

DEPUTY MANAGER
OFFICE OF NUCLEAR POWER
CHARLES HAYDEN FOX, JR.

WORK EXPERIENCE

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| FEB 87 - PRESENT | DEPUTY MANAGER, ONP, TVA, CHATTANOOGA |
| SEPT 86 - FEB 87 | TVA, ASSISTANT MANAGER OF NUCLEAR POWER, CHATTANOOGA, TENNESSEE |
| JAN 84 - AUG 86 | DEPARTMENT OF ENERGY, ASSISTANT MANAGER OF PROJECT MANAGEMENT, SAVANNAH RIVER PLANT, AIKEN, S.C. |
| NOV 81 - JAN 84 | ASSISTANT DIRECTOR FOR ENGINEERING, CLINCH RIVER BREEDER REACTOR PROJECT, OAK RIDGE, TENNESSEE |
| JUN 81 - NOV 81 | ENGINEER MANAGER AND DEPUTY ENGINEER MANAGER AND DIRECTOR, SYSTEMS MANAGEMENT DIVISION (DUAL POSITION), ENRICHMENT EXPANSION PROJECTS OFFICE, DOE-OAK RIDGE OPERATIONS, GS-15, FUNCTIONED AS THE ENGINEER MANAGER JUNE 81 - NOV 81. |
| SEP 80 - NOV 81 | DEPUTY ENGINEERING MANAGER, DEPT OF ENERGY, OAK RIDGE OPERATIONS, OAK RIDGE, TENNESSEE |
| SEP 77 - SEP 80 | DIVISION DIRECTOR, SYSTEMS MANAGEMENT DIVISION, DEPARTMENT OF ENERGY, ENRICHMENT EXPANSION PROJECTS OFFICE, DOE-OAK RIDGE OPERATIONS, OAK RIDGE, TENNESSEE |
| SEP 76 - AUG 77 | SYSTEMS ADVISOR TO DEPUTY MANAGER FOR ENRICHMENT EXPANSION PROJECTS, GS-15, DEPARTMENT OF ENERGY, DOE-OAK RIDGE OPERATIONS, OAK RIDGE, TENNESSEE |
| DEC 74 - SEP 76 | SENIOR DEVELOPMENT ENGINEER, ATOMIC ENERGY COMMISSION, ENERGY RESEARCH AND DEVELOPMENT AGENCY, OAK RIDGE OPERATIONS, OAK RIDGE, TENNESSEE |
| JUN 74 - DEC 74 | DEVELOPMENT ENGINEER, ATOMIC ENERGY COMMISSION, OAK RIDGE OPERATIONS, OAK RIDGE, TENNESSEE |
| JUL 73 - JUN 74 | OPERATIONS ANALYST, ATOMIC ENERGY COMMISSION, OAK RIDGE OPERATIONS, OAK RIDGE, TENNESSEE |

MAR 71 - JUL 73 TECHNICAL ANALYST, ATOMIC ENERGY COMMISSION,
SAVANNAH RIVER PLANT OPERATIONS OFFICE, AIKEN,
SOUTH CAROLINA

DEC 65 - SEP 68 ASSOCIATE DEVELOPMENT ENGINEER, UNION CARBIDE
CORPORATION, OAK RIDGE, TENNESSEE

SEP 62 - DEC 64 ENGINEERING COOP STUDENT, TENNESSEE VALLEY
AUTHORITY, CHATTANOOGA, TENNESSEE

CAREER HIGHLIGHTS

- o Was responsible for all facets of project management activities (design, engineering, and construction) at the Savannah River Plant, Aiken, S.C., for approximately 800 active projects ranging in size from less than \$1 million to \$900 million throughout the spectrum of technical complexity. The projects included The Defense Waste Processing Facility; The Naval Fuel Manufacturing Facility; the Steel Creek Dam Project which permitted the restart of the L Production Reactor; the Replacement Tritium Facility; and The Fuel Production Facility.
- o Provided engineering management and direction for all aspects of Clinch River Breeder Reactor Plant (CRBRP) Project, including technical supervision and contract administration of the CRBRP and supporting activities; managed CRBRP applied base research and development work at the reactor manufacturers and national laboratories; maintained overall supervision of programmatic and technical aspects of CRBRP and related activities, including all RRT technical and programmatic reviews and evaluations.

