

SOUTH CAROLINA ELECTRIC & GAS COMPANY

POST OFFICE BOX 764

COLUMBIA, SOUTH CAROLINA 29218

O. W. DIXON, JR.
VICE PRESIDENT
NUCLEAR OPERATIONS

September 21, 1982

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Virgil C. Summer Nuclear Station
Docket No. 50/395
Operating License No. NPF-12
Augmentation of Station Operating
Staff with Previously Licensed
Personnel

Dear Mr. Denton:

In a letter to the Nuclear Regulatory Commission dated March 4, 1981, South Carolina Electric and Gas Company committed to providing Pressurized Water Reactor (PWR) experienced Senior Reactor Operator (SRO) personnel to serve, in an advisory capacity, in the plant's control room. It was explained in that letter the fact that such personnel were currently onsite and that negotiations were in progress to retain these personnel until full power operation is achieved. These negotiations were formalized. However, due to the apparent heavy demand for these type personnel by the nuclear industry, great difficulty has been experienced in retaining these personnel and in acquiring replacements. We have experienced a loss of three qualified individuals since commencing the on-shift augmentation with contract personnel. In an effort to replace these personnel and overcome any further attrition, a comprehensive recruiting effort has been undertaken. This effort has been largely unsuccessful. To illustrate the problems and results of the recruiting effort, the following facts have been compiled.

1. Twenty-four qualified SRO-licensed candidates declined to accept an offer of employment involving shift work at Virgil C. Summer Nuclear Station.
2. A large population of candidates exists in the job market who have significant operating experience but only hold a Reactor Operator (RO) license in lieu of an SRO license. Statistics indicate that there are approximately three RO-licensed candidates for every SRO-licensed candidate in the job market.
3. Three qualified SRO-licensed candidates who would not accept an assignment at Virgil C. Summer Nuclear Station did accept employment for assignments not involving shift work at other sites.

As an additional incentive to enhance the retention and recruitment of qualified licensed personnel, additional salary compensation has been approved.

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Please find attached the resumés of five personnel that South Carolina Electric and Gas Company presently has available to perform these required duties. As can be noted upon examination of these resumés, three of these individuals possess experience as Licensed Senior Reactor Operators at PWR operating facilities (Messrs. Bly, Blake, and Simpkins). The remaining two individuals do not possess qualifications as stated in the March 4, 1981, letter (Messrs. Murphy and Stark).


Since March 1981, South Carolina Electric and Gas Company has employed two individuals who have previous experience as NRC Licensed Senior Reactor Operators. Enclosed are the resumés of these two individuals, Mr. G. G. Soult and Mr. L. R. Wagner. Both of these individuals work on separate rotating shifts with Mr. Soult serving as a Shift Supervisor and Mr. Wagner functioning as a Control Room Foreman. As can be seen upon examination of the attached resumés, these individuals possess extensive past experience as Licensed Senior Reactor Operators on large commercial Pressurized Water Reactors. Specifically, Mr. Soult spent approximately three years at Farley Nuclear Station. During this period, he acquired a Reactor Operator's License (August 1980), and a Senior Reactor Operator's License (January 1981), and performed duties as a Shift Foreman beginning in 1980. He also has approximately seven year's experience in the U. S. Navy Nuclear Power Program. Mr. Wagner spent over six years at Turkey Point Nuclear Station. During this period he obtained both a Reactor Operator's License (May 1973), and a Senior Reactor Operator's License (March 1977), and performed duties as a Nuclear Control Center Operator from May 1973 through May 1978.

Based on the above described experience for Messrs. Soult and Wagner, it is not considered necessary to augment their shifts with contract personnel. Therefore, only the remaining operating shifts will continue to be augmented with contract personnel. This will help alleviate our existing problem in replacing Messrs. Murphy and Stark.

It should also be noted that South Carolina Electric and Gas Company does have on staff other personnel who possess experience as Licensed Senior Reactor Operators at other Pressurized Water Reactors. These individuals are filling key positions in our organization but are available for relief duties to supplement the contract experience on a short time basis, if needed. Resumés for these personnel are enclosed.

Your prompt attention to this matter is greatly appreciated. If you have any additional questions, please call us.

Very truly yours,



O. W. Dixon, Jr.

ARK:OWD:dwf
Enclosures

cc: See Page Three

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cc: V. C. Summer
G. H. Fischer
H. N. Cyrus
T. C. Nichols, Jr.
O. W. Dixon, Jr.
M. B. Whitaker, Jr.
J. P. O'Reilly
H. T. Babb
D. A. Nauman
C. L. Ligon (NSRC)
W. A. Williams, Jr.
R. B. Clary
O. S. Bradham
A. R. Koon
M. N. Browne
G. J. Braddick
J. L. Skolds
J. B. Knotts, Jr.
B. A. Bursey
NPCF
File

RESUMES OF CONTRACT PERSONNEL

D. W. Murphy

D. W. Stark

S. E. Blake

J. Bly

D. S. Simpkins

DENNIS W. MURPHY

EXPERIENCE

April, 1980 - Present

Staff Engineer for NUS Corporation

Assigned to V. C. Summer Station - 860 MWE, 3 Loop Westinghouse PWR - in the start-up department as an assistant to the start-up supervisor.

