactor) systems for an operating land based prototype of a surface ship nuclear propulsion plant.

Worked for two and one-half years as lead mechanical and fluid systems engineer responsible for the design, construction, and initial testing of nuclear and non-nuclear support systems for the land based prototype of the TRIDENT submarine propulsion plant. These systems included the reactor emergency core cooling system, containment system, reactor discharge system, process cooling water system, and steam dump system. This work involved technical review, direction, and approval of the design, construction, and testing. Also administrated the development and approved the operating manual for these systems. This work required knowledge of the ASME and ANSI Design Codes and Nuclear Regulatory Commission regulations.

During this period was assigned a collateral responsibility to coordinate testing of prospective commanding officers of nuclear submarines in the fluid and mechanical systems area.

In the last year of this period continued to hold responsibility for some of the areas discussed above but have been assigned additional responsibilities for finalizing the design and test program for some of the TRIDENT steam plant systems. In this capacity was also responsible for the technical review and administration of the steam plant operating manual.

8/77 Joined the technical staff of the James A. FitzPatrick Plant as an Assistant Plant Engineer.

12/78 Transferred to the Maintenance Department as Electrical Maintenance Engineer. Responsible for the supervision of ten electrical maintenance personnel.

Has drafted many electrical corrective and preventative maintenance procedures.

Has been responsible for many plant modifications. His responsibilities have included design, installation supervision, and testing.

5/22-26/79 Attend 5 day electrical school on plant switchgear, motors and controls.

Building & Grounds Supervisor

A) Functions, Responsibilities & Authority

Maintain building and grounds in a sanitary condition and in compliance with NRC requirements for nuclear power plants.

Supervise 9 union employees and up to 35 temporary employees, during specific occasions, together with numerous craft personnel.

Supervise upkeep of grounds and surrounding property, including snow removal and perimeters for security purposes.

Supervise pickup of contaminated waste, storing in proper areas, coordinating processing and supervising de-contamination of contaminated areas.

Recommending purchase of equipment, materials & office furnishings for betterment of safety, durability and hours utilized to complete various work tasks.

B) Educational Background

Completed first year of high school and enrolled in welding school.

C) Experience

1) Nuclear

a) Directly Related

1964-65 Worked on construction of Nine Mile Point No. 1

1968-71 Worked at RG&E Nuclear Power Plant as Painting Supervisor in charge of nuclear coatings.

1971-77 Worked on JAF Nuclear Power Plant from start of construction to completion for Stone & Webster Engineering Corporation as a Painting Foreman.

1977-Present
Power Authority of the State of New York - Building & Grounds Supervisor.

b) Other

Fire Fighting School, Bayonne, New Jersey - 1961

U.S. Coast Guard Examinations - Pumpman and Tankerman

8 years of chemical handling while employed as a Merchant Marine on S.S. Chemical Transporter

1979 - Maintenance Seminar(3 days) - Hoffstra University, Hempstead, L.I.

Numerous training sessions at JAFNPP

Name

Hartford N Plant

TITLE

Instrumentation & Control Superintendent

REPORTS TO

Superintendent of Power

FUNCTION

The principal duty of the Instrumentation and Control Superintendent is the management and administration of the Instrumentation and Control Department.

RESPONSIBILITIES

The Instrumentation and Control Superintendent is responsible for the review of maintenance, repair, functional/calibration testing of instruments, test equipment, communication equipment, relaying & metering equipment, and security equipment associated with both nuclear safety-related and balance of plant systems.

Also responsible for the selection of hiring the department staff. The staff reporting to the Instrumentation and Control Superintendent includes the Assistant to the Instrumentation and Control Superintendent, Test Engineer, Computer Hardware and Communications Specialist, Technician Foreman, Secretary, and represented Instrumentation and Control Technicians.

Also a member of the Plant Operations Review Committee, the Emergency Team
and is one of the On-Call Supervisors.

EDUCATIONAL BACKGROUND

Degrees

2-year Associated Applied Science (AAS) in Electrical Technology
4-year Bachelor of Science in Electrical Engineering (BSEE)

SPECIAL TRAINING

GE/I&SE Field Engineering Program
GE/MAC Instruments and Controls School
GE/Switchgear (Med. and Low Voltage) School
GE/Speedvariator (Adjustable Speed Drives) School
GE/Instructor Training
Argonne National Lab Basic Nuclear Instrumentation Design Course
U.S. Marine Corp., Hydraulics Controls School

EXPERIENCE

NUCLEAR (BWR) DIRECT-RELATED

3 years	Assistant to the Instrumentation and Control Superintendent at JAFNPP with the responsibility of assisting the Instrumentation and Control Superintendent in the management and administration of the Instrumentation and Control Department.
2 1/2 years	GE Field Engineer at the James A. Fitzpatrick Nuclear Power Plant, assigned to Instrumentation and Control Department, assisting technicians with instrument and control maintenance. During this period assisted with calibration preops, startup and troubleshooting on the following systems: Reactor Recirculation, Nuclear Boiler, Residual Heat Removal, Core Spray, High Pressure Coolant Injection, Reactor Core Isolation Cooling, Primary Containment Isolation, Feedwater and Reactor Protection.
1 year	GE Field Engineer at the James A. Fitzpatrick Nuclear Power Plant, assisting construction supervisors (Electrical) with the installation, inspection and energizing of med. and low voltage switchgear, motor control centers and transformers.
1 1/2 years	GE Field Engineer at the Nine Mile One Nuclear Power Plant, assisting I & C Technicians with instrumentation and controls calibrations, startup, troubleshooting on the following system: Recirculation, Control Rod Drive, Refueling Bridge and Grapple, Startup Range and intermediate Range monitors and Transverse Incore Probe.

NUCLEAR RELATED

3 years	Electronics Technician at the University of Rochester, Nuclear Structure Laboratory, assisting an Electrical Engineer with the development cf preamplifiers for solid state detectors, also the installation of new equipment and the repair of research nuclear instrumentation.
4 1/2 years	Research Technican at Argonne National Laboratory assisting engineers and scientists with the development of new solid state nuclear instrumentation for high and low energy physic research.

OTHER

1/2 year	Assigned to GE/MAC Measurement and Control Department as an instructor. Instructing industrial and Power Plant instrument personnel in basic theory, troubleshooting and maintenance of process controls and instrumentation.
1 year	GE Installation and Service Engineering Department Training Coordinator for the Empire District. Scheduling and

instructing Electrical Maintenance courses, offered by GE to industrial maintenance personnel. The courses covered operation and maintenance of industrial power systems.

1 year — Assigned to the I&SE Field Engineering Training Center, as laboratory coordinator. This assignment was coordinating the changes of an existing laboratory into a more comprehensive type laboratory. At the peak of the project, there were 10 field engineers working on control and power laboratory units.

Joseph F. Flaherty

TITLE

Instrumentation & Control Foreman

REPORT TO

Instrumentation & Control Superintendent

FUNCTIONS, RESPONSIBILITIES, AND AUTHORITY

The principal duty of the Instrumentation and Control Foreman is the assignment of work activities to the Instrumentation and Control technicians in an expeditious and efficient manner.

The Instrumentation and Control Foreman is responsible for the following:

1. Direct planning, scheduling and assignment of Instrumentation and Control technicians.
2. Receive and log work requests as well as assigning department priorities and making man-power and man-hour estimates for the work.
3. Coordinate notification of Quality Control where applicable.
4. Assign work requests.
5. Compile and record data; for example, catalog data for monthly and annual reports.
6. Work as interface with contractors.
7. Review Surveillance Tests.
8. Assist technicians administratively and technically.
9. Develop new work, surveillance, and maintenance schedules.
10. Contact vendors as required.
11. Review drawings and other documentation for adequacy.
12. Perform other work as assigned by the Instrumentation and Control Superintendent to include such items as change requests, spare parts, etc.

EDUCATION

1. Scranton Central High School, Scranton, Pennsylvania
2. U.S. Navy Interior Communications "A" School (3 months)
3. U.S. Navy Nuclear Power School (1 year)
4. U.S. Navy Submarine School (3 months)
5. U.S. Navy Miscellaneous Specialty Schools (3 months)
6. Meters--Sigma Ltd. (1 week)
7. Basic PWR Training--Combusting Eng. (1 month)
8. Electronic Instruments--Fisher & Porter (1 week)
9. Radiation Monitoring-Westinghouse (2 weeks)
10. Nuclear Instruments--Gulf General Atomic (1 week)
11. Radiation Monitoring--Eberline (1 week)
12. Nuclear Plant Instruments-General Physics (3 months)

EXPERIENCE

1. Nuclear

2 years (BWR) — Power Authority of the State of New York
James A. Fitzpatrick Nuclear Power Plant

Initial position of Electronic and Relay Technician, responsible for calibration and maintenance of various plant equipment. Promoted to Instrumentation & Control Foreman in July, 1978. Responsibilities include scheduling of surveillance and balance of plant equipment plus review and updating of procedures. Day-to-day and long-term scheduling of technicians' activities plus day-to-day technical assistance and vendor contacts are also required. Participated in two refueling outages.

2 years (BWR) — Stone & Webster Engineering Corporation, Boston, Massachusetts
Long Island Lighting Company
Shoreham Nuclear Power Station

Participated in the writing of procedures for the initial checkout and operation of various electrical equipment. Supervision of technicians performing tests on Medium and Low Voltage Switchgear and Station Transformers (including relaying) for the initial energization of the Station Transformers and switchgear. Other responsibilities included the preparation of Pre-Operational and Acceptance Test Procedures.

1½ years (PWR) — Stone & Webster Engineering Corporation, Boston, Massachusetts
Duquesne Light Company
Beaver Valley Power Station--Unit No. 1

Assigned as an Engineering Associate responsible for the review and approval of electrical tests. Other responsibilities included checkout and pre-operational testing of the Solid State Reactor Protection System, Control Board and Computer De-multiplexer, Stop-Valve Protection Cabinets and other Nuclear Steam Supply System panels. Participated in Cold and Hot Functional Testing.

1 year (BWR) — Power Authority of the State of New York
James A. Fitzpatrick Nuclear Power Plant--Unit No. 1

Responsibilities included preparation of operation and maintenance procedures on site and technical direction of tradesmen in the checkout and calibration of various systems such as, Reactor Protection, Residual Heat Removal, Heater Drains and others.

1½ years (PWR) — Baltimore Gas & Electric Company, Baltimore, Maryland
Calvert Cliffs Nuclear Power Plant

Eighteen months as an Instrument and Control Technician at a nuclear power plant under construction, participating in the initial schematic verification, testing, calibration and surveillance procedure writing of various systems.

5 years (PWR) — U.S. Navy
U.S.S. Andrew Jackson (SSBN 619)

Qualified on watch stations associated with electrical and primary plants. Completely responsible for the safe and proper operation of the entire electric plant. Responsibility for the engineering plant (primary, secondary, and electrical) while shut down. Participated in all phases of refueling and power plant testing. As Interior Communications Electrician, responsible for shipboard communications, gyro navigation systems and ship's control, indication and alarm systems.

2. Other

1/2 year — Baltimore Gas & Electric Company, Baltimore, Maryland
Crane Station--Fossil Fueled Plant

Six months at a conventional power plant for introduction to power plant operation

TITLE

Instrumentation and Control Test Engineer

REPORT TO

Instrumentation and Control Superintendent

FUNCTION & RESPONSIBILITIES

I. Function:

The primary function of this position is to provide anticipatory and immediate corrective response to the technical aspects of relaying, radio, and metering systems at the James A. Fitzpatrick Nuclear Power Plant. Also the position shall provide management and technical support for complex testing of electrical equipment and systems.

II. Responsibilities:

a. Develop, update, and coordinate an adequate preventative and corrective maintenance program to insure the reliable operation of relaying, radio and metering systems at the James A. Fitzpatrick Nuclear Power Plant and associated transmission facilities.

b. Provide design input, project coordination, installation and maintenance direction of metering, relaying, radio, generation, and transmission equipment.

c. Develop a preventative maintenance program for electrical system testing; a Doble test program shall be included.

d. Provide direct assignments and schedules for technicians working in his/her areas of responsibilities.

e. Evaluate short and long-term line limits for influence on the plant output capacity.

f. Assist the Instrumentation and Control Superintendent in all matters concerned with reserve, emergency and normal power facilities.

g. Provide coordination studies and logic diagrams of power plant electrical systems as required.

h. Provide, update, correct, and review relay data sheets.

i. Provide coordination and documentation of all metering tests to include interchange with other utilities or purchasers of Authority Power from Fitzpatrick.

j. Coordinate all data collection systems and maintenance relative to the Production Control Center.

EDUCATIONAL BACKGROUND

I. Degrees

a. Attended Altmar-Parish-Williamstown High School (9/66 - 6/71) and obtained a high school degree

b. Attended Clarkson College of Technology (9/71-5/75) and obtained a Bachelor of Science Degree in Electrical Engineering.

II. Special Training

a. General Electric Schools

1. Field Engineering Program 9/22/75 - 11/21/75
2. Medium and Power Transformers School 5/16/76 - 5/21/76
3. A.C. Machines School 9/9/76 - 9/13/76
4. AKR Breakers and AKD-6 Switchgear School 4/11/77 - 4/15/77
5. Power Vac School 8/2/77 - 8/5/77
6. Appraisal Testing School 9/12/77 - 9/16/77
7. Attended and taught Electrical Power Distribution, Industrial Power Systems and Low Voltage Switchgear

b. Attended the 1979 Doble Engineering Client Conference

EXPERIENCE

I. Nuclear (1 year)

a. Safety related

1. Performed, provided technical assistance and developed procedures for relay and meter calibrations.
2. Provided technical assistance and developed procedures for testing critical MG Set power supplies.

b. Balance of Plant

1. Assumed overall responsibility for implementing radio and telemetering modifications
2. Provided technical assistance and developed procedures for testing relay, metering, telemetering, tone, carrier, and radio systems.