EDUCATION

JUN 66 B.S. NUCLEAR/MECHANICAL ENGINEERING, TENNESSEE TECHNOLOGICAL
UNIVERSITY

FEB 68 M.S. NUCLEAR/MECHANICAL ENGINEERING, NORTH CAROLINA STATE
UNIVERSITY

MAY 74 Ph.D, NUCLEAR ENGINEERING (MINOR-MECH. ENGR.), NORTH CAROLINA
STATE UNIVERSITY

LICENSES/CERTIFICATES

LICENSED PROFESSIONAL ENGINEER, CERTIFICATE E-18590

DIRECTOR, DIVISION OF NUCLEAR SERVICES
JAMES L. MCANALLY

WORK EXPERIENCE

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|------------------|--|
| MAR 87 - PRESENT | DIRECTOR, DIVISION OF NUCLEAR SERVICES, TVA, CHATTANOOGA |
| JAN 87 - MAR 87 | MANAGER, CORRECTIVE ACTION PROGRAM, TVA, CHATTANOOGA |
| OCT 86 - JAN 87 | ACTING MANAGER, PLANNING AND FINANCIAL STAFF, TVA, CHATTANOOGA |
| MAY 86 - OCT 86 | HEAD OF BUDGET AND COST CONTROL STAFF, TVA, CHATTANOOGA |
| 1980 - MAY 86 | CHIEF, FINANCIAL MANAGEMENT STAFF, PLANNING AND BUDGET, OFFICE OF THE GENERAL MANAGER, TVA, KNOXVILLE, TENNESSEE |
| 1978 - 1980 | SENIOR PROGRAM MANAGER--COORDINATION OF ENGINEERING SERVICES FOR UNION CARBIDE CORPORATION AND DEPARTMENT OF ENERGY, OAK RIDGE, TENNESSEE; AND RESIDENT MANAGER, EGYPT--CONSTRUCTION CONTRACT MANAGER FOR EGYPTIAN ELECTRIC AUTHORITY, GILBERT/COMMONWEALTH, READING, PENNSYLVANIA |
| 1977 - 1978 | PROJECT ENGINEER, CONSTRUCTION CONTRACT MANAGER FOR SUNDESERT NUCLEAR PROJECT, SAN DIEGO GAS AND ELECTRIC COMPANY, SAN DIEGO, CALIFORNIA |
| 1972 - 1977 | COMMONWEALTH EDISON COMPANY, CHICAGO, ILLINOIS--PROJECT MANAGER FOR BYRON AND BRAIDWOOD NUCLEAR PLANT PROJECTS; SITE ADMINISTRATOR AT LASALLE COUNTY NUCLEAR STATION CONSTRUCTION SITE; AND, SENIOR ENGINEER ON THE CLINCH RIVER LIQUID METAL FAST BREEDER REACTOR |
| 1970 | SENIOR ENGINEER, ANALYSIS OF PLANT DYNAMICS FOR LOFT REACTOR IN WATER REACTOR SAFETY PROGRAM, IDAHO NUCLEAR CORPORATION, IDAHO FALLS, IDAHO |

1968 - 1970 SENIOR ENGINEER, WESTINGHOUSE ELECTRIC CORPORATION, ADVANCED REACTOR DIVISION, MADISON, PENNSYLVANIA

1966 REACTOR ENGINEER, LOCKHEED NUCLEAR CORPORATION, DAWSONVILLE, GEORGIA

1962 - 1967 LICENSED NUCLEAR REACTOR OPERATOR, USAEC OP 1588, DEPARTMENT OF NUCLEAR ENGINEERING, TAUGHT BASIC ENGINEERING AND STRENGTH OF MATERIALS IN THE ENGINEERING SCIENCES DEPARTMENT, PURDUE UNIVERSITY, LAFAYETTE, INDIANA

EDUCATION

1962 B.S., NUCLEAR ENGINEERING, UNIVERSITY OF TENNESSEE
1966 M.S., NUCLEAR ENGINEERING, PURDUE UNIVERSITY
1968 Ph.D., NUCLEAR ENGINEERING, PURDUE UNIVERSITY
1972 M.B.A., HARVARD UNIVERSITY, 1972

LICENSES/CERTIFICATES

LICENSED NUCLEAR REACTOR OPERATION, USAEC OP 1588

DIRECTOR OF NUCLEAR TRAINING
R. JOE JOHNSON

WORK EXPERIENCE

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|------------------|---|
| MAY 86 - PRESENT | DIRECTOR, NUCLEAR TRAINING, TVA, CHATTANOOGA |
| NOV 79 - MAY 86 | CHIEF, NUCLEAR TRAINING BRANCH, TVA, SEQUOYAH |
| APR 77 - NOV 79 | COORDINATOR, POWER PRODUCTION TRAINING CENTER, TVA, SEQUOYAH |
| FEB 69 - APR 77 | ASSOCIATE PROFESSOR, SCHOOL OF NUCLEAR ENGINEERING, GEORGIA TECH |
| SEP 67 - FEB 69 | NUCLEAR ENGINEER, WESTINGHOUSE |
| JUN 67 - SEP 67 | ASEE-NASA SUMMER FACULTY FELLOW, MARSHALL SPACE FLIGHT CENTER |
| SEP 66 - FEB 69 | ASSISTANT PROFESSOR, SCHOOL OF NUCLEAR ENGINEERING |
| JUN 63 - SEP 63 | NUCLEAR ENGINEER, BABCOCK & WILCOX CO. |
| SEP 58 - SEP 61 | U.S. AIR FORCE, AIR WEATHER OFFICER |
| JUN 58 - SEP 58 | ENGINEER IN TRAINING, BABCOCK & WILCOX CO. |

EDUCATION

| | |
|------|--|
| 1958 | B.S. MECHANICAL ENGINEERING, GEORGIA INSTITUTE OF TECHNOLOGY |
| 1962 | M.S. MECHANICAL ENGINEERING, CALIFORNIA INSTITUTE OF TECHNOLOGY |
| 1966 | PHD NUCLEAR ENGINEERING, GEORGIA INSTITUTE OF TECHNOLOGY |