Certified as a System Test Supervisor. Responsibilities include: review of Phase I & II test procedures, Test index verification, punch listing system completion and major testing restraint items and various other administrative duties.

As the start-up Training Coordinator, my responsibilities are to verify qualification of new start-up personnel, and to perform the indoctrination and training necessary to certify them for performing safety related testing. Other responsibilities are: Tracking TMI - related Engineering changes and providing an interface between construction, start-up and nuclear engineering for follow-up on material and design; coordinate the project monthly discipline meetings; assist with project scheduling; and conducting milestone meetings.

May, 1979 to April 1980

Senior Engineer for NUS at Long Island Lighting Company's Shoreham Nuclear Power Station (860 MWE BWR) as an advisor to the Operations Engineer.

Responsible for review of operating and test procedures. Wrote Plant General Operating Procedures and Position Analyses for Operations management personnel. Assisted in preparation and implementation of an Operator Field Qualification Check-out Program, as well as classroom instruction for the on-site Operator Training Program. Performed review of Emergency procedures, control room conduct, and Emergency Core Cooling capability in compliance with NRC bulletin 79.08.

May, 1979 to April, 1980
(cont'd.)

Performed review and revision of Standard Technical Specifications for submittal to NRC.

July, 1977 to May 1979

Senior Engineer for NUS at Detroit Edison's Enrico Fermi II Nuclear Power Plant (1050 MWE BWR)

Responsible for preparation of System Descriptions and Operating Surveillance Procedures. Wrote all Plant General Operating Procedures. Coordinator for implementation of the ASME Inservice Inspection Program for pumps and valves.

In August, 1978, assisted in the preparation of "Design Features and Operational Experiences of BWR Coolant Pressure Boundary Leak Detection Systems in U. A. Nuclear Power Facilities", a survey for Kernkraftwerk RWE, NIS-KRB.

December, 1972 to July 1977

Carolina Power & Light Co.

Served as Licensed Senior Control Operator and instructor at the Brunswick Steam Electric Plant, two units (860 MWE BWR each)

Served as Senior Control Operator on shift with the full duties of the Shift Supervisor. Worked for several months as assistant to Operation's Supervisor. Was later transferred to the Training Department as leading instructor.

During start-up of Unit I and II, was system expert on Liquid Radwaste, Augmented Off Gas, Residual Heat Removal, Standby Liquid Control (boron injection), and several other systems.

As Senior Control Operator, was involved with start-up and commercial operation of Units I and II. Was also involved in two major outages, including refueling and neutron monitor removal and replacement.

December, 1972 to July, 1977
(cont'd.)

Carolina Power & Light Co.

While in the Training Department, was instructor for NRC operator's licensing and requalification program and assisted in the formation of a centralized training program for Carolina Power & Light Co.

December, 1964 to December, 1972

U. S. Navy

Served aboard the USS CASIMIR PULASKI, assigned to the Engineering Department. Was Engine room Supervisor and Leading Engineering Lab Technician and Engineering Department Section Leader.

Received a special commendation from COMMANDER SUBMARINE SQUADRON FOURTEEN for superior performance of duties while on board the Casimir Pulaski.

EDUCATION

1964	Graduate Simon Kenton High School, Lees Creek, Ohio
1966	Naval Nuclear Power School, Bainbridge, Maryland
1967	Naval Reactor Prototype, Units SIW and AIW, Idaho Falls, Idaho
1968 through 1972	Various Special Service Schools
1974	G. E. Reactor Operator Certification, Morris, Illinois
1978	Liberal Arts, Monroe Community College, Monroe, Michigan

DAVID W. STARK

EDUCATION:

U. S. Navy Schools:
Machinist Mate "A"
Basic Nuclear Power
Nuclear Power Prototype
Sub School
Machine Tool Operation
Flex Hose and Fittings
Westinghouse SSTG Control Oil
General Electric SSTG Control Oil
General Motors Diesel
Fairbanks Morse Diesel
Welding, Burning, Brazing
Noise Measurement and Reduction
Air Conditioning Lithium Bromide
2000 GPD Distilling Unit
General Pump Maintenance

Westinghouse Training Simulator
Zion, Illinois

Babcock and Wilcox Training Simulator
Lynchburg, Virginia

Attended Industrial Arts Courses at
Central Missouri State College

EXPERIENCE:

Employed by NUS Corporation

July, 1980
to Present

V. C. Summer Nuclear Station

Responsible for preparation of Surveillance Test Procedures
and reviewing/preparation of Alarm Response Procedures.

July, 1976 -
July, 1980

Employed by Stone and Webster Engineering Co., Boston, Mass.
as an Advisory Engineer.

February, 1980
- July, 1980

Long Island Lighting Co., Shoreham Unit No. 1

Assigned to expedite flush procedures for liquid Radwaste
System.

October 1978 -
February, 1980

Niagara Mohawk Corporation, Oswego Unit No. 6

Assigned to initial equipment start-up, flushing and accept-
ance testing of various systems. Provided operational guid-
ance on systems placed under client control.