II. Power Industry (3 years)

a. Provided technical assistance and job management responsibilities for installing electrical substations at the following locations:

Camden Wire Co.--Camden, New York
General Electric Co.--Auburn, New York
Cargill Salt--Lansing, New York
St. Regis Paper Co.--Deferiet, New York
General Motors Corp.--Massena and Tonawanda, New York

b. Performed power transformer and relaying scheme modifications to electrical substations at the following locations:

Gouverneur Talc--Balmat, New York
General Motors Corp.--Massena, New York
PASNY, Reynolds Substation--Massena, New York

c. Have provided technical assistance in performing power factor, infrared and high current testing

d. Completed power system studies for the following locations:

General Motors Corp.--Massena, New York
Bristol Labs--Syracuse, New York
Cargill Salt--Lansing, New York
Ingersoll Rand-Athens, Pennsylvania
Gould Pumps-Seneca Falls, New York
General Electric Company--Auburn, New York

TITLE

Computer & Communications Specialist

REPORTS TO

Instrumentation & Control Superintendent

FUNCTIONS, RESPONSIBILITIES, AND AUTHORITY

A. Direct technical supervision for all computer and communication system maintenance and installations.

B. All diagnostic troubleshooting of the computer and communication systems.

C. Evaluate and recommend action on all proposed computer and communication system alterations.

D. Provide physical changes to the computer software routines as required and conformance with prescribed procedures.

E. Provide on-the-job training for possible management trainees and technicians assigned to computer maintenance.

EDUCATIONAL BACKGROUND

1943 High School Grad.

1943 to date FCC Radio Telephone Licence

Ensuing 36 years include: Adult Education, Factory Training Schools and Educational Seminars too numerous to list. Subjects covered include (but are not limited to) mathematics, language, electronics, process control, process control instrumentation, nuclear instrumentation, minicomputers, process computer programming, medical x-ray, industrial x-ray, industrial speed control, turbine supervisory instrumentation, T.I.P. Calibration Systems and Reactor Control Rod Positioning Systems.

EXPERIENCE

A. Nuclear Related

1. 2 years Nine Mile Point 1 performing loop checks, power on and operability checking of all GEMAC process instrumentation and

nuclear instrumentation plus the Rod Position Information System and Rod Worth Minimizer Interface.

2. 6 months Millstone 1 performing Process Computer System Pre-op and Feedwater Control System Pre-op.

3. 6 months Pilgrim 1 performing start up and pre-ops Rod Position Information System, manual Control Rod Positioning System, Local Power Range, Average Power Range and Rod Block Monitoring Systems, start up and Intermediate Range Neutron Monitoring Systems, Process Radiation Monitoring System, Feedwater and Recirc. Pump Control Systems.

4. 3 years Fitzpatrick 1 performing start up, preop and hardware/-software maintenance of the Process Computer System.

   3 1/2 years Fitzpatrick 1 hardware/software maintenance with addition of new hardware and software as necessary to maintain the "State of the Art".

B. Other

Medical x-ray, industrial x-ray, radio broadcast station construction and operation, theater lighting and audio, radio/t.v. service, photography, DC & AC motor control, crane controls, low voltage switchgear and transformers, theater projection (film and video), etc.

Major thrusts of experience prior to nuclear related, however, were in radio broadcasting as station engineer (15 years) and process control as G.E. Co. field service (17 years).

Name:

Address: 30 McCracken Drive
RD #3, Box 65
Oswego, NY 13126

SS#: 473-40-6885

DOB: February 2, 1939

Height: 5'9"

Weight: 185 lbs.

Marital Status: Married - 4 children

PRESENT POSITION: Radiological & Environmental Services Superintendent
Power Authority of the State of New York
James A. FitzPatrick Nuclear Power Plant

I. PRINCIPLE DUTIES:

The Radiological and Environmental Services Superintendent (RESS) is under the general supervision of and reports to the Superintendent of Power. The areas of responsibility include:

1. radiation protection monitoring
2. plant chemical/radiochemical control
3. radiological emergency planning
4. radiation protection training
5. environmental monitoring
6. radioactive waste disposal
7. personnel radiation exposure control
8. chemical and radioactive effluent monitoring
9. procurement of radiological safety equipment and laboratory equipment

The RESS is responsible for adherence to the plant technical specification and state and federal regulations regarding radiological safety and environmental controls.

The RESS is responsible for personnel selection within the RES Department including professionals, technical and clerical staff and is also responsible for dealing with personnel problems within the department, which includes three (3) professionals, one (1) steno/secretary, two (2) record clerks and twelve (12) technicians.

The RESS provides a supervisory function in dealing with various contractors used by the Authority at the JAFNPP including environmental monitoring contractors (Texas Instruments, Eberline Corporation, Radiation Management), waste disposal contractors (Hittman Corporation) and radiological services contractors (RAD Services Corporation).

The RESS maintains direct contacts with various regulatory agencies including the U.S. Environmental Protection Agency, the NY Department of Environmental Conservation, NYS Department of Health, and the U.S. Nuclear Regulatory Commission.

The RESS advises other department superintendents, the Superintendent of Power and the Resident Manager regarding chemical and radiological problems encountered in plant operation. He is permitted by the plant technical specifications to go outside the JAFNPP organization to whatever higher level of the Authority supervision required for corrective action regarding any radiologically unsafe practice.

II. EDUCATION:

1. Graduate: Marshall Central High School
   Marshall, MN 1957

2. Graduate: University of Minnesota
   ACS B. Chem. 1968

Training:

3.	U.S. Public Health Service Training	
	Basic Rad. Health	1960
	Radionuclide Protection	1961
	Environmental Controls for Nuclear Reactors	1961
4.	Argonne National Laboratory	
	EBWR/CP-5 Health Physics Training	1962
5.	Hallam Nuclear Power Facility	
	Health Physics Training	1963
6.	U.S. Atomic Energy Commission	
	Fire Training	1966
7.	RIDL Corp. Multichannel	
	Analyzer School	1966
8.	Los Alamos Scientific Laboratory	
	Respiratory Protection Training	1973
9.	Niagara Mohawk Power Corp.	
	Fire Training	1973
10.	Emergency Medical Seminar	
	New London, CT	1976
11.	BWR Technology - JAFNPP	1977
12.	Senior Reactor Operator Training - JAFNPP	1979

III. EXPERIENCE:

1. 1959 - 1968 Rural Coop. Power Assn.
   Elk River, MN
   Senior Radiological Physics Technician at
   The Elk River Power Reactor

2. 1968 - 1975 Niagara Mohawk Power Corporation
   Oswego, NY
   Radiochemistry & Radiation Protection Supervisor
   at the Nine Mile Point Nuclear Station

3. 1975 - 1976 U.S. Nuclear Regulatory Commission
   Bethesda, MD
   Nuclear Engineer in NRR, Effluent Treatment Branch

4. 1976 - 1979 Power Authority of the State of New York
   Oswego, NY
   Radiological & Environmental Services Superintendent
   at the James A. FitzPatrick Nuclear Power Plant

IV. ARTICLES PUBLISHED:

1. Liquid and Solid Radwaste Experience at the Nine Mile Point BWR, Published by ASME, November, 1975.

2. Feedwater System Chemistry in the Nine Mile Point BWR, co author with S.G. Sawochlea, American Power Conference, 1973.

V. PAPER PRESENTED:

1. June 1973, ANS Conference Chicago
   Radiation Levels and Shielding at the Nine Mile Point BWR

2. Sept. 1972 Liberty Bell Corrosion Conference Paper on Nine Mile Point Torus Chemistry and Corrosion Protection Philadelphia.

3. June 1975 ANS Conference New Orleans
   Liquid Solid Radwaste Experience at the Nine Mile Point BWR.

4. Sept. 1975 ASME-IEEE Conference Portland, OR
   Liquid Solid Radwaste Experience at the Nine Mile POint BWR.

VI. SOCIETY MEMBERSHIPS:

1. Health Physics Society

2. Power Reactor Health Physicists - Sectry 1974

3. Edison Electric Institute - Health Physics Task Force

VIII. COMMITTEE MEMBERSHIP:

Present Membership

1. ANS 55.1 Standards Committee - N198
" Solid Radioactive Waste Processing"

2. JAFNPP - Plant Operations Review Committee

3. PASNY - Radiation Safety Committee

Past Membership

4. Joint Utility/GE BWR Water Chemistry Steering Committee

5. ANS 18.1 developing standard N237
Radioactive Source term specification

6. Nine Mile Point/James A. FitzPatrick Site
Operations Review Committee

7. Niagara Mohawk Power System Chemistry Committee

8. FRC Committee on incineration systems for solid Radioactive Wastes

9. NRC Bioenvironmental Technology Research Review Group

ASSISTANT TO RADIOLOGICAL AND ENVIRONMENTAL SERVICES SUPERINTENDENT
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
POWER AUTHORITY OF THE STATE OF NEW YORK

A. FUNCTIONS, RESPONSIBILITIES, and AUTHORITY

1) Supervise plant radiation monitoring program through direct evaluation of equipment performance and review of plant radiation protection documents.

2) Control chemical and radiochemical parameters throughout the plant by reviewing routine data, initiating non-routine analysis, and making recommendations relevant to the above parameters.

3) Serve and assist on the Emergency Planning and drill team by reviewing the Emergency Plan and participating in Emergency Drills.

4) Administer Radiation Protection Training program to new employees and continuing training of present staff in both routine and non-routine radiation protection techniques and practices. Also authorize personnel as qualified in the areas.

5) Assist in the Administration and continuing calculation of the environmental monitoring program on a routine basis. Consult and advise on the environmental program for recommendations to solve unusual problems with this program.

6) Collect, organize, review, and submit reports on radioactive waste disposal.

7) Control personnel radiation exposure through analysis of records, authorizations for exposures, making recommendations on job activities to minimize exposure.

8) Supervise the chemical and radioactive effluent monitoring program by reviewing data and making recommendations to staff.

9) Co-ordinate smooth operation of Radiation Protection group through supervision. procurement of equipment, serving as group advisor.

B. EDUCATION

1) Clarkson College of Technology, B.S. Chemical Engineering

2) Los Alamos Scientific Laboratory, Comprehensive Training Course in Respiratory Protection Practices for Occupational Safety and Health Personnel

3) Short Course in Radiation Protection Technology, Georgia Tech

C.. EXPERIENCE

1) Nuclear
   a) Radiation Protection and Reactor Physics Technician, 6 months, Niagara Mohawk

   b) Assistant to Site Superintendent Nine Mile Point, JAFNPP; assigned to Radiation Protection, 12/75 to 2/77.

   c) Assistant to Superintendent at Radiological and Environmental Services, JAFNPP: 2/77 to present.

2) Chemical Technician, Oswego Steam Station, Niagara Mohawk 10/73 to 12/75.

POWER AUTHORITY OF THE STATE OF NEW YORK
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

JOHN D. LEONARD, JR.
Resident Manager

P.O. BOX 41
Lycoming, New York 13093

315-342-3840

MEMORANDUM

RE: JOB DESCRIPTION

DATE: July 13, 1979

The primary function of this position is to implement the radiation protection and chemical/radiochemical program at the plant.

A. Functions, responsibilities and authority of this position are as follows:

The Radiation Protection and Radiochemistry Supervisor (RPRS) is under the direct supervision of and reports to the Radiological and Environmental Services Superintendent. The areas of responsibility include:

1. radiation protection monitoring
2. plant chemical/radiochemical control
3. radiation protection training
4. radioactive waste disposal
5. personnel radiation exposure control
6. chemical and radioactive effluent monitoring
7. procurement of radiological safety equipment and laboratory equipment

The RPRS is responsible for directing a staff of eleven (11) technicians assigned to perform radiation protection and chemical function associated with plant operation, and functions as the RES Department Superintendent in his absence.

During audits performed by various regulatory agencies the RPRS is the primary contact regarding radiation protection and chemistry matters.

The RPRS prepares detailed procedures to be used in the RES Department in carrying out its radiation protection and chemistry functions.

The RPRS maintains the chemical laboratory including the inventory of equipment and also ensures that radiological safety equipment is purchased as needed.

B. Educational background related as follows:

1. Associates Degree in Electrical Technology
2. Training in radiation protection, chemistry, reactor physics, corrosion and process systems conducted by Niagara Mohawk Power Corporation.
3. Boiling Water Reactor Chemistry at G.E.'s Vallecitas Nuclear Center
4. Short Course in Radiation Protection at Georgia Institute of Technology
5. Respiratory Protection training by the Los Alamos Scientific Laboratory
6. BWR Plant Design and Fundamentals instructions by G.E.'s Nuclear Energy Systems Division

C. Experience directly related to the nuclear industry as follows:

1. Five years experience as a technician in the Radiochemistry and Radiation Protection group at the Niagara Mohawk Power Corporation's Nine Mile Point Nuclear Station (Unit I). Achieved the "D" Technician (Senior) position. During this time worked in every aspect of the job.
2. Four years experience as the assistant Radiochemistry and Radiation Protection Supervisor and assigned to the Power Authority State of New York's (PASNY) James A. FitzPatrick Nuclear Power Plant (JAFNPP). The purpose of the assignment was to set up the Chem Lab and Radiation Protection program for startup.
3. Three years experience as the Radiation Protection and Radiochemistry Supervisor for the Power Authority State of New York at JAFNPP with the responsibilities as defined in Section A of this memo.

EM/aem

ENVIRONMENTAL SUPERVISOR
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
POWER AUTHORITY OF THE STATE OF NEW YORK

A. FUNCTIONS, RESPONSIBILITIES and AUTHORITY of this position are as follows:

The Environmental Supervisor (ES) is under the direct supervisior of, and reports to, the Radiological and Environmental Services Superintendent. The areas of responsibility include:

1) Environmental Monitoring
2) Chemical and Radioactive Effluent Monitoring
3) Radiological Emergency Planning
4) Radiation Protection Training
5) Procurement of Radiological Monitoring Equipment and Laboratory Equipment

The ES is responsible for directing one (1) Environmental Technician and any others assigned by the Department Superintendent to perform Environmental and Emergency Planning functions.

During audits, performed by various Regulatory Agencies, the ES is the primary contact regarding Environmental and Emergency Planning matters.

The ES prepares detailed procedures to be used in the RES Department in carrying out its environmental and emergency planning functions.

The ES maintains the inventory of Environmental and Emergency equipment and ensures that purchases of this equipment are made, as required.

B. EDUCATIONAL BACKGROUND related to the nuclear industry is as follows:

1) Associates Degree in Industrial Chemistry Laboratory Technology (Chemistry major)

2) Bachelor Degree in Science Education (major in Earth and Environmental Sciences)

3) Training in Radiation Protection, Chemistry, Reactor Physics, Corrosion Chemistry and Process Systems conducted by the Niagara Mohawk Power Corporation.

4) Short course in Radiation Protection and Environmental Surveys - Institute of Environmental and Industrial Health, School of Public Health, University of Michigan, May, 1977

5) Environmental Radiation Surveillance (short course) - Harvard University, School of Public Health, June 1978

6) Radiological Emergency Response Planning course in support of fixed nuclear facilities, Staff College, Defense Civil Preparedness Agency

7) Hewlett-Packard Computer Programming, 9825 Specality Course, Hewlett-Packard Co. Loveland, Colorado, August, 1978.

C. EXPERIENCE directly related to the Nuclear Industry is as follows:

1) Three years experience as a Technician in the Radiochemistry and Radiation Protection group for the Niagara Mohawk Power Corporation.(two years were at the NMPC Nine Mile Point #1 Nuclear Plant, one year was assigned to the Power Authority State of New York, James A. FitzPatrick Nuclear Power Plant). Achieved the "D" Technician (Senior) position during this period of time worked in most aspects of the job.