DIRECTOR OF NUCLEAR ENGINEERING
JOHN A. KIRKEBO

WORK EXPERIENCE

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|------------------|---|
| MAR 87 - PRESENT | DIRECTOR OF DIVISION OF NUCLEAR ENGINEERING, TVA, KNOXVILLE |
| OCT 86 - MAR 87 | LOANED EMPLOYEE TO DIVISION OF NUCLEAR ENGINEERING, TVA, KNOXVILLE (SWEC) |
| SEP 86 - OCT 86 | DIRECTOR OF DIVISION OF NUCLEAR ENGINEERING, TVA KNOXVILLE (SWEC) |
| JAN 86 - SEP 86 | MANAGER OF ENGINEERING AND TECHNICAL SERVICES, DIVISION OF NUCLEAR ENGINEERING, TVA, KNOXVILLE (SWEC) |
| 1983 - 1986 | SENIOR PROJECT ENGINEER, GULF STATES UTILITIES COMPANY, RIVER BEND STATION, UNIT 1 (SWEC) |
| 1978 - 1983 | PROJECT ENGINEER RIVER BEND STATION (SWEC) |
| 1976 - 1978 | ASSISTANT PROJECT ENGINEER (SWEC) |
| 1975 - 1976 | PROJECT COORDINATING ENGINEER, VIRGINIA ELECTRIC AND POWER COMPANY, NORTH ANNA POWER STATION, UNITS 1 AND 2 (SWEC) |
| 1974 - 1975 | LEAD POWER ENGINEER, STANDARD NUCLEAR PLANT, NEW ENGLAND ELECTRIC SYSTEM (SWEC) |
| 1973 - 1974 | PRINCIPAL NUCLEAR ENGINEER, VIRGINIA ELECTRIC AND POWER COMPANY, NORTH ANNA POWER STATION, UNITS 3 AND 4 (SWEC) |
| 1971 - 1973 | NUCLEAR SYSTEMS ENGINEER, SWEC |
| 1969 - 1971 | WEAPONS DEPARTMENT HEAD, RANK OF LIEUTENANT, OPERATIONAL READINESS OF THE POLARIS MISSILE WEAPONS SYSTEM, FLEET BALLISTIC MISSILE SUBMARINE REACTOR CONTROL DIVISION OFFICER, NUCLEAR REACTOR PROPULSION SYSTEM |
| 1964 - 1969 | U.S. NAVY NUCLEAR POWER PROGRAM |

EDUCATION

1964 B.S. CIVIL ENGINEERING, UNIVERSITY OF WASHINGTON
U.S. NAVY NUCLEAR POWER PROGRAM, GRADUATE-LEVEL COURSES IN
NUCLEAR REACTOR SYSTEMS AND PLANT ENGINEERING

LICENSES AND REGISTRATIONS

REGISTERED PROFESSIONAL ENGINEER (MECHANICAL), STATE OF LOUISIANA

ACTING DIRECTOR, NUCLEAR CONSTRUCTION AND PROJECT MANAGER
WATTS BAR CONSTRUCTION PROJECT
ROBERT A. PEDDE

WORK EXPERIENCE

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| JAN 87 - PRESENT | ACTING DIRECTOR, NUCLEAR CONSTRUCTION |
| JUL 86 - PRESENT | PROJECT MANAGER, WATTS BAR CONSTRUCTION PROJECT, TVA, WATTS BAR NUCLEAR SITE |
| JUN 84 - JUL 86 | ASSISTANT TO THE MANAGER, OFFICE OF CONSTRUCTION, TVA, KNOXVILLE |
| MAY 82 - JUN 84 | ASSISTANT TO MANAGER, DIVISION OF CONSTRUCTION |
| JUL 80 - MAY 82 | COST MANAGEMENT SPECIALIST, OFFICE OF ENGINEERING DESIGN AND CONSTRUCTION, TVA, KNOXVILLE |
| APR 77 - JUL 80 | SUPERVISOR, PLANNING AND SCHEDULING SECTION, OFFICE OF ENGINEERING DESIGN AND CONSTRUCTION, TVA, KNOXVILLE |
| APR 76 - APR 77 | SUPERVISOR, PROJECT CONTROL SECTION, DIVISION OF CONSTRUCTION, OFFICE OF ENGINEERING DESIGN AND CONSTRUCTION, TVA, WATTS BAR NUCLEAR PLANT |
| OCT 74 - APR 76 | PROJECT CONTROL ENGINEER, DIVISION OF CONSTRUCTION, OFFICE OF ENGINEERING DESIGN AND CONSTRUCTION, TVA, WATTS BAR NUCLEAR PLANT |
| AUG 72 - OCT 74 | CIVIL ENGINEER, DIVISION OF CONSTRUCTION, OFFICE OF ENGINEERING DESIGN AND CONSTRUCTION, TVA, WATTS BAR NUCLEAR PLANT |
| JAN 72 - AUG 72 | CIVIL ENGINEER, DIVISION OF CONSTRUCTION, OFFICE OF ENGINEERING DESIGN AND CONSTRUCTION, TVA, SEQUOYAH NUCLEAR PLANT |
| JUL 70 - JAN 72 | U.S. ARMY |
| APR 70 - JUL 70 | CIVIL ENGINEER, DIVISION OF CONSTRUCTION, TVA, CUMBERLAND STEAM PLANT |