Resume of David W. Stark
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- May, 1978 - Niagara Mohawk Corporation, Oswego Unit No. 5
October, 1978
Assigned to waste treatment facility in charge of system operation, modification, and new equipment.
- January, 1978 Gulf States Utility Willow Glen Unit No. 3
- May, 1978
Promoted to Engineer. Supervised Waste Treatment Facility rework and reliability improvement.
- October, 1977 - Niagara Mohawk Power Corporation, Oswego Unit No. 6
January, 1978
Wrote Test Procedures, including steam blow, boiler hydro, and flushing.
- May, 1977 - Gulf States Utilities Company, Willow Glen No. 3
October, 1977
Check out, start-up, and operator training on Waste Water Treatment System.
- July, 1976 - Engineering Associate for Stone & Webster Eng. Corp.
May, 1977
Responsible for preparation of Type B & C Test Procedures and testing design modifications for the following projects:

Gulf States Utilites - River Bend Station
Niagara Mohawk Power Corp. - Nine Mile No. 2
San Diego Gas and Electric Co. - Sundesert
- January, 1976 Employed by General Dynamics Corp. - Electrical Boat Div.
- July, 1976
Test writer responsible for preparation of nuclear test procedures flushes, hydros, and operational tests.
- November, 1972 Employed by Duke Power Company
- October, 1975
- July, 1974 - McGuire Nuclear Station
October, 1975
Control operator responsible for preparation of operating procedures and performing installation checks. Successfully completed Westinghouse SRO Certification at Westinghouse Training Simulator in Zion, Ill.

November, 1972 - Oconee Nuclear Station

July, 1974

Control Operator engaged in all phases of pre-operational and acceptance testing, and hot functional testing of three units and commercial operation of two units. During this time, successfully completed the B & W Training Simulator Course in Lynchburg, VA, and acquired an NRC Operators License on three units.

April, 1965 -

August, 1972

U. S. Navy

Assigned as Senior Engine Room Supervisor on two FBM Submarines - USS George Washington and USS Sam Houston (through 10 FBM patrols).

RESUMÉ

STEVE E. BLAKE

Formal Education/
Training: B.A. History - Mobile College, Mobile, Alabama, 1972.
Westinghouse Electric Corporation Plant Lecture Series
Phase V - Part A and B.
Westinghouse Electric Corporation PWR Simulator Program
Option V - Zion, Illinois.
Alabama Power Company System Qualification Reactor Fundamentals
Pre-License Review Series.

License: Senior Reactor Operating License No. SOP-3539.
Nuclear Certification Level II - ANSI 45.2-6

Experience:

2/82 - ----- NUS Corporation - assigned to Virgil C. Summer Nuclear
Station to augment the station operations group as required.

7/82 - 1/82 Chem-Nuclear Systems, Inc., Columbia, SC -
Training Instructor at Atkansas Nuclear One - presented
course on Mitigating Core Damage and Accident and Transient
Analysis.
Senior Training Engineer at Waterford III - developing
lesson plans for license operator training.

10/81 - 7/81 Carolina Power & Light Company's Brunswick Steam Electric
Plant, Southport, North Carolina -
Plant Project Engineer - Assigned to BSEP as a project
engineer working on plant retrofits. Primary duties while
working in this engineering group are control of initial
design and approval of plant modifications. In initiating
the plant modification package the following items were
the responsibility of plant engineer:

- 1) Interface with operations and outage coordinator.
- 2) Issue Field Revisions.
- 3) Review final documentation, design verification.
- 4) Coordination of establishing proper system conditions
to perform work.
- 5) In charge of engineering procurement, material
specification development, bid inquiries, purchase
orders placed, and evaluation of bids.
- 6) Oversee installation, perform acceptance testing and
system turnover.

2/80 - 10/80 New Brunswick Power Company, Pt. LePreau Generating Station,
Pt. LePreau, New Brunswick, Canada
Test and Startup Engineer - System Engineer assigned to the
Nuclear Pre-Commissioning Group at Pt. LePreau. Responsible
engineer for Primary Heat Transport System and Fuel Handling

STEVE E. BLAKE - RESUME Continued

Systems. As systems engineer, duties included monitoring construction progress, identification and resolution of field encountered engineering problems, expediting missing equipment components, development of test boundaries identification packages, test procedure development and initial checkout and testing of assigned systems. Responsible for mechanical, electrical, and instrumentation aspects of systems. Required to coordinate vendor activities and coordinate new construction activities.

4/74 - 2/80

Alabama Power Company, Farley Nuclear Plant, Dothan, Alabama

Experience has been gained in operations of a nuclear power plant, training and experience in new fuel receipt, inspection and handling. Experiences include involvement in cold hydrostatic testing, hot functional testing, pre-startup testing, initial fuel loading, low power physics testing and power escalation testing.

Shift Foreman - Operations -- responsible for the direct supervision of plant operators, for safe plant operations, on-shift training, radiation protection as it pertains to shift activities and the overall compliance with the procedures and requirements for The Farley Station.

Utility Foreman - Responsible for plant labor staff. Primary function was to write and implement plant cleanliness procedure.

Assistant Plant Operator and Plant Operator -- Responsible for the operation of plant equipment. Participated in Plant Training Program.