2) Two and one-half years experience as the Environmental Supervisor for the Power Authority of the State of New York at the James A. FitzPatrick Nuclear Power Plant with responsibilities as defined in Section A., above.

D. EXPERIENCE not directly related to the Nuclear Industry as follows:

1) One and one-half years as a School teacher with instruction time in Biology, Earth Science, Environmental Science and Physical Science.

TITLE: TECHNICAL SERVICES SUPERINTENDENT

A. Functions, Responsibilities, Authority

As a manager, direct and coordinate an engineering orgainization of approximately fifteen professional level engineers and eight support personnel organized into three divisions, (Plant Reliability and Performance, Reactor Engineering, and Record Management), each with a deparment supervisor. Coordinate the efforts of these three divisions with those of other plant departments to insure compliance with Nuclear Regulatory Commission requirements and the safe operation of the nuclear plant. Additional details are listed in Attachment I.

B. Educational Background

1.	1957-58	Rensselaer Polytechnic Institute	Engineering
	1958-59	Curry College	Business Administration
	1959-63	United States Merchant Marine Academy	B. S. Marine Engineering
	1965	N. S. Savannah NRC Operator Training Program	8 months - Received USNRC Operator License
	1966	N. S. Savannah Health Physics Training Certification (TODD Shipyards)	6 weeks
	1966	N. S. Savannah Water Chemistry Training Certification (Calgon Laboratories)	4 weeks
	1967-70	State University of N. Y. at Albany	M. S. Physics-Science Education 60 credit hours
	1973	Millstone I USNRC Senior Operator Course	6 months
	1978	G. E. BWR Design Fundamentals	3 weeks
	1979	UCLA - Plant Reliability & Performance	1 week
	1979	FitzParick USNRC Senior Operator Course	8 months (in progress)
2.	Licenses:	USNRC Operator - N. S. Savannah	1965-67
		USCG First Assistant Engineer any Horsepower	1967-Present

3. Experience

1. Nuclear

a) Direct - Nine Years

1976-79	Technical Services Superintendent	FitzPatrick NPP 820 MWe BWR
1973-76	Startup Supervisor	Millstone 1 NPP 650 MWe BWR
1972-73	Nuclear Startup Engineer	Ebasco Service Inc. Vermont Yankee & Millstone 1 BWR
1965-67	Shift Engineer	N. S. Savannah-80 MWt PWR

b) Indirect - Seven Years

1970-72	National Science Foundation Fellowship Assistant Professor of Physics	Maine Maritime Academy
1967-70	National Science Foundation Research Assistant in Physics	State Univ. of NY at Albany
1963-65	Engineer in charge of Watch	Oil Powered Merchant Marine Ship

2. See Resume Attached

ATTACHMENT I

JOB DESCRIPTION

PRINCIPAL DUTIES - Technical Services Superintendent

1. Supervise, plan, schedule, coordinate, review and approve the work of the three technical services divisions - through their supervisors as briefly outlined below:

Reactor Engineering

- Core Physics Testing
- Core Thermo Hydraulic Evaluation
- In Core Fuel Management
- Reactor Safety Analysis
- Core Abnormality Analysis
- Special Nuclear Material Accountability
- Core Alterations
- Process Computer Software
- Nuclear Regulatory Commission Fuel Records

Reliability & Performance

- Design Safety Analysis
- Independent Design Review
- Design of Plant Modifications
- Engineering Studies
- Material Purchase Specifications
- Installation of Modifications
- Testing of Modifications
- Reliability/Performance Testing
- Nuclear Plant Reliability Data System
- Preventive Maintenance Testing
- Leak Rate Testing

Record Management

- Tracking & Responding to Nuclear Regulatory Commission correspondence
- Engineering Drawing Revision & Control
- Technical Manual Revision and Control
- Administrative Procedure Revision & Control
- Establish & Maintain Plant Central File System
- Select & Operate record management computer systems
- Microfilming records & drawings
- Monthly & Annual Nuclear Regulatory Commission operating reports
- Licensee Event Reports
- Coordinate License & Technical Specification revisions

2. Act as the plant site "Chief Engineer" for review and resolution of technical problems.

3. Serve as a member of Plant Operations Review Committee.

4. Act as assistant to resident manager for special projects such as the monitoring and coordination of outside contractors or architect engineers.

5. Prepare special status reports and studies with recommendations for action by Resident Manager or Superintendent of Power.

6. Human Relations Skills Required

   a. Evaluate, select, interview and recommend hiring of engineers and support personnel for the department.

   b. Present and defend the plant position and concerns at meetings at the project engineer level with architect engineers and Power Authority of the State of New York headquarters.

PRINCIPAL DUTIES - CONTINUED - Technical Services Superintendent

6. c. Work with other site plant department superintendents to support their responsibilities and secure their support for technical services responsibilities.

d. Meet with managers of other utilities and vendors to secure their advise or support for plant projects.

e. Meet with Nuclear Regulatory Commission representatives to present plant technical positions, explain and answer questions concerning the plant in ways favorable to the plant position.

f. Prepare and discuss employee appraisal reports.

7. Opportunity for and Impact of Errors

a. Reactor Engineering - Daily exposure to risk of errors in core performance calculations. During refueling operations, risk of improper placement of fuel bundles. Risk of erroneous recommendations for control rod sequence movement. The consequences of any of these errors directly and seriously effect the safety of the nuclear core could result in damage to the nuclear fuel, increased off gas release and citation or monetary fine by the Nuclear Regulatory Commission.

b. Plant Reliability and Performance Engineering - Improper design of plant modifications, or failure to detect improper design by others, improper or inadequate modification testing directly effect nuclear plant safety. Failure to maintain proper records of modification and testing work, including proper reviews, quality assurance classification and other similar items may result in citation or monetary fine by the Nuclear Regulatory Commission.

c. Records Management - Failure to properly track and control required responses to Nuclear Regulatory Commission directives, Licensee Event Reports, and scheduled plant operation reports will result in increased inspection activity, citation or monetary fine by the Nuclear Regulatory Commission. Failure to maintain plant central files and records, or to properly document and control revisions to plant drawings, procedures, and manuals in accordance with Nuclear Regulatory Commission regulations will also result in citation or fine.

8. Degree of Supervision Received - Specific and general assignments are received generally without specific direction concerning the method of solution. Decisions concerning the scheduling, allocation of manpower, and form of completion are usually left to the discretion of the Technical Services Superintendent. Work leaving the department is generally accepted as final in form and, with the exception of plant procedures, not usually revised or altered.

POSITION TITLE: PLANT RELIABILITY AND PERFORMANCE SUPERVISOR

A. Functions, Responsibilities, & Authority of this Position

The requirements, duties, and reporting relationships for this position are as shown in the position description forwarded as attachment I.

In addition to those listed, I have had responsibilities involving programming and program management with the DGC C330 Computer.

B. Educational Background

SCHOOL	YEARS ATTENDED	DEGREE	GRADE AVG.
Hamilton Twp. High School Lockbourne, Ohio	1958-1962	H.S. Diploma Coll. Prep.	*4.0/4.0
U. S. Naval Academy	1962-1966	B.S. Nuclear Science	3.34/4.0

* Finalist: National Merit Scholarship Program

Service Schools: See resume attached

Other: Service joining PASNY I have completed the following continuing education courses:

Management of a Preventive Maintenance Program

Plant Reliability and Performance

C. Experience

1. See resume attached

2. Plant experience/qualifications include the following:

	PLANT		QUAL./EXPERIENCE
1.	DIG prototype	a.	Engineering officer of the watch
2.	USS Gato (SSN 615)	a. b.	Engineering officer of the watch Qualified in submarines
3.	S1W prototype	a. b.	Engineering officer of the watch Qualified chief engineer
4.	USS Kamehameha (SSBN 642)	a.	Chief engineer
5.	Millstone II (CE PWR)	a. b.	Shift test engineer Served as shift supervisor during testing
6.	Millstone I (GE BWR 4)	a.	Project engineer
7.	Clinton I & II (GE BWR 6)	a.	Startup supervisor (acting) - test program planning and system and component review.

POSITION DESCRIPTION

POSITION NUMBER _____
DATE July 29, 1977

TITLE Reliability & Performance Supervisor

DEPARTMENT: Technical Services

REPORTS TO: Technical Services Superintendent

LOCATION: James A. FitzPatrick N.P.P.

I. QUALIFICATIONS

Education: Bachelor or higher degree in engineering or physical science from an accredited educational program. An advanced degree (Master or Doctorate) in engineering or physical science is highly desirable.

Professional: At least two certifications from the professional qualification list, preferably both an advanced degree and professional engineer registration, are highly desirable. A minimum of one certification is required.

Years of Related Experience: A minimum of six years of progressively responsible nuclear power plant engineering, three of which must be at a nuclear plant site. Items from the professional qualification list may be substituted for up to two years of the six year requirement at the discretion of the resident manager.

Experience directly related to nuclear power plants is desired from two or more of the following areas:

a) Engineering design of plant system modifications
b) Startup, preoperational, or operational system testing
c) Reliability and performance testing and evaluation
d) Preventive maintenance, in-service inspection, or leakrate testing
e) Design safety analysis and independent design review or ASME Codes and ANSI standards.

Although supervising experience is not required, the demonstrated ability to provide leadership is essential. Ability to organize, plan and schedule work for a staff of eight engineers is required. Ability to prepare clear, accurate, and detailed reports is essential.

II. PRIMARY PURPOSE OF POSITION

Supervise and participate in the work of approximately eight engineers to provide engineering expertise for the design of solution to operating plant systems, testing of new, modified or existing plant systems and increase the on line reliability performance of the nuclear plant.

III. PRINCIPAL DUTIES

1. Supervise, plan, schedule, coordinate, review and approve the work of engineers in the plant performance and reliability division of the technical services department.

2. Review in detail engineering solutions before forwarding them for administrative review. This is extremely important because higher levels of administrative review may assume the accuracy of the detailed design after this review. Errors or failure to detect errors may seriously effect nuclear plant safety or result in unnecessary expenditures of PASNY funds.

TITLE: Reliability & Performance Supervisor

DEPARTMENT: Technical Services

REPORTS TO: Technical Services Superintendent

LOCATION: James A. FitzPatrick N.P.P.

III. PRINCIPAL DUTIES - (Continued)

3. Determine the need for, and initiate, engineering studies and performance tests to insure plant reliability and improve performance. The performance and reliability supervisor must be sufficiently experienced in this area to determine the appropriate tests or studies and operate on his own initiative without direction from the technical services superintendent. Proper performance of this function can significantly improve plant online efficiency, power production, and prevent unnecessary plant shutdowns.

4. Perform or supervise design safety analyses, and independent design review in accordance with applicable NRC regulation, ASME Codes and ANSI Standards. To properly fulfill this function he should have extensive knowledge of these codes and standards.

5. Establish and control plant preoperational and operational programs. Perform or supervise engineers work in preparation of test procedures. Review the procedures for compliance with codes, standards and department testing philosophy established by the technical services superintendent.

6. Assign and supervise the work of department engineers in the performance of special projects such as the preventive maintenance program testing, leak rate testing and in-service inspection.

7. Supervise and insure compliance with the Nuclear Plant Reliability Reporting System.

8. Prepare or supervise special engineering studies requested by the resident manager, USNRC, or other external organizations.

9. Supervise the coordination and tracking of plant modifications from initiation through testing.

10. Review recommended plant modifications received from external organizations such as General Electric SIL's, ECN's and TIL's. Recommend appropriate in plant action. Track and control these items. Initiate necessary plant action to implement these recommendations when approved by the resident manager.

11. Prepare detailed responses to inquiries from the USNRC.

12. Perform personnel administrative tasks for the department such as preparation of employee appraisal reports.

13. Support plant outage requirements as directed.

14. Establish and administer a program to monitor the performance of each plant system on a continuing basis.

Age 35
Married, two children

Bachelor of Science in Nuclear Science
U.S. Naval Academy
Graduated June 8, 1966
Standing 100 of 873
Grade Average 3.34

April 1976 - November 1977

Employer: Illinois Power Company
Position: Senior Operations Engineer/Assistant Startup Supervisor, Clinton Power Station, Clinton, Illinois 61727

Summary of Responsibilities:
Served throughout this period as Acting Startup Supervisor in charge of developing the startup program for the Clinton Power Station, supervising a staff of up to five (5) consultants and/or design organization startup engineers. Major responsibilities and achievements include the following:

1) Developed the startup organization, test program outline, and basic administrative framework for the startup of the Clinton Power Station, a two 950 MW unit BWR6 nuclear power station.

2) Wrote the Clinton Startup Manual, the governing document for the Clinton startup.

3) Supervised development of the startup schedule.

4) Developed the method for identifying turnover requirements to the contractor. Supervised the scoping of plant systems for turnover and testing.

5) Supervising the development of a detailed plant cleaning and hydrostatic test program.

6) Supervising an isometric drawing review program.

7) Developing or supervising the development of detailed administrative procedures to support the startup program.

8) Evaluating architect-engineer input in the areas of flush scoping, detailed sublevel scheduling, and test specification preparation.

9) Developing a detailed staffing plan for the Clinton startup.

10) Serving as corporate interface with the architect-engineer field service organization.

This position will eventually lead to direct field supervision of approximately sixty (60) startup engineers and additional technical support personnel.

August 1974 - March 1976

Employer: Northeast Utilities
Position: Startup Engineer, Millstone Point Units I and II

Summary of Responsibilities:
Served twelve (12) months as a shift test engineer in charge of shift testing during the startup program for Unit I, an 830 MW pressurized water reactor. During this period, two (2) months were spent with the concurrent duties of operations shift supervisor. Major responsibilities included the following:

1) Performing or supervising plant testing on a rotating shift basis.

2) Following the construction and documenting and resolving construction or design deficiencies for assigned systems.

3) Preparing test procedures for assigned systems.

In addition to the above, responsibilities were assigned to audit and evaluate a major portion of the test program performed during or prior to this period. In this capacity I audited approximately 60-70% of tests performed during the startup program for Unit II.

Served seven (7) months as test engineer in charge of testing a retrofit BWR off gas treatment system for Unit I. A detailed design review uncovered serious problems in the system. Resolution of these problems required specialized testing on and off site and formulation and evaluation of design alternatives.

In February, 1976, I was a guest speaker at an international seminar on off gas system design and testing sponsored by the NUS Corporation in Washington, D. C.

June 1974 - August 1974

Employer: Self-employed

Two months were taken between termination of active duty military service and commencement of employment with Northeast Utilities to perform extensive renovation on investment property I had acquired.

June 1966 - May 1974

Employer: U. S. Navy
Position: Various, summarized below:

May 1972 - May 1974

Engineer Officer, USS Kamehameha (SSBN 642) (Blue). Responsible for all phases of operation, maintenance, and training involved with a naval nuclear propulsion plant. Supervised a staff of up to 6 officers and 55 enlisted personnel through the latter phases of a shipyard refueling and overhaul and through two deterrent patrols.