EDUCATION

1970 B.S. CIVIL ENGINEERING, MICHIGAN STATE UNIVERSITY

SITE DIRECTOR/PROJECT MANAGER
BELLEFONTE NUCLEAR PLANT
JAMES P. DARLING

WORK EXPERIENCE

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| OCT 85 - PRESENT | SITE DIRECTOR/PROJECT MANAGER, TVA, BELLEFONTE NUCLEAR PLANT |
| JUL 85 - OCT 85 | ASSISTANT MANAGER, POWER & ENGINEERING (NUCLEAR), TVA, CHATTANOOGA |
| OCT 84 - JUL 85 | MANAGER, OFFICE OF NUCLEAR POWER, TVA, CHATTANOOGA |
| APR 81 - OCT 84 | DEPUTY MANAGER, OFFICE OF POWER, TVA, CHATTANOOGA |
| DEC 79 - APR 81 | MANAGER OF POWER ENGINEERING, OFFICE OF POWER, TVA, CHATTANOOGA |
| AUG 77 - DEC 79 | DIRECTOR, DIVISION OF FUELS, TVA, CHATTANOOGA |
| MAY 77 - AUG 77 | ASSISTANT DIRECTOR, DIVISION OF POWER RESOURCE PLANNING, TVA, CHATTANOOGA |
| MAR 73 - MAY 77 | BRANCH CHIEF, DIVISION OF POWER RESOURCE PLANNING, TVA, CHATTANOOGA |
| JUN 71 - MAR 73 | ASSISTANT BRANCH CHIEF, DIVISION OF POWER RESOURCE PLANNING, TVA, CHATTANOOGA |
| SEP 67 - JUN 71 | POWER PROGRAM ANALYST, OFFICE OF POWER, TVA, CHATTANOOGA |
| AUG 66 - SEP 67 | RESEARCH ANALYST, FINANCIAL PLANNING STAFF, TVA, CHATTANOOGA |
| DEC 65 - AUG 66 | MECHANICAL ENGINEER, DIVISION OF POWER PRODUCTION, POWER PLANT MAINTENANCE, TVA, CHATTANOOGA |
| MAR 59 - DEC 65 | POWER SUPPLY ENGINEER, DIVISION OF POWER SUPPLY PLANNING, TVA, CHATTANOOGA |
| OCT 59 - APR 60 | U.S. ARMY |

EDUCATION

1959 B.S. MECHANICAL ENGINEERING, TENNESSEE TECHNOLOGICAL UNIVERSITY
1967 M.S. INDUSTRIAL ENGINEERING, STANFORD UNIVERSITY
1969 MBA, UNIVERSITY OF CHATTANOOGA

NUCLEAR SITE DIRECTOR
SEQUOYAH NUCLEAR PLANT
HERBERT L. ABERCROMBIE

WORK EXPERIENCE

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| NOV 84 - PRESENT | SITE DIRECTOR, TVA, SEQUOYAH NUCLEAR PLANT |
| APR 84 - NOV 84 | DIRECTOR, DIVISION OF NUCLEAR SERVICES, TVA, CHATTANOOGA |
| SEP 81 - APR 84 | ASSISTANT MANAGER, NUCLEAR PRODUCTION, TVA, CHATTANOOGA |
| JUL 79 - SEP 81 | POWER PLANT SUPERINTENDENT, TVA, BROWNS FERRY NUCLEAR PLANT |
| MAR 77 - JUL 79 | ASSISTANT POWER PLANT SUPERINTENDENT, TVA, BROWNS FERRY NUCLEAR PLANT |
| JAN 70 - MAR 77 | POWER PLANT OPERATIONS SUPERINTENDENT, TVA, SEQUOYAH NUCLEAR PLANT |
| MAY 68 - JAN 70 | POWER PLANT OPERATIONS SUPERVISOR, POWER PRODUCTION, TVA, CHATTANOOGA |
| JUL 66 - MAY 68 | PERSONNEL OFFICER, POWER PRODUCTION, TVA, CHATTANOOGA |
| NOV 63 - JUL 66 | SHIFT ENGINEER DIVISION OF POWER PRODUCTION, TVA |
| DEC 53 - NOV 63 | UNIT OPERATOR, DIVISION OF POWER PRODUCTION, TVA. PROGRESSIVE ASSIGNMENTS AFTER COMPLETION OF TVA'S STUDENT GENERATING PLANT OPERATOR (SGPO) TRAINING PROGRAM |
| DEC 50 - DEC 53 | U.S. NAVY |

EDUCATION

APPLIED SCIENCE DEGREE IN PROGRESS, UNIVERSITY OF ALABAMA (109 HOURS
COMPLETED)