While working as a utility foreman, attended licensing class and received a Senior Operators license on Farley Unit 1 in October 1979. Performed duties of licensed shift foreman on Unit 1 from October 1979 to February 1980.

Other experience stated above was gained while performing Unit 2 shift foreman duties in the adjacent control area of the same control room.

JUDSON BLY

EXPERIENCE:

- U. S. Navy - 1964 - 1970
Qualified on Nuclear Submarine Power Plants as Mechanical Operator, Engine room Supervisor (ERS), and Engineering Laboratory Technician (ELT). Instructor at Nuclear Submarine Prototype Plant.
- 1970 - September 1974
Wisconsin Public Service Corporation,
Kewaunee Nuclear Plant
Shift Supervisor during Construction Phase, Pre-op phase, Fuel load, Start-up to commercial operation, and power operation, SRO license.
- November 1974 to Present
NUS Corporation:

Virgil C. Summer Nuclear Station Unit 1 - assigned to augment Station Operations staff.

Beaver Valley Power Station - Operations advisor and shift operating foreman during pre-op phase, fuel load, start-up to commercial operation. SRO license.

D. C. Cook Nuclear Plant - Instructor for licensing of 10 new hot license RO's. Taught requalification classes and RO to SRO upgrade course. Wrote training system descriptions.

Enrico Fermi Nuclear Station - Wrote system technical descriptions.

Angra Nuclear Plant, Brazil - Operations Consultant. Reviewed procedures, start-up plans, organization plans, Operations Department Planning. Served as Operations Supervisor for 9 months.

DAVID S. SIMPKINS

WORK EXPERIENCE

January, 1981 -
Present

NUS Corporation

Assigned to Virgil C. Summer Nuclear Station to augment Station Operations Staff.

May, 1980 -
December, 1980

Gilbert Associates, Inc.

Assigned as start-up Engineer at Callaway Nuclear Plant, Fulton, Missouri.

Developed preventive maintenance and corrective maintenance programs and procedures for SNUPPS plant.

August, 1978 -
May, 1980

United Engineers and Constructors

June, 1979 -
May, 1980

Assigned as Maintenance Engineer at Brunswick Nuclear Plant, Southport, NC. Reviewed, revised, and developed preventive and corrective maintenance procedures, reviewed plant modifications, developed training program for Mechanical Maintenance personnel and conducted training for mechanics.

August, 1978 -
May, 1979

Assigned as S/U Engineer at Salem Nuclear Plant, Salem, NJ. Performed flushes, hydros, and pre-op testing on various systems. Systems include service water, containment spray, liquid waste and pre-op test on waste evaporator. Wrote flush and hydro procedures.

July, 1975 -
August, 1978

Alabama Power Company - Farley Nuclear Plant

September, 1976 -
August, 1978

Plant Operator (Nuclear) Underwent cold license training and received Reactor Operator's License in March, 1977. Assisted in all aspects of plant start-up including Hot Functional Testing, Cold Hydro Testing and Plant Pre-Operational. Received Senior Reactor Operators License, through self-study in May, 1978. Conducted initial receipt and inspection of fuel. Perform start-up for initial criticality for Unit one. Participated in many reactor and turbine start-ups, shut-downs, and trips.

July, 1975 -
September, 1976

Assistant Plant Operator (Nuclear) Assisted in start-up testing, including hydros, flushing and pre-operational testing. Participated in plant operator training course.

July, 1968 - U. S. Navy
September, 1976

March, 1975 - USS Seahorse (SSN 669) Maintenance Data Collection System
July, 1975 System Coordinator for Machinery Division during post-over-haul period while awaiting discharge. Qualified as Shutdown Roving Watch.

October, 1972 - USS U. S. Grant, SSBN 631 - Leading Petty Officer of Machinery
March, 1975 Division. Responsible for the operation and maintenance of propulsion and reactor plant and the training of personnel. Qualified as Engineering Watch Supervisor, responsible for entire engine room and reactor plant. Received Submarine Squadron Fourteen Commendation for period assigned to the USS U. S. Grant.

October, 1970 - Staff Instructor - Navy Nuclear Power Training Unit - West
October, 1972 Milton, NY.
Trained enlisted and officer students in plant operations. Conducted all aspects of training including administering exams and participating in Qualification Boards. Qualified as Engine Room Supervisor.

LICENSES

March, 1977 Reactor Operators License - NRC
May, 1978 Senior Reactor Operators License - NRC

TRAINING AND EDUCATION

1978 Senior Reactor Operator Training - Farley Nuclear Plant
1977 Reactor Operation Training - Cold License - Farley
1977 Simulator Training - Westinghouse - Zion, IL
1975 Plant Operator Training - Farley Nuclear Plant
1970 Navy Nuclear Prototype Training - West Milton, NY
1969 Navy Basic Nuclear Power School - Bainbridge, MD
1968 Navy Machinist Mate "A" School - Glakes, IL
1975 - 1976 Two (2) quarters - Pre-engineering - George C. Wallace
Community College, Dothan, Alabama
1966 Graduated - Beauregard High School, Opelika, AL