March 1970 - April 1972

Training staff, S1W prototype, NPTU, Idaho Falls, Idaho. Served 18 months as shift Leading Engineering Officer of the Watch, senior naval officer on an operating shift at S1W, an operating prototype naval nuclear propulsion plant. Duties included supervision of up to 25 staff and 60 student personnel in support of plant operational training.

Served 6 months as Assistant Training Officer in charge of classroom training, supervising a staff of fourteen. Responsible for the training of up to 40 officers and 130 enlisted students.

April 1968 - March 1970

Junior Officer aboard USS Gato, SSN 615. Assigned duty as Communications Officer (6 months), Electrical Division Officer (4 months), Reactor Controls Officer (6 months), ship's Damage Control Assistant and Auxiliary Division Officer (8 months). Duties included supervision of up to fourteen men in maintenance of assigned equipment and supervision of an operating watch section on a naval nuclear propulsion plant.

September 1967 - April 1968

Student, U.S. Naval Submarine School, New London, Connecticut. Graduated 38 of 148.

April 1967 - September 1967

Student, D1G prototype, Naval Nuclear Power Training Unit, West Milton, New York with studies involving practical operating experience on a naval nuclear propulsion plant. Graduated 3 of 24.

September 1966 - April 1967

Student, U.S. Naval Nuclear Power School, Mare Island, California, with studies involving the theoretical aspects of nuclear power plant operation. Graduated 12 of 48.

June 1966 - August 1966

Instructor, U. S. Naval Academy, Annapolis, Md.

July 13, 1979

TITLE: TECHNICAL SERVICES ENGINEER

A. Functions, Responsiblities and Authoriy of Your Positions

1. Develop, administor, supervise and maintain a total plant Record Management System including the following:

   (a) Daily tracking of open action items and correspondence control.

   (b) Prepare detailed indexing procedures for plant records and follow-up

   (c) Superintend the microfilming, processing, diazo duplication and quality control of documents for archival storage and reductions in space requirements.

   (d) Perform daily magnetic tape and disk copy backup of computerized data base to ensure system integrity

   (e) Instruct personnel in use of system, both in the inputting and search modes

   (f) Perform evaluation upon failure of any portion of system; recommend and implement solution

   (g) Inform plant staff of other possible uses of system, such as, work request and purchase order control

   (h) Develop procedures to effectively manage the system

   (i) Assist staff in obtaining required daily printouts

   (j) Superintend the distribution and updating of controlled documents to assure safe plant operation

   (k) Review new micrographics equipment for upgrading the document control center operation and recommendations for purchase

   (l) Review all modifications and addition of new programs to system

   (m) Sets goals for the record management department and is responsible for system performance

2. Prepares monthly and other reports to the PASNY New York Office, USNRC, Edison Electric Institute, International Atomic Energy Agency, and other organizations.

3. Counsel engineers in review of plant problems to ensure proper corrective action is taken.

4. Assists with plant licensing and technical specification changes to ensure the proper and safe operation of the plant.

5. Assists plant staff in locating any documentation required such as letters, technical manuals, drawings specifications, purchase orders, work request, etc.

6. Assumes responsibility for the technical services department in the absence of the technical services superintendent.

7. Assists plant staff in:

   (a) Answering USNRC Bulleints, Circulars, Inspections, and Newsletters

   (b) Any other plant problems

B. Educational Background

Bachelor of Engineering (Marine) Degree from New York State Maritime College; Fort Schuyler; Bronx, New York - 1964

C. Experience

1. Nuclear

   (a) General Electric Co. - Knolls Atomic Power Laboratory, August 1967 - January 1974

   (1) Electrical Engineer - Supporting the continued safe operation of the D1G and S3G Navy Nuclear Power Plants by issuing work request; providing technical assistance during work task performance and emergencies; developing, preparing, performing and reporting on electrical tests; developing new operating procedures; reviewing all modification requests; and performing reactor physics testing.

   (2) Mechanical Engineer - Same duties as above but working on mechanical components

   (3) Lead Mechanical Engineer - Supervising 4 engineers on the S3G prototype and assisting 7 engineers on the D1G prototype in maintenance and testing of the mechanical/electrical equipment and components.

(b) Carolina Power and Light Company - February 1974 - August 1976

(1) Senior Engineer - In the Nuclear Plant Engineering section of the Power Plant Engineering Department at the Releigh, N.C. Corporate Offices assisting in the design, evaluation and selection of the H.B. Robinson Nuclear Power Plant radwaster evaporator addition; Technical Coordinator for the Development of American National Standard, ANSI-N183 "Emergency Core Cooling System Design Guidelines for PWR Plants;" member of the Company Nuclear Safety Committee assisting in audits of the H. B. Robinson Nuclear Power Plant

(2) Senior Mechanical-Engineer In the Environmental Engineering section assisting in the design of the Shearon Harris Nuclear Power Plant; developing and reviewing technical specifications for equipment and components for radioactive waste systems; reviewing flow diagrams and general arrangement drawings for the rad. waste processing building; member of the Company Nuclear Safety Committee assisting in audits of the H. B. Robinson and the Brunswick, Unit 2 Nuclear Power Plants; developed technical specification for the H. B. Robinson spent fuel storage rack modification/addition; assisting in the revision of all nuclear plant engineering department administrative procedures.

2. Professional Licenses -

(a) Second assistant engineer of steam vessel, any horsepower, any ocean and third assistant engineer of motor vessels, any horsepower, any ocean.

(b) Sailed as an engineering officer in the U. S. Merchant Marine for three years, June 1964 - to July 1967 with Isthmian Lines, Moore-McCormack and Grace Lines supervising 3 to 9 men in engine room operation and maintenance.

DATE: July 13, 1979

A. Functions, Responsibilites and Authority of Position:

1. To provide expertise in the field of Civil Engineering at the JAFNPP to include, but not limited to, related design, guidance, inspection, construction, maintenance, preparation of specifications for bids, bidding, purchasing and coordinating.

2. Have been responsible, completely or to some degree, for the following work, since my arrival at this plant on July 6, 1977.

   a. Barge slip and associated work by Niagara Mohawk in this area.

   b. Design and construction of on-site atmospheric sensor

   c. Installation of 2 post indicator valves in outside fire lines.

   d. On the Nuclear Plant Reliability Data System (NPRDS) coordinator and have been responsible for compiling the engineering data base for the NPRDS, as well as continuing reports for this system.

   e. Budget estimate for my portion of Tech. Services budget.

   f. Battery room emergency showers - design and follow work.

   g. Design and construction of fire protection lines and sprinkler system for document control center.

   h. Design and construction of water supply and drain lines for air conditioning and servicing ARMS rooms and machines.

   i. Design and work for relocations of power cable to refuel bridge.

   j. Engineering for preliminary location and layout for a new plant support building (office building).

   k. Followed progress of fuel pool column support installation.

   l. Design and construction of 6 oil spill containment structures.

   m. Cleaning of cask drop protection system and building construction for storage of CDPS.

   n. Initially appointed as responsible individual for high density spent fuel rack installation-relieved of this to spend more time on other work.

o. Have been involved in several other smaller projects doing design, calculations, inspections, etc.

p. Responsible individual for 79-02, pipe support qualification, while R. Liseno is away for the month of July, 1979.

3. Authority has ranged from having 2 clerks working for me, thru the directions of contract personnel on various projects.

B. Educational Background:

1. Graduate Civil Engineer

2. Lincensed Professional Engineer in the State of New York

3. Completed BWR plant design and fundamentals course given by G.E., on-site, in March and April, 1978

4. Qualified as self monitor for work in a N.P.P.

5. Qualified as RWP leadman for work in a N.P.P.

C. Experience:

1. Nuclear - 2 years as plant Civil Engineer at JAFNPP. This work has involved a considerable amount of intimate association with a N.P.P. while operating and during outages.

2. Twenty-five years experience in Civil Engineering field to include design, construction and maintenance of highways, buildings, bridges, water supply and drainage including two years at the JAFNPP. Experience also includes a considerable amount of management, purchasing, scheduling, inspection, coordinating of work and work forces, preparations of specifications and bidding.

POSITION: Plant Engineer

A. Functions, Responsibilities, Authority

Administration of plant design modification program to improve the safety and reliability of the James A. FitzPatrick Nuclear Power Plant from the point of problem identification through design, review, approval, implementation and testing. Also, have a diministered program of document revision to support plant modification.

Have been responsible for the following since my arrival at this plant in December, 1976.

1. Independently develop solutions to plant problems to improve reliability, safety, and efficiency of plant.

2. Have reviewed proposed solutions generated by outside organizations to verify their desirability and acceptability.

3. Coordinated the design, review, approval, implementation and testing of several organizations to ensure efficient and thorough processing of necessary modifications.

4. Coordinated a program of system testing to verify the system design basis for plant modifications.

5. Administrated a program of record management to satisfy both the requirements of regulatory agencies and the needs of maintenance, engineering, and operation personnel.

6. Conducted system tests to verify the system design basis for plant modifications.

7. Performed various research and supervisory functions as directed by the Technical Services Superintendent to assist in the efficient operation and maintenance to the plant.

B. Eduction

1. Graduated in 1967 from Clyde Central School, Clyde, New York. Academic Diploma.

2. 1967 to 1971 - Cornell University, Ithaca, New York. B. S. Degree in Engineering Physics.

3. U. S. Navy:

   a. 11/71 to 5/72 - Advanced Nuclear Power School, Bainbridge, Maryland.

   b. 5/72 to 11/72 - U. S. Naval Nuclear Power Training Unit, West Milton, New York. Prototype training on Reactor Plant. Qualified as Engineering Officer of the Watch.

4. Power Authority of the State of New York, James A. FitzPatrick Nuclear Power Plant.

   a. 1/31/77 to 2/6/77 - 48 hours of BWR Operating Fundamentals training at the G.E. BWR Training Center, Morris, Illinois.

   b. 10/21/77 - 7/24/78 Completed the necessary requirements as summarized below for a senior reactor operators license

      1. Classroom technical training (16 weeks)
      2. On-the-job training (12 weeks)
      3. Simulator certification training (1 week)
      4. Review and evaluation (3 weeks)

      I was awarded my SRO license 7/24/79

C. Experience

Nuclear

1. U.S. Navy, 6/71 to 10/76, Honorable Discharge.

   2/73 to 10/76 - U.S.S. Nautilus (SS(N)571), Qualified as Engineering Officer of the Watch. Assumed, in a succession, the duties of Weapons/Sonar Officer, Electrical Officer, Damage Control Assistant, and Assistant Engineer.

2. 12/76 to 11/78 - Assistant Plant Engineer, 12/78 to present Plant Engineer, Power Authority of the State of New York, James A. FitzPatrick Nuclear Power Plant. Responsible for the control of Plant modifications,architect/engineer contract administration, and preparation and conduct of preoperational and operability tests for completed modifications.

D. Other

Numerous part-time and summer jobs during high school and college as a machine operator, die maker and machine setup man.

July 13, 1979

ASSISTANT PLANT ENGINEER - ELECTRICAL

A. POSITION:

1. Function - to act as plant site resident expert in the field of electrical engineering.

2. Responsibilities - see below.

3. Authority - most all decision making authority regarding dollar expenditures, plant and department procedures, and approval of system modifications requires concurrance of higher authority.

B. EDUCATION:

1. B.S. Degree in Electrical and Power Engineering.

2. Numerous courses in nuclear plant theory, design, and regulatory guides.

3. See resume for additional information if desired.

C. EXPERIENCE:

1. Three years in design office of engineering firm as electrical engineer responsible for design of electrical systems for two 1300 MW nuclear plants.

2. One-and-one-half years on construction site of two 1300 MW nuclear plants as electrical field engineer responsible for installation of electrical equipment.

3. Eight months in present position as assistant plant engineer.

D. RESPONSIBILITIES:

1. Perform engineering studies and calculations in order to solve plant problems.

2. Provide complete resolution of plant electrical problems including original design work, preparation of purchase or bid specifications, preparation of engineering drawing changes, preparation of work requests, preparation or review of test procedures and coordination and supervision during the construction and test phase.

3. Provide complete engineering work to enable contractors to perform work beyond the capability of the plant staff.

4. Insure compliance of existing plant designs and modifications with applicable ASME, ASNI, and IEEE standards and with plant operational and environmental specifications.

5. Act as plant engineer leader to assist the plant staff in the investigation and resolution of plant problems regardless of the area of engineering discipline.

6. Provide supervision of craft labor for specific projects to support plant outages.

7. Establish, follow-up and supervise special programs such as nuclear plant reliability data reporting, inservice inspection, or leak rate testing.

8. Assist other disciplines and departments in their activities as delegated by the supervisor such as preoperational tests, nuclear fuel moves, and operational procedure development.

9. Using individual initiative complete special engineering studies or projects in response to inquiries or requirements from external organizations, such as the U.S. Nuclear Regulatory Commission.

10. Coordinate fire protection modifications.

ASSISTANT PLANT ENGINEER - ELECTRICAL

A. POSITION

1. Function - to act as plant site resident expert in the field of electrical engineering.

2. Responsibilities - see below

3. Authority - most decision making authority regarding dollar expenditures, plant and department procedures, and approval of system modifications requires concurrance of higher authority.

B. EDUCATION

1. B. S. Degree in Electrical and Power Engineering.

2. One course in nuclear plant theory, design, and regulatory guides.

3. See resume for additional information if desired.

C. EXPERIENCE

1. Two years in design office of engineering firm as electrical engineer responsible for design of electrical systems for two 1300 MW nuclear plants.

2. Two years on construction site of three coal power plants as an electrical field engineer responsible for installation and testing of electrical equipment.

3. Two months in present position as assistant plant engineer.

D. RESPONSIBILITIES

1. Perform engineering studies and calculations in order to solve plant problems.

2. Provide complete resolution of plant electrical problems including original design work, preparation of purchase or bid specifications, preparation of engineering drawing changes, preparation of work requests, preparation or review of test procedures and coordination and supervision during the construction and test phase.

3. Provide complete engineering work to enable contractors to perform work beyond the capability of the plant staff.

4. Insure compliance of existing plant designs and modifications with applicable ASME, ASNI, and IEEE standards and with plant operational and environmental specifications.

5. Act as plant engineer leader to assist the plant staff in the investigation and resolution of plant problems regardless of the area of engineering discipline.

6. Provide supervision of craft labor for specific projects to support plant outages.

7. Establish, follow-up and supervise special programs such as nuclear plant reliability data reporting, inservice inspection, or leak rate testing.

8. Assist other disciplines and departments in their activities as delegated by the supervisor such as preoperational tests, nuclear fuel moves, and operational procedure development.

9. Using individual initiative complete special engineering studies or projects in response to inquiries or requirements from external organizations, such as the U.S. Nuclear Regulatory Commission.