ASSISTANT TO THE MANAGER OF NUCLEAR POWER
LARRY L. JACKSON

WORK EXPERIENCE

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| DEC 86 - PRESENT | ASSISTANT TO THE MANAGER OF NUCLEAR POWER, TVA, CHATTANOOGA |
| OCT 86 - DEC 86 | ASSISTANT MANAGER OF NUCLEAR POWER (STAFFS), TVA, CHATTANOOGA |
| DEC 85 - OCT 86 | ASSISTANT TO THE MANAGER OF NUCLEAR POWER, TVA, CHATTANOOGA |
| APR 80 - DEC 85 | CHEMISTRY DEPARTMENT MANAGER, EVALUATION TEAM MANAGER, CORPORATE EVALUATOR, CHEMISTRY AND RADIOLOGICAL PROTECTION EVALUATOR, INSTITUTE OF NUCLEAR POWER OPERATIONS |
| MAY 78 - APR 80 | RADIATION SPECIALIST, U.S. NRC |
| FEB 72 - MAY 78 | CHEMISTRY AND HEALTH PHYSICS SUPERVISOR CHEMISTRY AND HEALTH PHYSICS FOREMAN, FARLEY NUCLEAR PLANT, ALABAMA POWER COMPANY |
| JUN 70 - FEB 72 | CHEMISTRY TECHNICIAN ON STARTUP OF TWO SUPERCRITICAL FOSSIL FUELED PLANTS, ALABAMA POWER COMPANY |
| JUN 65 - JAN 70 | U.S. ARMY, PROGRESSED FROM SECOND LIEUTENANT TO CAPTAIN CHEMICAL CORPS |

EDUCATION

1965 B.A. CHEMISTRY - UNIVERSITY OF NORTH ALABAMA

MANAGER OF NUCLEAR PERSONNEL
MARILYN E. TAYLOR

WORK EXPERIENCE

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|------------------|---|
| FEB 86 - PRESENT | MANAGER OF NUCLEAR PERSONNEL, OFFICE OF NUCLEAR POWER, TVA, CHATTANOOGA |
| OCT 85 - FEB 86 | MANAGER, HUMAN RESOURCES, POWER AND ENGINEERING (NUCLEAR), TVA, CHATTANOOGA |
| AUG 79 - OCT 85 | DIRECTOR, DIVISION OF PERSONNEL, TVA, KNOXVILLE |
| AUG 74 - AUG 79 | MANAGER, INDUSTRIAL RELATIONS, KAISER SAND AND GRAVEL COMPANY, PLEASANTON, CALIFORNIA |
| DEC 72 - AUG 74 | EMPLOYEE DEVELOPMENT COORDINATOR, KAISER INDUSTRIES, OAKLAND, CALIFORNIA |
| MAY 68 - DEC 72 | TRAINING SUPERVISOR, KAISER INDUSTRIES, OAKLAND, CALIFORNIA |
| JUN 65 - MAY 68 | EMPLOYMENT INTERVIEWER, KAISER INDUSTRIES, OAKLAND, CALIFORNIA |

EDUCATION

1961-62 SACRAMENTO CITY COLLEGE, SACRAMENTO, CALIFORNIA

LICENSES/CERTIFICATES

1973 ADULT EDUCATION TEACHING CREDENTIAL, SACRAMENTO, CALIFORNIA

CHAIRMAN, NUCLEAR SAFETY REVIEW BOARDS
WILLIAM H. HANNUM

WORK EXPERIENCE

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| AUG 86 - PRESENT | CHAIRMAN, NUCLEAR SAFETY REVIEW BOARDS, TVA, CHATTANOOGA |
| AUG 82 - AUG 86 | DIRECTOR, WEST VALLEY PROJECT OFFICE, U.S. DEPARTMENT OF ENERGY, WEST VALLEY, NEW YORK |
| 77 - AUG 82 | DEPUTY DIRECTOR GENERAL, OECD NUCLEAR ENERGY AGENCY; PARIS, FRANCE |
| 76 - 77 | DEPUTY MANAGER, IDAHO OPERATIONS OFFICE, ERDA, IDAHO FALLS, IDAHO |
| 73 - 76 | ASSISTANT DIRECTOR FOR NUCLEAR SAFETY, REACTOR DEVELOPMENT DIVISION, U.S. ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION, WASHINGTON, DC. |
| 68 - 73 | CHIEF, REACTOR PHYSICS, U.S. ATOMIC ENERGY COMMISSION, WASHINGTON, DC. |
| 67 - 68 | EXCHANGE SCIENTIST, U.K. ATOMIC ENERGY ESTABLISHMENT, WINFRITH, DORSET, ENGLAND |
| 63 - 67 | ASSISTANT GROUP LEADER, LOS ALAMOS SCIENTIFIC LABORATORY, LOS ALAMOS, NEW MEXICO |
| 58 - 63 | SENIOR SCIENTIST, BETTIS ATOMIC POWER LABORATORY, WEST MIFFLIN, PENNSYLVANIA |

EDUCATION

| | |
|------|----------------------------------|
| 1958 | PHD PHYSICS, YALE UNIVERSITY |
| 1956 | MS PHYSICS, YALE UNIVERSITY |
| 1954 | AB PHYSICS, PRINCETON UNIVERSITY |