RESUMES OF SOUTH CAROLINA ELECTRIC & GAS COMPANY PERSONNEL

G. G. Sault

L. R. Wagner

M. N. Browne

J. G. Connelly

L. F. Storz

J. F. Heilman

M. B. Williams

GENE G. SOULT

Educational Background:

1969	Aurora High School Aurora, West Virginia
1981	B.S. Nuclear Management Troy State University Dothan, Alabama

Military Background:

1971 - 1972	Nuclear Power School Mare Island, California
1972	Nuclear Power Training Unit Initial Qualification Electrical Operator Idaho Falls, Idaho
1972 - 1975	USS M.G. Vallejo SSBN 658 EWS, EDPO, SDMAW, EO
1975 - 1978	Nuclear Power Training Unit Ballston Spa, New York EOOW, EWS, SDMAW, Staff Instructor

Civilian Background:

1978	Engineering Aide Farley Nuclear Plant Dothan, Alabama
1980 - 1981	Shift Foreman Farley Nuclear Plant Participated in training for Cold License on Unit II and Hot License on Unit I. Obtained Reactor Operator License (OP-5303) in August, 1980, and a Senior Reactor Operator License (SOP-3826) in January, 1981. Involved in all phases of day-to-day operations of Westinghouse PWR including regulatory compliance, surveillance testing, maintenance coordination, radiation control, environmental effluents, fuel handling, determination and classification of abnormal or emergency conditions. Also functioned as Shift Technical Advisor, participated in refueling of Unit I and initial startup of Unit II.
1981	Virgil C. Summer Nuclear Station Jenkinsville, South Carolina In June, 1981, assigned duties as Control Room Foreman.

Resume of Gene G. Sout
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1982

Shift Supervisor
Virgil C. Summer Nuclear Station
Jenkinsville, South Carolina
Senior Reactor Operator Licensed

LARRY R. WAGNER

Educational Background:

1961 North Miami Senior High School
North Miami, Florida

1966 - 1969 Miami Dade Community College
South Miami, Florida
Part-time student

Military Background:

1963 - 1966 Completed Training Program on CGM-76B Missile
and served as Inertial Guidance System
Mechanic at Kadena Air Force Base,
Kadena, Okinawa

Civilian Background:

1970 Auxiliary Equipment Operator
Cutler Power Plant
South Miami, Florida

1972 - 1978 Turkey Point Nuclear Station Units III and IV
Florida Power and Light
In March, 1972, participated in Licensed
Operator Training Program for Three Loop
Westinghouse PWR. In May, 1973, obtained
a Reactor Operator's License (OP-3305) and
in March, 1977, obtained a Senior Reactor
Operator License (SOP-2378-1). From May,
1973, through June, 1978, assigned duties
as Nuclear Control Center Operator. Responsible
for day-to-day control room duties involving
all phases of plant operations. Participated
in seven refuelings, two system blackouts,
several dual plant trips. Also participated
in operations involving plant safety injections
and steam generator tube ruptures of various
sizes.

1978 - 1980 Washington Public Power Supply
Systems WNP-2, AN 1150 MW BWR under construction
June, 1978, assigned duties as Control Room
Supervisor. Participated in the development
of station operating procedures.

1980 (June) Control Room Foreman
Virgil C. Summer Nuclear Station
South Carolina Electric & Gas Company
Jenkinsville, South Carolina

1982 Licensed as Senior Reactor Operator
Virgil C. Summer Nuclear Station
Jenkinsville, South Carolina

MELVIN N. BROWNE

Position: Director, Independent Safety Engineering Group

Formal Education: 1970, Clemson University, Clemson, S.C.
B.S., Mechanical Engineering

Experience:

1981-Present

South Carolina Electric & Gas Company
Nuclear Engineering and Licensing Department--
Director, Independent Safety Engineering
Group. Responsible to evaluate technical
aspects of day-to-day plant activities for
safe operation, review safety related pro-
cedures and review plant operations in
regard to operating experience including
Licensee Event Reports of facilities of
similar design.

1980-1981

Alabama Power Company, Joseph M. Farley
Nuclear Plant--Sector Supervisor
Assigned duties as Shift Supervisor.
Responsible for all phases of day-to-day
operations of Westinghouse PWR including
regulatory compliance, surveillance testing,
maintenance coordination, radiation control,
environmental effluents, physical security,
fuel handling, determination and classi-
fication of abnormal or emergency con-
ditions. Position encompasses extensive
personnel management exposure (both con-
tract and non-contract) to include tracking,
motivation, counseling, human relations,
evaluation, leadership, and related
administration.

1978-1980

Alabama Power Company, Joseph M. Farley
Nuclear Plant--Generating Plant Engineer,
Supervising. Involved in all aspects of
safety-related piping systems and equipment.
Coordinated development and implementation
of Preservice and Inservice Inspection
programs; Inservice Testing of pumps and
valves as required by the Code of Federal
Regulations and ASME Boiler and Pressure
Vessel Code. Administered contracts
for inspection services. Specified and
monitored non-destructive examinations

1978-1980 continued

for welding and other special processes associated with maintenance, repair and modification of installed plant equipment. Developed thorough knowledge of manufacturers/engineers specifications, blueprints, diagrams, schematics, shop and trade practices, equality assurance, production control criteria and safety standards. Designated "Acting Technical Supervisor" for a period of 8 months. Supervised staff of 12 engineers, group responsibilities included surveillance scheduling, licensee event reporting, preparation of plant budgets, fire protection, and engineering support. Developed methods for tracking plant design changes. Supervised engineering on-site and coordinated efforts of off-site organizations in developing final design. Supervised implementation and testing of modifications. Evaluated secondary performance in accordance with Power Test Codes.