POSITION: Assistant Plant Engineer (Mechanical)

A. Assure that the aspects of plant systems that fall within the mechanical discipline are designed or modified for the betterment of plant operation. Assist other disciplines and departments in their activities as delegated by the supervisor.

B. B.S. Mechanical Engineering 1972
Clarkson College of Technology

Master of Engineering (Mechanical) 1973
Cornell University

Graduate level courses in Nuclear Engineering
Northeastern University

C1b. Stone and Webster Engineering Corporation

4 1/3 years total nuclear related experience including:
2 1/2 years nuclear project experience (specification preparation, system calculations, etc.)
1 year field construction - Quality Control remaining experience in staff analysis groups.

2. E.I.T. Massachusetts

POSITION: Assistant Plant Engineer (Reactor Engineering)

A. Functions, responsibilities and authority:

Perform and analyze reactor core physics calculations and supervise reactor physics tests, refueling operations, and plant power changes necessary to the safe and efficient management of the reactor core. Specific activities include:

1. Determine and appraise reactor performance to demonstrate compliance with the technical specifications and fuel warranty agreement.

2. Supervise reactor analyst group members to assure safe and reliable reactor operation.

3. Propose and develop procedures to comply with administration and government controls.

4. Supervise plant power changes to insure safety and efficiency.

5. Assist the reactor analyst supervisor.

6. Prepare and review plant modifications and determine their impact on plant operation.

7. Prepare and approve fuel movement forms and monitor fuel moves to insure compliance with NRC regulations.

b. Education:

1. BS - Physics

2. MEng - Nuclear Engineering and Science

3. 15 additional graduate credits (beyond Master's) in nuclear engineering

4. General Electric Station Nuclear Engineer's Course

C. Experience

1a. 1 year in current position

Attendance at GE/BWR Station Nuclear Engineer's Conference

1b. None

2 None

POSITION: Reactor Analyst Supervisor

A. Functions, Responsibilities, Authority

Member of PORC. Responsible for the safe and efficient management of the reactor, including, but not limited to: advising operations personnel concerning load changes; developing and monitoring refueling sequences; and reviewing reload licensing submittals.

2. Education:

B.S. Nuclear Engineering - Rensellaer Polytechnic Institute

General Electric Station Nuclear Engineer's Course

General Electric BWR Plant Fundamentals Course

General Electric Pre-conditioning Interim Operating Management Recommendations Course

NUS Core Analysis Workshop

Presently participating in a training class in preparation for SRO licensing

3. Experience:

8 months as reactor analyst supervisor

12 months as acting R.A.S.

4 1/2 years as an engineer in a reactor analysis department

All experience at operating BWR's

ASSISTANT PLANT ENGINEER (REACTOR ENGINEERING)

A. Perform and analyze reactor core physics calculations and supervise reactor physics tests, refueling operations, and plant power changes necessary to the sale and efficient management of the reactor core.

B. B. S. in Engineering Physics, May 1978, Cornell University, Ithaca, NY

M. Eng. (Nuclear), May 1979, Cornell University, Ithaca, NY

C. (1) Gamma-Spectroscopy as it applies to determining neutron fluences in varying power ranges for calibration of Westinghouse Compensated ION chambers and component testing while at Cornell.

(2) Attendance of classes describing:

a) Recirculation System

b) Recirculation Flow Control

c) Control Rod Drive Mechanism

d) CRD Hydraulics

e) Reactor Manual Control/Rod Position Information System

f) Rod Worth Minimizer

g) Rod Sequence Control System

h) Intermediate Range Monitor System

i) Local Power Range Monitor System

j) Average Power Range Monitor System

k) Rod Block Monitor System

l) Traversing In-Core Probe System

m) Reactor Water Clean-Up System

TITLE: OPERATING DOCUMENT COORDINATOR

A. Functions, Responsibilities, and Authority of Positions.

1. Develop, administer, supervise and maintain a complete drawing control system including the following:

   (a) Supervise design draftsmen to maintain all plant and vendor engineering drawings in the "as built" conditions.

   (b) Control all aperature cards, drawings, indices and drawing records.

   (c) Approve all revised drawings and aperature cards to insure that modifications have been incorporated correctly.

   (d) Assist other plant personnel in obtaining information, drawings and manuals required for plant modifications/operations.

   (e) Develop procedures to effectively manage the drawing system

   (f) Review all modification packages to insure all documents affected are included.

2. Assist the Technical Services Engineer in the administration and operation of the Automated Records Management System including the following:

   (a) Assist in the generation of detailed indexing procedures for plant records and follow-up

   (b) Supervise the microfilming, processing, diazo duplication and quality control of document for archival storage and reductions in space requirements.

   (c) Perform daily magnetic tape and disk copy backup of computerized data base to ensure system integrity.

   (d) Instruct personnel in use of system both in the inputting and search modes

   (e) Assist staff in obtaining daily printouts

   (f) Supervise the distribution and updating of controlled documents to assure plant operation

   (g) Review new micrographics equipment for upgrading the document operation and recommendations for purchase.

3. Insure required documentation is maintained in accordance with applicable NRC Regulatory Guides and ANSI Standards.

4. Supervise file clerks/typists in document distribution, preparation of procedures, general filing, and the maintenance of all records and logs associated with drawing control and record management program.

5. Supervise clerks, microfilm operations, and document controller in their respective duties.

6. Audit all check lists, records, logs, follow up action items and files for accuracy and completion.

7. Prepare monthly Operating Status Report for USNRC.

8. Assumes responsibility for Technical Services Engineer in his absence.

9. Assists plant staff in locating any documentation required such as letters, technical manuals, drawings, specifications, purchase orders, work requests, etc.

B. Educational Background

Mohawk Valley State College of New York. Graduated June 1952. Associate Degree in Mechanical Technology.

C. Experience

General Electric Co. - Syracuse, New York. June 1952 to July 1975.

6/52 - 6/54	Detail Draftsman. Made detailed drawings from designers layouts of sub assemblies.
6/54 - 6/56	Armed Forces
6/56 - 12/60	Design Draftsman. Worked on major radar and sonar programs. My talents were applied to cabinet design, console design castings, gear trains, electronic packaging. Lead designer on many projects with responsibility for other designers and detailers.

Supervise Engineering Documentation 12/60 - 7/75

Duties consisted of supervision of approximately twenty people, minimum, up to seventy five people. These were designers, detailers, checkers, and clerks. Responsible for the costing of jobs from RFQ to award of contract. Required knowledge of electrical and mechanical techniques. Worked mainly on government contracts, defense systems, radar and sonar. Responsible for the scheduling and control of a job after receipt of contract. My last job was Solid State Mobile Radar for the Marines.

Administrative Duties:

Appraisals of individuals, manpower planning, take part in budget planning, handle subcontracts, and deal with outside vendors.

POWER AUTHORITY OF THE STATE OF NEW YORK
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

JOHN D. LEONARD, JR.
Resident Manager

P.O. BOX 41
Lycoming, New York 13093

315-342-3840

July 13, 1979

MANAGEMENT AND TECHNICAL RESOURCE DATA

TITLE: Training Coordinator

FUNCTIONS, RESPONSIBILITIES AND AUTHORITY:

The Training Coordinator provides overall direction and supervision for the formulation and implementation of training systems to support the operating, maintenance and performance goals of safe, maximum electrical generation within stringent regulation. The Training Coordinator directs the development and implementation of training systems for licensed operators, technicians and mechanics, and professional and supervisory personnel.

The Training Coordinator maintains an up-to-date knowledge of regulatory requirements and enforcement policies to insure that training systems satisfy legal requirements.

EDUCATION:

The incumbent holds a New York State high school Regents diploma, and is a graduate of the U.S. Navy nuclear power training program. He has completed several short courses and seminars.

EXPERIENCE:

Nuclear Related.

The incumbent has a total of fifteen years of experience directly related to nuclear power, as follows:

(1) U.S. Navy; 7 years; Reactor Operator and Reactor Technician on S1C/S2C and S5W reactor plants. Electronics Technician.

(2) Carolina Power and Light Company, Brunswick Plant; 5 years; Reactor Operator and Training Coordinator. Held USNRC Senior Operator's license.

(3) Power Authority of the State of New York, FitzPatrick Plant; 3 years; Training Coordinator. Currently holds USNRC Senior Operator's license.

Non-nuclear Related.

(1) General Electric Company, Schenectady, New York; 1 year; Apprentice Machinist.

(2) Raytheon Company, New London, Connecticut; 4 years; Computer operator and technician, computer programmer, electronics design associate.

OTHER PERTINANT INFORMATION:

The Training Coordinator must possess and maintain a high degree of knowledge of the design and operating characteristics of the nuclear power plant.

Training Specialist
JAF Nuclear Plant

A. Functions, responsibilities, and authority of position

The training specialist, under general supervision, formulates and implements training systems to support the operating, maintenance and performance goals of safe, maximum electrical generation within stringent regulatory requirements.

Develops effective training systems to insure training is related to and satisfies training objectives

Researches source materials and develops lesson plans, teaching aids and study aids to implement training systems.

Prepares for approval, administers and grades quizzes, examinations and performance tests to evaluate student performance and training system effectiveness.

Documents training activities to insure that records of training and qualification for project personnel remain accurate and current.

Motivates students to learn, maintains an environment conducive to learning, and makes recommendations to the Training Coordinator for improvements in training effectiveness and student performance.

B. Educational Background

CIVILIAN

* Graduated Altoona Area High School, Altoona, Penna. - 1968
* Attended the following schools conducted by General Electric:
  - I. Operation, Maintenance, and Testing of:
    - a. 345 KV Air Blast Circuit Breaker
    - b. Metal Clad Switchgear (Magne Blast) Circuit Breakers
    - c. Low-voltage Switchgear
  - II. Control Maintenance and Troubleshooting Seminar
  - III. Electrical Maintenance Seminar
  - IV. Motor Maintenance Seminar
  - V. Electric Power Distribution Seminar
  - VI. Industrial Power Systems Coordination Seminar

MILITARY

* Electricians Mate Class "B" School, advanced course of 30 weeks stressing the theory of operation and the maintenance, repair, and testing of sophisticated electrical shipboard generating and switchboard equipment. 1975 Great Lakes, Illinois
* Attended the Navy's Advanced Engineering School at New London, Connecticut between 1972 and 1975 for the following courses:
  - I. 300 KW Motor Generator Troubleshooting and Repair - 2 weeks
  - II. Variable Speed Controllers Troubleshooting/Repair - 2 weeks
  - III. Preventive Maintenance Supervisor - 1 week
  - IV. Circuit Breakers and Controllers, operation and repair - 2 weeks
* USN Submarine School - 1972
* USN Nuclear Power School and Prototype - 1970-1971
* USN Electricians Mate Class "A" School - 1970

Taining Specialist
JAF Nuclear Plant

C. Summary of Experience

May 1979 to present — Training Specialist at the JAF Nuclear Plant

Dec. 1978 to May 1979 — Nuclear Operator at the JAF Nuclear Plant

Feb. 1978 to Dec. 1978 — Journeyman Electrician at JAF Nuclear Plant

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1975 to Jan. 1978
- Naval Nuclear Power Training Unit, S3G Prototype, Operated by the Knolls Atomic Power Laboratory/General Electric company for the Energy Research and Development Administration.
- Staff Instructor/Engineering Watch Supervisor, coordinated and supervised the training of assigned personnel in the theory, operation, and maintenance of Pressurized Water Reactor Plants.

1975
- Attended Electricians Mate Class "B" School for 30 weeks. (See listing under Education)

1972 to 1975
- Served as member of the Electrical Division aboard the USS TREPANG (SSN 674) a nuclear fast attack submarine. My watchstanding qualifications were:
  1.) Shutdown Maneuvering Area Watch
  2.) Electric Plant Control Benchboard Watch
  3.) Battery Charging Electrician
  4.) Machinery Space Two Watch (Reactor Technician)
  5.) Auxiliary Electrician
  6.) Throttleman

  While on board, I was called upon to serve up to ten months a year at sea finishing up my tour of duty with a complete overhaul at the Portsmouth Naval Shipyard.

1970 to 1971
- Naval Nuclear Power School and Prototype, completed six months of college level courses covering all aspects of reactor core construction, operation, theory, materials, and related chemistry controls, followed by six months training at the S3G prototype. Qualified as Electrical Operator.

1969 to 1970
- Completed Naval Basic Training followed by 18 weeks of Basic Electricity and Electricians Mate Class "A" School.

Training Specialist
JAF Nuclear Plant

C. Summary of Experience (continued)

* SERVED AS TRAINING COORDINATOR, my duties were to ensure each student recieved the appropriate amount of watchstanding time as well as study time. Also, to counsel students who were not meeting the established rate of qualification and devise methods of effectively helping the slower student.

* AWARDED THE NAVY GOOD CONDUCT MEDAL TWICE for demonstrated support, honesty, and fidelity.

* PARTICIPATED IN TWO MAINTENANCE SHUTDOWNS at the James A. FitzPatrick Nuclear Power Plant, one of which was a major refueling.

* PARTICIPATED IN A MAJOR REACTOR REFUELING AND OVERHAUL for the S3G prototype. During this time, the reactor and propulsion equipment was overhauled and tested in a timely manner which saved both time and money.

* QUALIFIED ENGINEERING WATCH SUPERVISOR at the S3G prototype, duties are to ensure the proper watchstanding of all personnel in the Engineering Department and to supervise all evolutions and casualty control in the reactor plant.

* SERVED AS ELECTRICAL DIVISION LEADING PETTY OFFICER, 12-15 men were under my direction to carry out intensive training cycles of from 50-60 officers and enlisted personnel every 6 months and to ensure the proper preventive maintenance and repair of all electrical equipment on board.

Title; Training Specialist

A. Functions, responsibilities, and authority of position

The training specialist, under general supervision, formulates and implements training systems to support the operating, maintenance and performance goals of safe, maximum electrical generation within stringent regulatory requirements.

Develops effective training systems to insure training is related to and satisfies training objectives

Researches source materials and develops lesson plans, teaching aids and study aids to implement training systems.

Prepares for approval, administers and grades quizzes, examinations and performance tests to evaluate student performance and training system effectiveness.

Documents training activities to insure that records of training and qualification for project personnel remain accurate and current.

Motivates students to learn, maintains an environment conducive to learning, and makes recommendations to the Training Coordinator for improvements in training effectiveness and student performance.

EDUCATION U. S. Navy Basic Electricity / Advanced Electronics A-School
University of Hartford, West Hartford, Conn., completed general requirements for B. S.-Management.

EMPLOYMENT HISTORY

September 1975 to Present: Consumers Power Co., Palasades Nuclear Plant, Covert, Michigan

Nuclear Training Coordinator I (11/77 - present)
Activities center on maintenance, operation, and administrative skills training. Major achievement: Senior Reactor Administrative Operating Certification.