MANAGER, EMPLOYEE CONCERN PROGRAM
ERIC K. SLIGER

WORK EXPERIENCE

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| DEC 85 - PRESENT | MANAGER, EMPLOYEE CONCERN PROGRAM |
| FEB 85 - DEC 85 | STAFF ASSISTANT, OFFICE OF NUCLEAR POWER, TVA, CHATTANOOGA |
| NOV 84 - FEB 85 | SUPERVISOR, REGULATORY ENGINEERING, TVA, CHATTANOOGA |
| JAN 80 - NOV 84 | SUPERVISOR, RADIOLOGICAL EMERGENCY PREPAREDNESS, TVA, CHATTANOOGA |
| JUL 78 - JAN 80 | NUCLEAR ENGINEER, NUCLEAR GENERATOR BRANCH, TVA, CHATTANOOGA |
| JUN 77 - JUL 78 | NUCLEAR ENGINEER, PREOP TEST, TVA, WATTS BAR NUCLEAR PLANT |
| OCT 75 - JUN 77 | CLINCH RIVER BREEDER REACTOR PROJECT-STAFF ENGINEER-PROJECT MANAGER-CONTRACTS |
| JUL 71 - SEP 75 | LT., U.S. NAVY, NAVY NUCLEAR POWER OPERATIONS (SUBMARINE) |
| JUN 70 - JUL 71 | NUCLEAR ENGINEER, REACTOR ENGINEERING, TVA, CHATTANOOGA |

EDUCATION

1970 B.S. NUCLEAR ENGINEER, UNIVERSITY OF TENNESSEE

MANAGER, PLANNING AND FINANCIAL STAFF
S. B. FISHER

WORK EXPERIENCE

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|-------------------|--|
| JAN 87 - PRESENT | MANAGER, PLANNING AND FINANCIAL STAFF, TVA, CHATTANOOGA, TENNESSEE |
| JAN 85 - JAN 87 | PRESIDENT, FISHER SERVICES INC., MANAGEMENT CONSULTING FIRM, AUGUSTA, NEW JERSEY |
| MAR 80 - JAN 85 | DIRECTOR, FISCAL AND INFORMATION MANAGEMENT, GENERAL PUBLIC UTILITIES NUCLEAR CORPORATION, PARSIPPANY, NEW JERSEY |
| SEPT 72 - MAR 80 | CONTROLLER AND DIRECTOR OF FINANCE, MARTIN MARIETTA CORPORATION, DENVER, COLORADO |
| MAY 68 - SEPT 72 | CORPORATE FINANCIAL ANALYST, FAIRCHILD INDUSTRIES, GERMANTOWN, MARYLAND |
| SEPT 59 - MAY 68 | BUSINESS MANAGER, RESEARCH AND DEVELOPMENT AND INFORMATION SYSTEMS GROUPS, MARTIN MARIETTA CORPORATION, DENVER, COLORADO |
| SEPT 53 - SEPT 59 | SUPERVISOR COST ACCOUNTING AND FINANCIAL ANALYST, GENERAL ELECTRIC, CINCINNATI, OHIO |

EDUCATION

| | |
|------|---|
| 1949 | B.A. INDUSTRIAL MANAGEMENT - UNIVERSITY OF KENTUCKY |
| 1952 | ACCOUNTING STUDIES - UNIVERSITY OF LOUISVILLE |
| 1954 | LAW STUDIES - SALMON P. CHASE COLLEGE OF LAW |

SPECIAL ASSISTANT TO THE MANAGER OF NUCLEAR POWER
TISH B. JENKINS

WORK EXPERIENCE

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|------------------|--|
| APR 86 - PRESENT | SPECIAL ASSISTANT TO THE MANAGER OF NUCLEAR POWER, TVA, CHATTANOOGA |
| MAY 83 - APR 86 | NUCLEAR RESEARCH PROJECTS BRANCH MANAGER, TVA, CHATTANOOGA |
| DEC 81 - MAY 83 | ASSISTANT MANAGER OF OFFICE OF ECONOMIC AND COMMUNITY DEVELOPMENT, TVA, KNOXVILLE |
| NOV 79 - DEC 81 | DISTRICT ADMINISTRATOR IN OFFICE OF THE GENERAL MANAGER, TVA, CLEVELAND, TENNESSEE |
| JUL 77 - NOV 79 | BOILING WATER REACTOR LICENSING SECTION SUPERVISOR, TVA CHATTANOOGA |
| MAY 73 - JUL 77 | NUCLEAR ENGINEER IN SAFETY AND LICENSING, TVA, CHATTANOOGA |

EDUCATION

| | |
|------|---|
| 1972 | B.S. PHYSICS AND MATH - WESTERN KENTUCKY UNIVERSITY |
| 1973 | M.S. NUCLEAR PHYSICS - WESTERN KENTUCKY UNIVERSITY |
| 1977 | EIT CERTIFICATE, STATE OF TENNESSEE |