1977-1978

Alabama Power Company, Joseph M. Farley Nuclear Plant--Generating Plant Engineer. Participated in fuel load, initial criticality, physics testing and power ascension test program; prepared test procedures, conducted tests and evaluated results. Assigned to plant maintenance group--initiated and implemented preventive maintenance program, prepared maintenance procedures for work on safety-related equipment; supported maintenance activities by troubleshooting, planning, and parts procurement; acted as liaison for major turbine generator inspection and repair.

1971-1977

May 1971-May 1977: United States Navy Machinist Mate Petty Officer First Class. Intrinsically involved in all aspects of nuclear systems; radiation safety; quality control; production; test and troubleshooting; inspection; personnel supervision. Due to demonstrated professionalism, initiative, adaptability and willingness to assume substantially increased responsibilities promoted in advance of normal time requirements to Petty Officer First Class. Accorded the highest professional and personal evaluations throughout Naval Career. Positions encompassed considerable personnel management exposure coupled with foreign residence and travel

1971-1977 continued

having afforded me the opportunity to establish rapport, assist, counsel, train and direct personnel of diverse backgrounds, interests, capabilities and motivations.

USS Lapon (SSN-661)--Assistant Workcenter Supervisor; responsible for a staff of specialists who performed all assembly, disassembly, overhaul, checkout, repair, test, troubleshooting, maintenance, adjustment, fabrication and modification on highly complex nuclear and conventional pressurized water reactor, air conditioning and refrigeration, hydraulic and secondary systems. Inspected and coordinated at all work center echelors to insure optimum production control, quality assurance, personnel efficiency, systems operability safety, sequences of operation. Certified Quality Assurance Inspector responsible for identification and rectification of deficiencies, trends, problem areas.

Additional Education:

United States Navy Nuclear Training Program. Completed the following job related courses: Quality Assurance, Radiation Control, Hydraulics, Air Conditioning and Refrigeration, other courses on specific mechanical equipment installed on nuclear submarines.

Nuclear Certification

USNRC Senior Reactor Operator License #3684

JOHN G. CONNELLY, JR.

Formal Education:

1966 B.S. Nuclear Engineering
North Carolina State University

Training:

1968-1969 Westinghouse Reactor Operator Training
Program, Waltz Mill and Pittsburgh, PA.

1969-1970 H. B. Robinson on-site training program,
Hartsville, SC.

Experience:

Employed by Carolina Power and Light
Company from 1966 to March 1977.

1966-1968 Start-up Engineer and Plant Engineer
at 700 MWe Fossil Unit.

1968-1972 Nuclear Engineer and Senior Engineer at
H.B. Robinson Nuclear Plant. Performed
Start-up Operations. Wrote general Plant
Administrative Procedures. Training
Coordinator for all plant operators.
Inspected new fuel arriving on-site.
Obtained license (SOP-1367). Shift
Supervisor during initial power ascension
phase.

1972-1977 Principal Engineer--Nuclear Training and
Administration. Responsible for cost
analysis, procurement and construction
of Shearon Harris Nuclear Plant Simulator;
preparation of Nuclear Generation Depart-
ment's O&M budget (approximately \$23 million);
coordination of all Nuclear Gen. Training
Programs. Registered as a Professional
Engineer.

Employed by South Carolina Electric & Gas
Company from March 1977 to Present.

1977-1979 Technical Support Supervisor
(See FS&R or Administrative Procedures
for responsibilities.)
Performing dual role as Start-up Supervisor.
Ensures the development, effective admin-
istrative control, and implementation of

1977-1979 continued

the Start-up Test Program. Supervise and coordinate all activities of the Start-up Group.

1979

Assistant Plant Manager
(See FSAR or Administrative Procedures for responsibilities.)
Performing dual role as Start-up Supervisor.

1981

Deputy Manager
(See FSAR for responsibilities.)
Performing dual role as Start-up Supervisor.

LOUIS F. STORZ

Formal Education:

1971

B.S. Mechanical Engineering
Purdue University

Training:

1960-1967

Completed the following U.S. Navy
Technical Schools: Electronics
Technical "A" School, Submarine School,
Nuclear Power School, Scuba Divers School,
Ships Damage Control School

1972-Present

Completed following Technical and Manage-
ment Training: Senior Reactor Operator
Training (Wisconsin Electric Power Co.),
Ansal Industrial Fire School (Ansal Co.),
HPR Fire Protection (Marsh & McClenan Pro-
tection Consults), High Rise Building Fire
Safety (University of Wisconsin), Fire
Protection for Nuclear Power Plants
(National Loss Control Corporation),
Fire Protection for Fossil Power Plants
(National Loss Control Corporation),
Professional Management Training Unit III
(Wisconsin Electric Power Company),
NFPA Flammable Liquid Seminar

Experience:

1960-1967

U.S. Navy, Conventional and Nuclear
Submarine Programs. Accomplished the
following: certified as nuclear
reactor operator S3G and S5W plants;
certified Navy scuba diver; shipboard
reactor operator certification board
representative; shipboard reactor
operator training coordinator; shipboard
engineering department administrative
assistant; and nuclear systems and
instrumentation and control instructor--
Charleston Submarine Training Center.