Maintenance Supervisor (4/76 - 10/77)
Responsible for an eighteen month project to design and implement a plant Measuring and Test Equipment Calibration Program in compliance with NRC (10-CFR-50 Chapter 12) guidelines. Duties included development of calibration, documentation, and material control criteria, as well as revision of applicable plant and corporate QA procedures.

Instrument and Controls Technician (9/75 - 3/76)
Duties included the repair and maintenance of nuclear plant instrumentation and control systems.

July 1971 to August 1975: Xerox Corporation, Hartford, Conn.

Senior Technical Representative
Responsible for the repair and maintenance of electro-mechanical and solid state machinery in established territories.

August 1967 - May 1971: U. S. Navy

Electronics Technician Second Class
Leading Petty Officer, charged with supervision and repair of electrical components and communication systems.

POWER AUTHORITY OF THE STATE OF NEW YORK

I. Position Title: Security & Safety Supervisor

Reports To: (Title) Resident Manager - JAFNPP

II. Job Function:

Responsible for the formulation, implementation, and supervision of the Industrial Security Program as dictated by the U.S. NRC to prevent the theft of special nuclear materials and acts of sabotage at a nuclear power plant. Responsible for the formulation, implementation, and supervision of the Industrial Safety and Fire Protection Programs in accordance with Federal and State statutes to provide safety and fire protection to employees and facility. Update each program as Federal and State statutes dictate or whenever such updating is apparent for the betterment of these programs.

III. Accountabilities: SECURITY

1. Maintain personnel and training records of all members of the Security Force for audit by U.S. Nuclear Regulatory Commission.

2. Update training curriculum as dictated by U.S. NRC guides, regulations, and ANSI Standards and submit same to the U.S. NRC for their approval.

3. Conduct unannounced tests, inspections, and drill during other than normal working hours to ensure the highest performance of the Security Force in response to a security threat and rectify any deficiency which may be observed.

4. Supervise the Security Force and ensure their proficiency in the use of hand guns and understand the limitations of such use to comply with the New York State Penal Law.

5. Review time sheets and invoices for payment of Security Force services.

6. Prepare purchase requisitions and verify such equipment or services were received as ordered.

7. Conduct periodic training classes for employees and advise Operations Superintendent of updated and new security requirements to comply with the U.S. NRC.

8. Formulate and update Administrative and Security Procedures applicable to the Security Force and employees, present such procedures to the Plant Operations Review Committee and upon arrival, implement and supervise such procedures. Maintain these and records for U.S. NRC audit.

9. Maintain records of maintenance and test of the following security systems subject to U.S. NRC audit: perimeter fencing, lighting and intrusion alarms, access control system, door alarms, auxiliary generator, HVAC System, X-ray equipment, weapons detectors, computer system, closed circuit television, communications equipment, security vehicles, key control and administration, and personnel identification system.

III. Accountabilities (Cont'd)

10. Maintain the following records for U.S. NRC audit: visitors, vendors, logs of personnel entering protected area, routine security tours and inspections, tests of equipment, inspection of security systems, security force responses to tests and drills, on-site alarms and details of responses by Security Force.

11. Assist the Director of Security and Safety in the preparation of a security plan in a timely manner as U.S. NRC regulations are updated.

12. Report security violations or non-compliances to the Resident Manager, Director of Security and Safety, and U.S. NRC as appropriate.

13. Prepare appropriate written reports relative to security operations, deficiencies and audits to the Resident Manager and Director of Security and Safety.

14. Maintain weekly liaison with local, state, and federal law enforcement and advise them of security requirements unique to the James A. FitzPatrick Nuclear Power Plant in event assistance is required.

15. Familiarize local, state and federal law enforcement agencies with the plant site.

16. Assist local, state and federal law enforcement agencies when requested.

17. Formulate, implement, and supervise contingency plans for fires, site evacuations, personnel disturbance, threats and attempts of sabotage, civil disturbance, discovery of unauthorized persons in protected or vital areas, discovery of sabotage devices and multiple loss of on-site and off-site communications as required by the U.S. NRC through local, state and federal authorities.

18. Represent the Resident Manager during unannounced security audits conducted by the U.S. NRC at least semi-annually and take remedial action as a result of such audits, if appropriate.

19. Advise the Resident Manager in regard to security matters unique to the James A. FitzPatrick Nuclear Power Plant.

SAFETY

1. Develop procedures for the implementation and auditing of the safety program in accordance with the requirements of OSHA.

2. Train employees, discuss problems, and remedy safety problems unique to the JAFNPP.

3. Maintain records of program for audit by State Insurance Fund and NELPIA.

FIRE PROTECTION

1. Develop a program and procedures for the implementation and auditing of the Fire Protection Program in accordance with U.S. NRC requirements and audits.

2. Organize, train, and document the Fire Birgade organization in accordance with U.S. NRC requirements and audits.

3. Maintain records of the program for audit by the U.S. NRC and NELPIA.

IV. Educational Background:

Graduate of Solvay High School, Solvay, New York 13209

Attended Central Technical Institute, Kansas City, MO

Radio & Television Engineering Course - 60 weeks - full time

Also Attended the following courses, seminars, and schools:

1. "Raidological Physics for Physicians", NYS Upstate Medical Center Syracuse, New York - 18 months

2. "Radiological Health", Health, Education, and Welfare Council Chicago, Illinois - 1 week

3. "Safety Management Techniques" - National Safety Council Chicago, Illinois - 1 week

4. Various OSHA Seminars and Courses

5. Industrial Security (DOD) Fort Holabird, MO

6. While at JAFNPP:

   a. I have attended the five day Fire Protection Course for the Operations Phase at General Physics, Columbia, Maryland

   and

   b. I have participated in a two day Fire Brigade Leader Training Course by Professional Loss Control, Inc. of Oak Ridge, Tennessee.

V. Societies: I AM A MEMBER OF:

1. American Society for Industrial Security

2. American Society of Safety Engineers

3. International Association of Chiefs of Police

VI. I hold an FCC Commercial First Class Radio Telephone License, and an Amatuer Radio License.

Title: Assistant Security and Safety Supervisor

A. Under the direction of the Security and Safety Supervisor, is delegated responsibilities for the implementation and monitoring of the security, fire protection and industrial safety program at the plant level in accordance with Federal and State regulations.

1. Conducts security personnel supervision, administration, and management. (40 men security force)

2. Oversees training and qualification program.

3. Personnel command and control.

4. Controls security and contingency plans.

5. Day to day operations of necessary decisions.

B. High School - Several Military School - Military Police - Supply.

C. 1. Nuclear

A. None

B. Control warheads of guided missiles (Security) in Korea.

D. Site Supervisor - Security - 1976-1979

Implementation and monitor those aspects of the Security, fire protection, and safety programs as assigned by the Security and Safety Supervisor.

1. Supervise the contract security force representing forty (40) individuals.

2. Interview and pre-select all security officer candidates, while training and recommend final selection of security officers at the completion of the training program.

3. Prepare work schedules for security force members.

4. Maintain personnel and training records of all members of the security force for audit by USNRC.

5. Review time sheets and invoices for payment of security force services.

6. Prepare and update administrative and security procedures applicable to the security force and employees.

7. Update training curriculum as dictated by USNRC Guides, Regulations, and ANSI Standards.

8. Prepare and maintain access lists of authorized personnel requiring access to the plant which are subject to USNRC audit.

9. Maintain the following records for USNRC audit. Visitors, vendors, logs of personnel entering protected areas, routine security tours and inspections, tests of equipment, inspection of security systems, security responses to tests and drills, on-site alarms and details of responses by security forces.

10. Conducts Assessment.

    a. Unauthorized personnel, vehicles/contraband.

    b. Alarms/security equipment.

    c. Loss of communications.

    d. Loss of power/lighting.

    e. Failure of security personnel to report.

11. Responds to:

    a. Direct overt attacks

    b. Explosive devices.

    c. extortion/hostage threats and situations.

    d. Attack threat and warning.

    e. Sabotage devices/evidence.

    f. Civil disturbance.

- SITE QUALITY ASSURANCE ENGINEER

RESPONSIBILITIES:

Administer the implementation of the Authority's Quality Assurance Program at the plant thorugh the establishment of a systematic program of audits, surveillance and document reviews, and supervise plant Quality Assurance/Quality Control personnel in their performance of designated activities. Provide assurance to management that quality related activities are performed in accordance with Authority commitments to the NRC and that contractors and consultants at the plant perform quality related activities in accordance with approved Quality Assurance program and procedures.

EDUCATION:

High School Graduate - 1941, Westboro High School
Westboro, Massachusettes

College: Farragut College - 1947 - 1948
Farragut, Idaho

Gonzaga University - 1948 - 1953
Spokane, Washington

Bachelor of Science - Civil Engineering - 1953

TRAINING: Stat-A-Matrix Quality Assurance Auditing, General Electric BWR Training Course, Radiation Protection.

QUALIFICATIONS: Civil Engineering Degree, State of Massachusettes Professional Engineer.

EXPERIENCE:

Nuclear - Two years Quality Assurance Engineer BWR Plant
Seven years Site Quality Assurance Engineer BWR Plant

OTHER:

Sixteen years work for various firms performing structural steel and concrete design. Worked on construction projects, prepared construction specifications and cost estimates. Evaluated subcontractor proposals. Reviewed and approved Architect Engineer work.

- QUALITY CONTROL SUPERVISOR

SUMMARY OF POSITION

Administer and supervise the Authority's Quality Control portion of the Quality Assurance Program at the plant related to all phases of material procurement and independent inspection of quality related activities. Provide assurance to the Site Quality Assurance Engineer that the plant systems and components are procured, modified, repaired, operated, and tested in accordance with the Authority's Quality Assurance Program requirements.

EDUCATION:

High School Graduate - numerous military related schools in the electrical field. Graduate of Naval Nuclear Power School. Attended numerous job related courses, i.e., fundamentals of non-destructive testing, metalurgy of welding and joining, operational quality assurance, and BWR training.

OTHER:

Assistant Quality Control Supervisor - Niagara Mohawk NMP-JAF
Assistant Quality Assurance Officer Submarine Force Atlantic Fleet - U.S. Navy
Twenty years past experience U.S. Navy including 8-10 years in Nuclear Power Plant Submarine Force.
Certified Level III in accordance with ANSI 45.2.6.

[redacted] - QUALITY ASSURANCE ENGINEER

RESPONSIBILITIES:

In conjunction with the Site Quality Assurance Engineer, I develop and implement the Authorities published commitment to the NRC and monitor the quality related activities performed at the operating plant by internal organizations and major contractors.

EDUCATION:

1950

1966 - 1968	Various credit courses - University of Rochester
1974	Seminar - Middlesex County College Operational Quality Assurance
1974	Middlesex County College Auditing Nuclear Quality
1977	General Electric Morris, Illinois Fundamentals of BWR Operation

EXPERIENCE:

Nuclear - From 1960 through 1970, I held positions with two large architectural-engineering firms. As Senior Electrical Engineer and Electrical Superintendent on several large nuclear power stations. From 1970 to date, I have been assigned to the FitzPatrick Plant as a Quality Assurance Engineer.

OTHER:

Electrical Superintendent on Fossil Power Plant Projects.

Summary description of job position, responsibilities, educational backgournd and experience.

- QUALITY ASSURANCE ENGINEER

RESPONSIBILITIES:

Conduct audits and surveillances in the implementation of managements NRC approved Quality Assurance Program and the Plant Technical Specifications.

EDUCATION:

High School
College - Mechanical Engineering Degree

TRAINING: Stat-A-Matrix Quality Assurance Auditing, General Electric BWR Training Course, Radiation Protection.

QUALIFICATIONS: Mechanical Engineering Degree, New York State Professional Engineer, British Chartered Mechanical Engineering.

EXPERIENCE:

Nuclear - Seven years Quality Assurance BWR Plant
Three years Construction BWR Plant

OTHER:

Twenty years construction and maintenance fossil power plants.

- QUALITY CONTROL INSPECTOR

SUMMARY OF POSITION:

Provide the implementation of that portion of the Quality Assurance Program at JAFNPP related to the procurement inspection, installation and testing of materials and equipment to ensure that these activities are carried in accordance with approval procedures and to provide assurance to the Quality Control Supervisor that these activities and also repairs and modifications are completed within the context of an approved Quality Assurance Program.

EDUCATION:

1960 - 1962 - State Agricultural and Technical Institute at Farmingdale
Major - Chemical Technology

1966 - 1967 - Adelphi University - Part time courses for personal advancement

1974 - 1976 - State University at Oswego - Part time course for personal advancement

EXPERIENCE:

Nuclear - Reactor Operator for eight years at Brookhaven National Laboratory. Experience gained on three different reactors (graphite, H_2O and PWR). Position involved operation and maintenance of reactors and associated equipment.

OTHER:

As a result of previous and current employment, participated in courses related to Nuclear Theory and Quality Control. Currently qualified to perform Level II tasks in accordance with ANSI N45.2.6 - 1973.

- QUALITY CONTROL INSPECTOR

SUMMARY OF POSITION:

Provide the inplementation of that portion of the Quality Assurance Program at JAFNPP related to the procurement inspection, installation and testing of materials and equipment to ensure that these activities are carried out in accordance with approved procedures and to provide assurance to the Quality Control Supervisor that these activities and also repairs and modifications are completed within the context of an approved Quality Assurance Program.

EDUCATION:

High School Graduate - Approximately 40 hours of various college courses including mathematics, business law, economics, leadership, literature, etc. Numerous military related schools in the non-destructive examination field. Job related courses such as Quality Assurance auditing, BWR training, arc welding, and quality control inspection, etc. Certified Level II in accordance with ANSI 45.2.6.

EXPERIENCE: Nuclear -

Quality Control Inspector - U.S. Testing Company
Quality Control Inspector - U.S.A.F. Souther Command
Twenty-six years past experience U.S.A.F. of which ten years was in non-destructive examination.

- QUALITY CONTROL INSPECTOR

SUMMARY OF POSITION:

Provide the implementation of that portion of the Quality Assurance Program at JAFNPP related ot the procurement inspection, installation, and testing of materials and equipment to ensure that these activities are carried in accordance with approval procedures and to provide assurance to the Quality Control Supervisor that these activities and also repairs and modifications are completed within the context of an approved Quality Assurance Program.

EDUCATION:

High School Graduate - 1967, Pulaski Academy and Central School

College - 1961 through 1971, 12 Credit Hours - University of Maine, University of Guam, Jefferson C.C.

Technical Operations - 1974, 40 hour course in Radiography

MagnaFlux Corporation - 1976, 40 hour course in Ultrasonic Testing

Krautkramer - Branson, Inc. - 1977, 40 hour course in Ultrasonic Weld Inspec.