MANAGER, NUCLEAR POWER INFORMATION STAFF
CAROL E. AYERS

WORK EXPERIENCE

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|------------------|--|
| MAR 87 - PRESENT | MANAGER, NUCLEAR POWER INFORMATION, TVA, CHATTANOOGA, TENNESSEE |
| 1986 - MAR 87 | PUBLIC AFFAIRS SPECIALIST, NATIONAL AERONAUTICS AND SPACE ADMINISTRATION, MARSHALL SPACE FLIGHT CENTER, ALABAMA |
| 1984 - 1986 | PUBLIC AFFAIRS SPECIALIST, U.S. DEPARTMENT OF ENERGY, OAK RIDGE OPERATIONS, OAK RIDGE, TENNESSEE |
| 1983 - 1984 | PUBLIC AFFAIRS SPECIALIST, U.S. DEPARTMENT OF ENERGY, OFFICE OF FOSSIL ENERGY, WASHINGTON, D.C. |
| 1981 - 1983 | CHIEF OF PUBLIC INFORMATION BRANCH, PROJECT MANAGEMENT CORPORATION, CLINCH RIVER BREEDER REACTOR PROJECT, OAK RIDGE, TENNESSEE |
| 1980 - 1981 | WRITER/EDITOR, U.S. DEPARTMENT OF ENERGY, TECHNICAL INFORMATION CENTER, OAK RIDGE, TENNESSEE |
| 1975 - 1980 | INFORMATION OFFICER, U.S. DEPARTMENT OF ENERGY, PITTSBURGH ENERGY TECHNOLOGY CENTER, PITTSBURGH, PENNSYLVANIA |
| 1973 - 1975 | SCIENCE WRITER, GENERAL MOTORS RESEARCH LABORATORY, WARREN, MICHIGAN |
| 1970 - 1973 | ASSISTANT EDITOR, AMERICAN CHEMICAL SOCIETY, ENVIRONMENTAL SCIENCE AND TECHNOLOGY MAGAZINE, WASHINGTON, D.C. |

EDUCATION

| | |
|------|---|
| 1968 | B.S., PLANT SCIENCE, WEST VIRGINIA UNIVERSITY |
| 1970 | M.S., PLANT SCIENCE, UNIVERSITY OF DELAWARE |

MANAGER, EMPLOYEE CONCERN TASK GROUP
WILLIAM R. BROWN, JR.

WORK EXPERIENCE

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|------------------|--|
| JAN 87 - PRESENT | MANAGER, EMPLOYEE CONCERN TASK GROUP, TVA |
| OCT 86 - JAN 87 | ACTING DIRECTOR, NUCLEAR CONSTRUCTION, TVA |
| MAR 86 - OCT 86 | DEPUTY DIRECTOR, NUCLEAR CONSTRUCTION, TVA |
| OCT 85 - MAR 86 | PROJECT MANAGER, WATTS BAR NUCLEAR PLANT, TVA |
| MAR 82 - OCT 85 | PROJECT MANAGER, BELLEFONTE NUCLEAR PLANT, OFFICE OF ENGINEERING DESIGN AND CONSTRUCTION, TVA |
| FEB 80 - MAR 82 | ASSISTANT MANAGER, OFFICE OF CONSTRUCTION, TVA, KNOXVILLE |
| AUG 78 - FEB 80 | CONSTRUCTION ENGINEER, DIVISION OF CONSTRUCTION, TVA, KNOXVILLE |
| MAR 77 - AUG 78 | ASSISTANT CONSTRUCTION ENGINEER, DIVISION OF CONSTRUCTION, TVA, HARTSVILLE NUCLEAR PLANT |
| MAY 76 - MAR 77 | SUPERVISOR, ELECTRICAL ENGINEERING UNIT, DIVISION OF CONSTRUCTION, TVA, HARTSVILLE NUCLEAR PLANT |
| APR 73 - MAY 76 | SUPERVISOR, INSTRUMENTATION UNIT, DIVISION OF CONSTRUCTION, TVA, BROWNS FERRY NUCLEAR PLANT |
| JUL 70 - APR 73 | ELECTRICAL ENGINEER AND INSTRUMENT ENGINEER, DIVISION OF CONSTRUCTION, TVA, BROWNS FERRY NUCLEAR PLANT |
| MAR 68 - JUL 70 | RESEARCH ENGINEER, THE BOEING COMPANY, CAPE KENNEDY, FLORIDA |
| NOV 66 - FEB 68 | FIELD ENGINEER, CHRYSLER CORPORATION, CAPE KENNEDY, FLORIDA |
| NOV 65 - NOV 66 | FLIGHT TEST ENGINEER, GENERAL DYNAMICS CORPORATION, CAPE KENNEDY, FLORIDA |

EDUCATION

B.S. ELECTRICAL ENGINEERING, TENNESSEE TECHNOLOGICAL UNIVERSITY

MANAGER, MANAGEMENT TRAINING
MARILYN S. BLACKBURN

WORK EXPERIENCE

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| MAR 87 - PRESENT | MANAGER, MANAGEMENT TRAINING AND DEVELOPMENT, TVA, CHATTANOOGA, TENNESSEE |
| OCT 84 - MAR 87 | ORGANIZATIONAL DEVELOPMENT CONSULTANT, DIVISION OF PERSONNEL, TVA |
| OCT 82 - OCT 84 | TRAINING OFFICER, MANAGEMENT SKILLS ASSESSMENT PROJECT, DIVISION OF PERSONNEL, TVA |
| AUG 81 - OCT 82 | CONSULTANT, ORGANIZATION DEVELOPMENT TRAINING, MARKET RESEARCH, ATLANTA, GEORGIA |
| SEP 79 - AUG 81 | RESEARCH ANALYST, TRAINING EVALUATION, PERSONNEL RESEARCH, DIVISION OF PERSONNEL, TVA |
| OCT 75 - JAN 77 | EMPLOYMENT SPECIALIST, DEPARTMENT OF EMPLOYMENT SECURITY, STATE OF TENNESSEE |

EDUCATION

| | |
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| 1981 | M.S., INDUSTRIAL PSYCHOLOGY, UNIVERSITY OF TENNESSEE |
| 1978 | B.S., BUSINESS ADMINISTRATION, UNIVERSITY OF TENNESSEE |