1971

PPG Industries, Chemical Division,
Columbia Southern Road, Lake Charles,
Louisiana

1971 continued

Mechanical Engineer

(Lake Charles Staff 1/71-10/71)

Completed intensive eight-week facility and system process orientation to learn basic aspects of plant operations, which included the following: Fossil power plant operations and production of chlorine, sodium hydroxide, chlorinated hydrocarbons gasoline additives, silica pigments, and vinyl polymers.

Responsibilities included the following: Assisting in the development, design through construction, and operation of a pilot plant for the production of HCl.

1971-1972

Babcock and Wilcox Company, Nuclear Power Generation, Lynchburg, Virginia

Contract Systems Engineer: Was responsible for the design of nuclear safety features and nuclear auxiliary support systems. This included: preparation of mechanical flow diagrams; instrumentation requirements, equipment specifications; detailed functional operating instructions; and solving system engineering problems with architectural engineering firms and customer's project management.

1972-1980

Wisconsin Electric Power Company, Milwaukee, Wisconsin. Operations Technical Assistant II and III, Point Beach Nuclear Power Plant (9/72-6/74). Was assigned general engineering work within the Operations Department, usually relative to data interpretation and system problem-solving. Was placed in a self-study program to prepare for NRC SRO licensing exam. Received SRO license (1/74). Was promoted to Technical Assistant III and continued similar work with additional responsibilities in construction and follow-up and start-up.

Operations Superintendent Assistant, Point Beach Power Plant (6/74-11/77)

Was responsible for all aspects of Operations Department administration, except personnel. Duties included preparing, reviewing, auditing normal and emergency procedures, operating

1972-1980 continued

instructions and functional and periodic testing. Reviewed and implemented operational quality assurance requirements, implemented code and technical specifications changes and prepared special technical investigations and field modifications. Performed surveillance of and directed construction activity. Held SRO license.

Qualified as Shift Supervisor (SRO) and as Nuclear Core Loading and Fuel Movement Supervisor. Was Start-up, Test, and Field Modification Engineer for the following: 35 gpm blowdown/waste evaporator system; 80 gpm reactor coolant gas stripper system; main steam dump overspeed protection system; radioactive gas decay and removal system (first of kind); radioactive solid and liquid waste disposal system. Coordinated shipment of spent fuel to reprocessor. Prepared technical paper on Radioactive Waste Disposal presented in 1977, Atlanta Waste Symposium, published 1979. Also administered all aspects of plant fire prevention and protection. During the period of 1972-1977, 11 refueling outages occurred at Point Beach Power Plant.

System Fire Protection Officer, Corporate Staff (11/77-3/80)--The major duties and responsibilities of this position include the following: preparing fire hazard analyses; developing and implementing fire protection policies; training and inspection programs; property loss investigations; and developing/implementing loss control programs including all aspects of Point Beach Nuclear Power Plant fire protection program.

Beginning April 1979, in addition to normal responsibilities, assigned to the Wisconsin Electric Three Mile Island Nuclear Accident Review Task Force as Nuclear Operations and Training Specialist.

Institute of Nuclear Power Operations (INPO) (12/79-3/80)--Assigned to the original INPO staff on a loan basis by WEPCO. Worked on

1972-1980 continued

preparation of criteria for Operational Benchmarks and an evaluation program for Nuclear Power Plants. Was recalled from this project to act as Operations Superintendent at Point Beach Nuclear Station.

Operations Superintendent, Point Beach Nuclear Power Plant (3/80-6/80)--Responsible for all aspects of the Operations Department administration and license activities. During this period of time, two cold shutdowns were made to plug steam generator tubes, and a five-week refueling outage was completed.

1980-1981

South Carolina Electric and Gas Company, Columbia, SC --Operations Supervisor, V.C. Summer Nuclear Station, Jenkinsville, S.C. Responsible for all aspects of the Station Operations Department administration. (See FSAR Chapter 13.1 for responsibilities.)

1981-Present

South Carolina Electric and Gas Company, V.C. Summer Nuclear Station; Assistant Manager, Operations. (See FSAR Section 13.1 for responsibilities.)

RESUMÉ

JAMES F. HEILMAN

Formal Education: Currently enrolled as a senior at University of South Carolina, Columbia, SC majoring in Computer Science.
A.S. - Delta College, University Center, MI.

Military Training/ Experience:

Nuclear Power School, Bainbridge, Maryland.
Nuclear Prototype Training, Windsor Locks, Connecticut.
Electronics Technician "A" School, Great Lakes, Illinois.