I have had approximately four years of specialized training instrumentation pneumatics, and hydraulics while in the service. I also have had over five years experience in radiography, magnetic particle inspection, liquid penetrant inspection, dimensional inspection, weld inspection, and records examination prior to this job with the M.W. Kellogg Company and I achived a Level II status in all prior to my job with the Power Authority.

TITLE: - OFFICE MANAGER

A. Manages, plans and directs the Office Services functions, including 14 people, that provides the administrative and supporting elements for plant operation. This includes the Personnel Office, Procurement Department, Accounting Office and related internal Office Services such as messenger, telephone and mail service. Answer to the Resident Manager directly.

B. B. S. in Education
M. S. in Education Administration

C. 22 years with the Power Authority in Administrative and Public Information areas including 13 years at the hydroelectric St. Lawrence Power Project.

Attended public information seminar at Associated Universities of Oak Ridge, Tennessee. Acted as community liason during construction of the FitzPatrick Nuclear Power Plant, Oswego, New York. Assigned to the FitzPatrick Plant for nine (9) years. Attended seminar on public information at American Management Association, New York City.

John Austin

John W. Austin
OFFICE MANAGER

JWA/aem

PERSONNEL OFFICER

FUNCTIONS, RESPONSIBILITIES AND AUTHORITY:

The Personnel Officer administers a broad-based personnel function encompassing labor relations and the recruitment/retention of a highly skilled workforce at the James A. FitzPatrick Nuclear Power Plant.

He assists and advises the Resident Manager in the areas of wage and salary administration, performance planning and reviews and any additional administrative assignments that enhance managment development.

He interprets labor contract provisions and assists in the mediation of labor/management disputes.

He is charged with implementing the new Human Resources Data System for the FitzPatrick Plant which will provide an efficient control of employee data.

He develops job advertisements for exempt and non-exempt positions.

EDUCATION:

The incumbent possesses a Bachelors Degree (Sociology) and thirty-two (32) credit hours completed in the field of Vocational Guidance and Counseling.

EXPERIENCE:

Nuclear Related - None

Other

- Six (6) years with the New York State Department of Labor as an Employment Interviewer
- Several seminars/training courses in Labor Relations, Writing Job Descriptions, Interviewing, Counseling and Testing.

POWER AUTHORITY OF THE STATE OF NEW YORK
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

JOHN D. LEONARD, JR.
Resident Manager

P.O. BOX 41
Lycoming, New York 13093

315-342-3840

July 10, 1979

TITLE: Procurement Coordinator

A.) Functions, responsibilities, and authority:

1. Supervise purchasing agents at J.A.F. site including two agents and a clerk-typist (one permanent and one temporary). Also supervises agents for Crouse Nuclear Service Corporation.

2. Writes procurement procedures and revisions thereto. Reviews procurement and QC/QA procedures related to procurement to ascertain that procedures are being followed.

3. Reviews purchase orders, requisitions and Quality Control Requirements for the following:

   a. Determines that requisition is properly prepared and approved in accordance with Work Activity Control Procedure No. 10.1.4.

   b. Determines the technical application of the material, equipment or service requirements, which must be explained in memoranda. The memoranda are written to the Contract Administrator by the Procurement Coordinator for the Resident Manager's signature when required by dollar limitations imposed by PASNY Purchasing Procedures.

   c. Verifies that Quality Control requirements shown on the requisition are reflected on the purchase order. Category I orders must have Quality Assurance approval for qualified vendor and review of QC requirements before the order is signed.

   d. Determines that Power Authority Purchase Procedures are being satisfied.

   e. Reviews all orders and initials same for propriety of competitive bidding, to eliminate duplications and other elements listed in items nos. a. through d. above.

4. Prepares drafts of special purchase orders for service, maintenance, technical assistance and other non-routine matters. Determines that format, terms and conditions are acceptable with Headquarters Contract Administrator and Legal Department.

5. Provides information requested by Headquarters' Engineering, Contract Administration, Legal and other departments regarding J.A.F. purchase orders.

6. Writes procedures for expediting critically needed materials and equipment and follow-up that procedures are followed and effective.

7. Coordinates vendor's spare parts recommendations with department heads and warehouse manager.

8. Visits vendor facilities when required to expedite delivery of critically needed materials.

9. Reports to the Resident Manager on questions regarding the purchase orders originating at the J.A.F. Site.

B.) Educational background completed:

Adelphi College 1952 BBA Degree

C.) Experience:

(1) Nuclear

1. Nov., 1974 - Present - Procurement Coordinator - PASNY - J.A.F. Supervise purchasing, Accounts payable (until employment of Sr. Accountant) and other duties related to personnel hiring, office services and administrative matters.

2. May, 1970 - Nov., 1974 - Auditor - PASNY - J.A.F. - Audited J.A.F. Consulting Engineers payroll, purchases, cost-plus and other contractors pay estimates. Wrote audit programs and reported to management on findings.

(2) Other information:

1. July, 1958 - May, 1970 - Sr. Accountant, PASNY - St. Lawrence Project Supervised Accounting Department, set-up cost ledger, voucher register and other accounting records. Wrote classification of accounts according to F.P.C. Uniform System of accounts. Prepared budget and reports comparing actual to budget expenditures.

2. March, 1954 - July, 1958 - Accountant - Auditor - Main & Company CPA's performed various auditing functions, write-up and tax work on a variety of corporations.

3. September, 1952 - March, 1954 - Accountant - Auditor - Loomis, Suffern & Fernald, CPA's - Performed various auditing functions, write-up and tax work on a variety of corporations.

4. February, 1949 - June, 1952 - Attended - Graduated college
   August, 1947 - Feb uary, 1949 - Various Jobs
   February, 1946 - August, 1947 - U.S. Army
   September, 1941 - February 1946 - High School

Procurement Coordinator

JRT/kjd

SENIOR ACCOUNTANT

A. FUNCTIONS - Maintain proper and effective accounting functions neccessary for efficient site operations.

B. EDUCATION - BBA in Accounting

C. EXPERIENCE - 2½ years Operating Nuclear Plant
7½ years Hydro Electric Plant

TITLE: ACCOUNTANT

A.) Functions, responsibilities, and authority of your position:

To maintain proper and effective accounting functions necessary for efficient site operations in relationship to headquarter's procedures. To provide support and direct the daily accounting activities in the absence of the Senior Accountant or other personnel in the department.

B.) Education background completed A.A.S. Degree in Accounting

C.) 1) a. None
b. None
2) ---

INFORMATION OFFICER

A. The Information Officer is responsible for

1. Routine and emergency communications between the plant and the public and news media;

2. Maintaining contacts and communication with local elected and appointed officials.

B. Educational Background

1. B.A. - Physics

2. M.S. - Physics Education

C. Experience

1. a. Three years experience at JAFNPP including training courses in plant design and radiation protection;

Two years experience as a teacher-demonstrator for "This Atomic World", a nuclear school assembly program;

Special training courses in nuclear technology and alternate energy sources through Oak Ridge Associated Universities.

b. Four years teaching experience in high school science (physics, chemistry, earth science, general science).

POWER AUTHORITY OF THE STATE OF NEW YORK
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

JOHN D. LEONARD, JR.
Resident Manager

P.O. BOX 41
Lycoming, New York 13093

315-342-3840

July 14, 1979

SUBJECT: Position Survey - Warehouse Manager

A. FUNCTIONS

The Warehouse Manager reports directly to the Resident Manager and is responsible for the overall operation of the plant's main and sub warehouses. He ensures that receipt, handling, storage and issue of materials conform to existing National and Regulatory Standards while providing the support necessary for the operation of the plant.

B. EDUCATIONAL BACKGROUND

B.A. Political Science;Lemoyne College;Syracuse, New York:1968

Naval Basic and Advanced Flight Training:Graduated as pilot January, 1971;Naval Air Station, Corpus Christi, Texas

Introduction to Boiling Water Reactor Nuclear Power Plants;3 week intensified course presented by General Physics Corporation;completed June 30, 1978

C. EXPERIENCE

1. Nuclear

b. Navy Nuclear Weapons Reliability Program and Final Top Secret clearance.

2. Other

Material Control Officer and Assistant Maintenance Officer for aircraft operations - Naval Air Station, Norfolk, Virginia

MP:alh

II. Technical Resources

B. Offsite (Nonplant staff)

Describe the technical resources available in the event of an accident, including those from a subsidiary, wholly or partially owned service company, or holding company, where applicable. The following information should be provided:

1. Provide an organizational chart showing each offsite functional unit and subunit that now provides, and could provide, engineering-professional-technical support for your plant staff in the areas of:

   a. Nuclear power plant operations.

   b. Nuclear, mechanical, structural, electrical, thermal-hydraulic, metallurgical and materials, instrumentation and controls, and systems engineering.

   c. Plant chemistry and radiochemistry.

   d. Health physics.

   e. Nuclear fuels.

   f. Maintenance engineering.

   Briefly describe the functions and responsibilities of each unit and subunit and indicate the number of professional-technical persons within each unit and subunit, including managers and supervisors. Other personnel may be included if you believe their level of expertise will be useful in performing necessary and unique functions for unusual events like the TMI-2 accident.

   The organizational chart should indicate whether the present nuclear plant(s) technical support assignment for each unit and subunit is on the basis of full-time (F), part-time (P), or not assigned at all (N) but could be made available.

2. Provide the following summary information for the professional-technical personnel within each unit and subunit identified in 1 above in tabular form:

   a. Educational background

   b. Applicable work experience in the particular field.

c. Any other information you believe may be pertinent, including any NRC licenses held or formerly held.

Response

The information requested above is provided in the attached Figure II.B.1-1 and Tables II.B.1-1, II.B.2-1 and II.B.2-2.

TABLE II.B.1-1
TECHNICAL RESOURCES (OFFSITE)
FUNCTIONS AND RESPONSIBILITIES

Assistant Chief Engineer - Projects

The Project Engineering Section, headed by the Assistant Chief Engineer - Projects, has prime responsibility for engineering and design for all of the Authority's power plants. It will have expertise in nuclear, mechanical, electrical and structural engineering and licensing. It will have recourse to the Staff Engineering Department and Power Operations Department for additional information or greater specialization. It will also utilize the original plant designer, NSSS vendor or other suitably qualified design organizations as required. Within the Project Engineering Section a project engineering group is assigned to each plant with responsibilities for only its respective project. Project engineering groups are staffed as shown on Figure II.B.1-1.

The Project Engineering Section also acts as the focal point within the Authority in its dealings with regulatory agencies, and outside consulting organizations in order to insure a prompt, accurate and adequate information flow.

Principal Nuclear Engineer - Projects

The Principal Nuclear Engineer - Projects assists the Assistant Chief Engineer - Projects in the supervision of the Project Engineers for nuclear power plant projects.

Project Engineers

The Project Engineers report to the Principal Nuclear Engineer - Projects and to the Assistant Chief Engineer - Projects in that order. They are responsible for the overall technical and administrative activities concerning their assigned project. The Project Engineer may delegate tasks, duties and responsibilities to members of his Project group.

Project Group

Engineers in the Licensing, Mechanical, Electrical, Instrumentation/Control, Civil/Structural and Nuclear disciplines are assigned to the projects and provide technical support to the Project Engineer in the area of their disciplines.

In developing Authority positions, a close working relationship with their respective disciplines in the Staff Engineering Division is encouraged. When the completed plants have become operative, the Project Group assists in the technical support function.

Assistant Chief Engineer - Staff

Staff Engineering has senior advisors for providing consultation and technical support to the Engineering Department for all the Authority's projects with expertise in the various disciplines: (Electrical, Mechanical, Nuclear and Structural Engineering). They are a separate section of the Authority's Headquarters Office and are under the direction of the Assistant Chief Engineer - Staff Engineering, who reports to the Chief Engineer.

Staff Engineering personnel have the assignment of review and investigation of problems that are directed to them by the Resident Manager at the site, by the Power Operations Department and by the Project Engineers for each project. In additon to technical input on those matters directed to Staff Engineering, they are responsible for an overview into any area which requires technical review.

Director of Environmental Programs

The Director of Environmental Programs and his staff provide consultation and technical support to the Engineering Department for all the Authority's projects in the disciplines of aquatic and terrestrial biology/ecology, air quality/meteorology, hydrology, and environmental health/toxicology. The Environmental Programs Group may be assisted by other Power Authority employees with appropriate training and experience, and by various consultants. Assistance is provided for licensing efforts for all regulatory agencies and for those aspects of design, engineering and construction that may interface with the environment. The Environmental Programs Group is located in the Authority's Headquarters Office and reports to the Chief Engineer.

Assistant Chief Engineer - Construction Supervision

The Assistant Chief Engineer - Construction Supervision, reporting to the Chief Engineer, is responsible for insuring that the construction at Authority plants meets the quality, schedule and budget requirements. The Contract Administrator reports to the Assistant Chief Engineer - Construction Supervision and has responsibility for the administration of the procurement cycle for items purchased by the Authority at Headquarters. He is additionally responsible for monitoring other delegated organizations in their administration of contracts and the evaluation of bids (as related to design changes) in conjunction with other departments of the Authority as appropriate.

Director - Quality Assurance

The Director - Quality Assurance reports to the Chief Engineer and is responsible for establishing, administering and coordinating the Authority's Quality Assurance Program. Quality Assurance engineers assigned to each nuclear project at the Headquarters Office and at each site report to the Director of Quality Assurance.

Principal Fossil Engineer - Projects

The Principal Fossil Engineer - Projects assists the Assistant Chief Engineer - Projects in the supervision of the Project Engineers for fossil power plant projects.

Project Engineers

The Project Engineers report to the Principal Fossil Engineer - Projects. They are responsible for the overall technical and administrative activities concerning their assigned projects. The Project Engineers may delegate tasks, duties, and responsibilities to members of his Project group.

Project Group

Engineers in the Licensing, Mechanical, Electrical and Civil disciplines are assigned to the projects and provide technical support to the Project Engineer in the area of their disciplines.

Principal Pumped Storage Engineer

The Principal Pumped Storage Engineer assists the Assistant Chief Engineer - Projects in the supervision of the Project Engineers for pumped storage, hydro, small hydro and transmission line project.

Project Engineers

The Project Engineers report to the Principal Pumped Storage Engineer. They are responsible for the overall technical and administrative activities concerning their assigned projects. The Project Engineer may delegate tasks, duties and responsibilities to members of his Project group.

Project Group

An engineer in the Licensing discipline is assigned to the project to provide technical and licensing support to the Project Engineer.

NUCLEAR OPERATIONS SECTION

The Nuclear Operations Section, headed by the Manager, Nuclear Operations, provides overall direction for the operation of the Authority's nuclear power plants. The section contains five groups: (a) JAF and IP3 Nuclear Operations; (b) Radiological; (c) Training and (d) Inservice Inspection.

The Assistant Manager, Nuclear Operations, provides technical direction and supervision to the Nuclear Operations Section.