Reactor Operator and Shutdown Maneuvering Area Watch, U.S.N., Patrick Henry, SSBN-599, 1971-1973; responsibilities included safe operation and maintenance of the reactor control and safety systems, directly responsible for the entire nuclear plant when shutdown.

Electronics Technician, U.S.N., 1967-1971; responsible for the operation, maintenance and repair of air search and control radars and radar repeaters, required to read and work from schematic diagrams, mechanical drawings, and blueprints.

Experience:

Director of Nuclear Operations Training, responsible for all phases of License Operator Training and Retraining, Shift Technical Advisor Training and Retraining, scheduling of training programs and development of departmental Training Manual.

Nuclear Training Instructor, responsible for classroom instruction in Licensed Operator and Auxiliary Operator Training programs, including exam preparation, lesson plan development and review.

Training Coordinator I (Nuclear), Consumers Power Company, Midland Plant, responsible for Cold License Operator Training and Requalification.

Assistant Shift Supervisor, Consumers Power Company, Midland Plant, February 1977 to June 1978; responsible for writing and reviewing initial operating procedures, supervision and monitoring of nuclear plant construction.

Assistant Nuclear Operator, Florida Power Corporation, Crystal River Nuclear Plant, September 1973 to February 1977; responsible for daily operations in the Control Room, working directly with the Nuclear Operator under the direct supervision of the Shift Supervisor. Received Cold Senior Operators License (75-100%), initial fuel receipt and initial fuel loading; was operator at the controls during initial criticality and power range testing; this included all phases of plant operation from the control room of an operating PWR; responsible for the writing and review of operational procedures, alarm procedures, and emergency procedures.

James F. Heilman - Resumé Continued

Licenses: Senior Operators License #SOP-4187, V. C. Summer Nuclear
 Station.
 Senior Operators License #SOP-2655 (Cold), Crystal River
 Nuclear Station.
 Advanced Class amateur radio operators and station license
 #WD8PEY.

MICHAEL B. WILLIAMS

Education:

M.A., Business Management,
Central Michigan University

B.A., Biology,
Coker College

License:

USNRC Senior Reactor Operator
SOP-1927 (H.B. Robinson Plant)

USNRC Reactor Operator
OP-3060 (H.B. Robinson Plant)

Experience:

1981-Present

South Carolina Electric and Gas Company. As Manager, Nuclear Operations Education and Training, responsible for development and implementation of training and education programs for personnel associated with the V.C. Summer Nuclear Station. Personnel to be trained include station, corporate office staff, and contractors. Responsible for procurement and operation of a full scope simulator duplicating the station (3 loop, 2775 MW thermal, Westinghouse design) control room.

1978-1981

Carolina Power and Light Company. As Director, Nuclear & Simulator Training, responsible for providing effective nuclear plant operator training in conformance with applicable regulatory requirements and plant needs to insure the availability of the large numbers of skilled personnel necessary for the safe and efficient operation of the Company's nuclear generating plants. Responsible for the efficient operation of the Shearon Harris Nuclear Power Plant Simulator (PWR) including provision of modifications as required; procurement of the Brunswick Unit 2 Simulator (BWR) and development of training programs for each. As Principal Quality Assurance Specialist, responsible for managing the Nuclear Plant Surveillance Program at the Company's operating nuclear generating plants, H.B. Robinson Unit 2 (PWR) and Brunswick Unit 1 and Unit 2 (BWR). Provided surveillance programs to determine the adequacy of approved plant procedures and practices, the degree of implementation and the quality of work being accomplished.

1978

NUS Corporation. Responsible as Manager, Production Training Services Department, for the development and conduct of all training services for nuclear and fossil electric utility and industrial clients. These programs include NUS generic programs or special programs, conducted at NUS or on-site. Responsible for providing services to utility clients including consulting, personnel selection, testing, audit examinations, and program evaluations. Responsible for furnishing on-site individuals to administer client programs, including the development of client training and related materials. Responsible for providing services related to the use of power plant simulators and trainers.

1971-1978

Carolina Power and Light Co. As Project Administrative Specialist, responsible for supervising nuclear and fossil Generation Department administration including finance and cost control; non-fiscal administration including personnel selection and administrative procedures development; contract administration; and implementation of the Nuclear Plant Reliability Data Program (NPRD) at three operating and four nuclear units under construction. As Senior Scientist, responsibilities included administration of NRC type "Audit Exams", development of training programs for fossil and nuclear plant applications. As member of the nuclear plant simulator procurement team, conducted design reviews and acceptance test procedure development. As Shift Foreman at H. B. Robinson Plant, supervised operating shifts at combined fossil/nuclear station, licensed by NRC as SRO and RO on Westinghouse Pressurized Water Reactor. Taught "Hot License" and requalification training courses at Robinson Plant. As Control Operator and Auxiliary Operator was assigned responsibilities on both fossil and nuclear units.

1963-1971

U.S. Navy. Engineering assignments to new construction and operational fleet ballistic missile and attack nuclear submarines.

Resume of Michael B. Williams
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Current Memberships:

Industry Review Group for Training
and Education Division, Institute of
Nuclear Power Operations; Advisory
Committee for Nuclear Technology Degree
Program, Aiken Technical College.