The section personnel maintain and provide specialized knowledge in all aspects of nuclear plant operation. They formulate and maintain corporate programs to assure efficient and safe operation of the plants, while maintaining full compliance with all regulatory requirements. They review, evaluate, and support plant performance and the implementation of corporate programs. These responsibilities are assigned to the groups as indicated below:

(a) Nuclear Operations Group: (JAF & IP3)

Provides specialized knowledge in the operation and maintenance of operating nuclear plants by monitoring and reviewing all aspects of plant operation. Provides direct support of nuclear plant from group personnel. Coordinates engineering, legal, contracts, procurement and consultant services. Acts as primary communications channel to nuclear plants. Informs nuclear plant of developments in technical and regulatory areas. Provides an operability and maintainability review of new designs and construction. Schedules operations personnel, documentation and equipment to support plant commissioning and operation. Recommends plant staff candidates for new plant from operating plant.

(b) Radiological Group:

Provides specialized knowledge in radiological emergency plans, radiation protection, shielding, meteorological and environmental (radiological) aspects for operating and planned nuclear plants. Formulates and maintains emergency plans in conjunction with nuclear plant personnel and coordinates support with regulatory agencies. Formulates, implements and monitors programs/techniques to minimize staff and public exposure to radiation. Reviews new plant design and modifications to assure adequate shielding to minimize radiation exposure. Provides expertise in radioactive effluent releases and distribution to assure proper programs to meet normal and accident conditions. Provides expert witness for regulatory hearings. Provides specialized knowledge in radiochemistry. Provides specialized knowledge in treatment and handling methods for radioactive waste material.

(c) Training Group:

Provides specialized knowledge in regulatory training requirements for licensed, non-licensed, and maintenance personnel, including methods, techniques, and facilities. Formulates and assists site implementation of training programs at fossil, hydro, and nuclear plants. Provides primary interface with the NRC Operator Licensing Branch. Formulates and directs training for corporate personnel in nuclear and non-nuclear disciplines, including corporate non-technical programs. Maintains centralized training files for corporate personnel.

(d) Inservice Inspection Group:

Provides specialized knowledge and services in Inservice Inspection Program development and implementation in accordance with the Code of Federal Regulations, 10CFR50.55a, the American Society of Mechanical Engineers Boiler and Pressure Vessel Code Sections III, V, IX, and XI. Responsible for implementing the Inservice Inspection Programs at nuclear plants and providing specialized knowledge in nondestructive testing procedures for conformance to applicable codes, regulatory guides, and NRC requirements. Provides primary interface between ISI contractors doing nondestructive examinations, plant operations, and the authorized inspection agency.

Safety and Security

Responsible for formulating, implementing and administering the nuclear security, fire protection, and safety programs for nuclear, fossil and hydro-electrical facilities. Responsibilities include design and cost evaluation of electronics surveillance systems and security force requirements as required by state and federal laws. The scope of responsibility includes construction, site security and industrial security at the Authority Headquarters,

Fuels Engineering Group:

The functions of this group pertain to the performance of existing fuel in nuclear reactors and to reload fuel planning for future operating cycles. With regard to existing fuel, the Fuels Engineering Group analyzes, studies and evaluates performance of the existing fuel and provides guidance to those responsible at the nuclear plants for day-to-day operating activities affecting the nuclear core. With regard to reload fuel, the Fuels Engineering Group assists in the scheduling of refueling outages. Personnel of the Fuels Engineering Group also provide the necessary interface between the Power Authority and the supplier of fabricated nuclear fuel and furnish guidance to the Power Authority in respect to the effect of fuel design decisions on plant operations.

In addition, the Fuels Engineering Group also performs work in connection with development of nuclear reactor analysis methods and nuclear fuel licensing.

Operations Engineering Group:

The Operations Engineering Section has staff responsibility for all non-nuclear operations and maintenance. This includes hydro, fossil, transmission and substation facilities. Direct field technical support is provided in particular for protective relaying, instrument and control, computer, communications power apparatus, thermal performance, turbines, and vibration-related work. Significant detailed design activities are also undertaken in these areas.

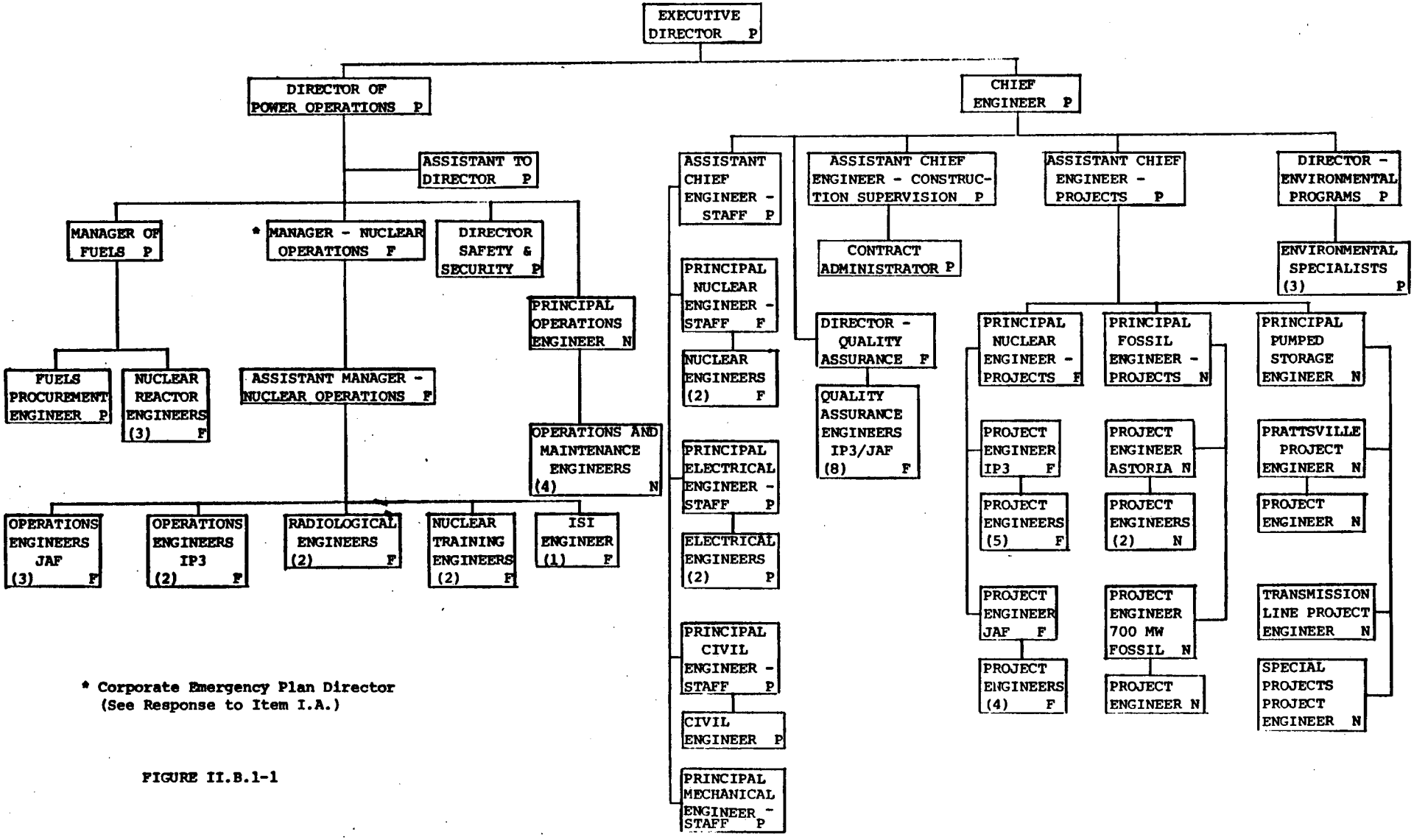
TABLE II.B.2-1
Technical Resources (Offsite)
Engineering Department

	Eng. Dept.	Nuclear Projects	Fossil Projects	Pumped Storage Projects	Quality Assurance	Construction Supervision	Environmental Programs	Staff Nuclear	Staff Mechanical	Staff Electrical	Staff Civil
1. Total Number (Managers, Engineers and Professional Personnel)	48	11	6	5	9	2	4	3	1	3	2
2. Education Background											
B.A. Biology	2						2				
B.A. Economics	1					1					
B.S. Ceramic Engineering	1				1						
B.S. Civil Engineering	7	1	1	3	1						1
B.S. Electrical Eng.	9	1	1	1	1			2		3	
B.S. Marine Engineering	4	1	2			1					
B.S. Mathematics	1									1	
B.S. Mechanical Eng.	10	4	2		1	1					
B.S. Metallurgical Eng.	1				1						
B.S. Nuclear Engineering	1	1									
B.S. Industrial Engineering	1				1						
B.S. Quantitative Biology	1						1				
B.S. Quality Engineering	1				1						
B.S. Physics	3	1					1	1			
B.S. Structural Engineering	1										1
B.S. Natural Resource Conservation	1			1							
M.A. Biology	1						1				
Master of Business Adm.	2	1			1						
M.S. Civil Engineering	1		1								
M.S. Ecology/Biochemistry	1						1				
M.S. Engineering Management	1	1									
M.S. Electrical Engineering	5	2	1					1		1	
M.S. Geophysics	1						1				
M.S. Mechanical Engineering	6	3	2						1		
M.S. Computer Science	1									1	
M.S. Metallurgical Eng.	1				1						
M.S. Nuclear Engineering	4	2						2			
M.S. Nuclear Physics	1	1									
M.S. Public Health	1			1							
M.S. Physics	1							1			
M.S. Structural Eng.	1										1

	Eng. Dept.	Nuclear Projects	Fossil Projects	Pumped Storage Projects	Quality Assurance	Construction Supervision	Environ-mental Programs	Staff Nuclear	Staff Mechanical	Staff Electrical	Staff Civil
Ph.D. Biology	1						1				
Ph.D. Ecology/Biochemistry	1						1				
Ph.D. Electrical Eng	1									1	
Ph.D. Geophysics	1						1				
Ph.D. Marine Ecology	1						1				
Ph.D. Nuclear Engineering	1							1			
Ph.D. Structural Eng.	1										1
3. Technical Experience											
(a) Engineering (Man-years)											
(1) Nuclear Power Field	344.5	122.5	17.5	12	50	18	2.5	38	5	15	21
(2) Engineering Management	295.5	65	26.5	54	42	20	15.5	14	3.5	5	15
(3) Total Utility Experience	457.5	106	94	54.5	41	41	27.5	36	3	39.5	5.5

(b) Field (Man-years)	F	N	F	N	F	N	F	N	F	N	F	N	F	N	F	N	F	N	F	N	F	N
Mechanical Eng.	49	108.5	21	14.5	8	53				4	7	20			3	1	5	13				
Nuclear Safety and Licensing	16		16																			
Nuclear Engineering	30		10						3						12							
Electrical Eng.	33.5	101.5	10.5	32.5	2	7		2		12					2	10			14	34		
Reactor Physics	15		2.5												12.5							
Physics		5		5																		
Nuclear Power Plant Operation	32		2		1										2							
Structural Eng.	49	78	7	21	9	5	12	22		10											21	20
Reactor Engineering	4.5		1												3.5							
Civil Engineering		18						18														
Quality Assurance Engineering	46	85							46	85												
Metallurgy/Materials Engineering	7								6													
Radiological Environmental Monitoring	4	2										2	3.5		0.5							
Non-Radiological Environmental Monitoring	16.5	15.5											16.5	15.5								
Thermal Hydraulic Eng.	4.5	2											2	2	2.5							
Health Physics	1														1							

Note: F = Full time nuclear experience
N = Non-nuclear experience



* Corporate Emergency Plan Director
(See Response to Item I.A.)

FIGURE II.B.1-1

TABLE II.B.2-2

TECHNICAL RESOURCES (OFF SITE)

POWER OPERATIONS DEPARTMENT

1. Total Number (Managers, Engineers, and Professional Personnel)	P.O. Dept. 25	JAF Project Operations (3)	IP3 Project Operations (2)	Radiological Controls (2)	Project Inservice Inspection (1)	Nuclear Training (2)	Fuels (6)	Operations Engineering (5)
2. Education Background								
B.S. Chemistry	1			1				
B.S. Metallurgical Engineering	1				1			
B.S. Mechanical Engineering	5	1	1			1	2	
B.S. Radiological Health Physics	1		1					
B.S. Electrical Engineering	8	1						5
B.S. Aeronautical Engineering	1	1						
B.S. Mathematics	2	1					1	
B.S. Applied Physics	1		1					
B.S. Naval Science	1							
B.S. Civil Engineering	1						1	
B.S. Chemical Engineering	1						1	
B.S. Physics	1						1	
M.S. Industrial Management	2			1	1			
M.S. Metallurgy	1				1			
M.S. Nuclear Engineering	3	1	1				1	
M.S. Systems Management	1							
M.S. Physics	1						1	
M.S. Mechanical Engineering	1						1	
M.S. Chemical Engineering	1						1	
M.S. Electrical Engineering	1							1
M.S. Management	1							1
PHD Nuclear Engineering	1						1	

TABLE II.B.2-2 (CONT'D)
TECHNICAL RESOURCES (OFF SITE)
POWER OPERATIONS DEPARTMENT

	JAF Project Operations		IP3 Project Operations		Radiological Engineering		Project ISI		Nuclear Training		Fuels		Operations Engineering		Power Operations Dept.	
3. Technical Experience																
(a) Engineering																
(1) Nuclear Power Field	23		18		22		8		21		58		8		196	
(2) Engineering Management	7		3		7		15		9		9		25		141	
(3) Total Utility Experience	22		20		1		8		1		56		30		170	
(b) Field	F	N	F	N	F	N	F	N	F	N	F	N	F	N	F	N
Reactor Physics	1										7				8	
Health Physics					8						1/4				8	
Nuclear Engineering	2										8				10	
Mechanical Engineering	3	5					1				1				10	5
Structural Engineering												2				2
Thermal Hydraulics Eng.											1/2				1/2	
Metallurgical Materials Eng.							14				1/4				14	
Radiological Env. Monitoring					2						1/2				2	
Reactor Engineering	3										3				6	
Construction Engineering												15				15
Nuclear Fuel Management											38				38	
Reactor Shielding											3					
Communications														13		13
Electrical Engineering	2	3												34	24	10
Nuclear Pr. Plant Operators	15	14							15			7			82	7
Plant Chemistry									4						4	
Training Supervisor									2						8	
Radiochemistry					12										12	
Non-Rad. Environ. Monitoring					1/4										1/4	
Emergency Planning					3/4										3/4	
Performance & Reliability Engineering	1		3												4	
Radiological Engineering			2												2	
Radwaste Management	5														5	

Note: F = Full time nuclear experience
N = Non-nuclear experience