DIRECTOR, NUCLEAR QUALITY ASSURANCE
NICHOLAS C. KAZANAS

WORK EXPERIENCE

| | |
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| MAR 87 - PRESENT | DIRECTOR NUCLEAR QUALITY ASSURANCE, TVA, CHATTANOOGA (GPU NUCLEAR) |
| AUG 86 - MAR 87 | DIRECTOR ENGINEERING PROJECTS, GPU NUCLEAR CORPORATION, PARSIPPANY, NEW JERSEY |
| NOV 81 - AUG 86 | DIRECTOR QUALITY ASSURANCE, GPU NUCLEAR CORPORATION, PARSIPPANY, NEW JERSEY |
| NOV 79 - NOV 81 | MANAGER OF QUALITY ASSURANCE FOR THREE MILE ISLAND UNITS 1 AND 2, GENERAL PUBLIC UTILITIES, PARSIPPANY, NEW JERSEY |
| AUG 79 - NOV 79 | TMI PROJECT MANAGER FOR PIPING CORROSION PROBLEMS, THREE MILE ISLAND UNIT 2, GENERAL PUBLIC UTILITIES, PARSIPPANY, NEW JERSEY |
| MAR 79 - AUG 79 | TMI-2 ACCIDENT RESPONSE TEAM, THREE MILE ISLAND UNIT 2, GENERAL PUBLIC UTILITIES, PARSIPPANY, NEW JERSEY |
| MAR 78 - MAR 79 | MANAGER OF QUALITY ASSURANCE, GPU SERVICE CORPORATION FOR FORKED RIVER NUCLEAR STATION, GENERAL PUBLIC UTILITIES, PARSIPPANY, NEW JERSEY |
| NOV 74 - MAR 78 | QUALITY ASSURANCE PROGRAM MANAGER, PERRY NUCLEAR POWER PLANT UNITS 1 AND 2, GILBERT/COMMONWEALTH, READING, PENNSYLVANIA |
| JUN 74 - NOV 74 | QUALITY ASSURANCE ASSISTANT PROGRAM MANAGER, PERRY NUCLEAR POWER PLANT UNITS 1 AND 2, GILBERT/COMMONWEALTH, READING, PENNSYLVANIA |
| JAN 74 - JUN 74 | OPERATIONS MANAGER - GENERAL ATOMICS - GULF NUCLEAR FUELS COMPANY, NEW HAVEN, CONNECTICUT |
| SEP 72 - JAN 74 | PRODUCTION MANAGER - GENERAL ATOMICS - GULF NUCLEAR FUELS COMPANY, NEW HAVEN, CONNECTICUT |
| 1970 - SEP 72 | CHIEF METALLURGIST/ ENGINEER IN CHARGE OF METALLURGY - UNITED NUCLEAR FUELS, NEW HAVEN, CONNECTICUT |

1962 - 1967

MATERIALS ENGINEER/PROJECT ENGINEER - PRESSURE
VESSELS/APPLIED RESEARCH METALLURGIST - UNITED
AIRCRAFT CORPORATION HAMILTON STANDARD
DIVISION, WINDSOR LOCKS, CONNECTICUT

EDUCATION

1962 B.S. METALLURGICAL ENGINEERING, LAFAYETTE COLLEGE

1969 M.B.A. PRODUCTION MAJOR, UNIVERSITY OF HARTFORD

DIRECTOR OF NUCLEAR SAFETY AND LICENSING
RICHARD L. GRIDLEY

WORK EXPERIENCE

JAN 86 - PRESENT DIRECTOR OF NUCLEAR SAFETY AND LICENSING, TVA,
CHATTANOOGA (GE)

AUG 79 - JAN 86 MANAGER, FUEL AND SERVICES LICENSING, NUCLEAR
ENERGY BUSINESS OPERATION; GENERAL ELECTRIC
(GE), SAN JOSE, CALIFORNIA

MAR 77 - AUG 79 MANAGER, OPERATING REACTOR LICENSING, BWR
PROJECTS DEPARTMENT, GE

NOV 74 - MAR 77 MANAGER, BWR TRAINING SERVICES, BWR PROJECTS
DEPARTMENT, GE

DEC 69 - NOV 74 MANAGER, BWR TRAINING, ATOMIC POWER EQUIPMENT
DEPARTMENT, GE

DEC 67 - DEC 69 MANAGER, BWR TRAINING CENTER, ATOMIC POWER
EQUIPMENT DEPARTMENT, GE, MORRIS, ILLINOIS

JAN 65 - DEC 67 SPECIALIST, CUSTOMER TRAINING, ATOMIC POWER
EQUIPMENT DEPARTMENT, GE, SAN JOSE, CALIFORNIA

JAN 62 - JAN 65 REACTOR OPERATIONS ENGINEER, ATOMIC POWER
EQUIPMENT DEPARTMENT, GE, SAN JOSE, CALIFORNIA

JAN 61 - JAN 62 ENGINEER, NEW PRODUCTION REACTOR, HANFORD
ATOMIC POWER OPERATION, GE, RICHLAND,
WASHINGTON.

JAN 57 - JUN 61 REACTOR ENGINEER, REACTOR SPECIALIST, SHIFT
SUPERVISOR REACTOR OPERATIONS, HANFORD ATOMIC
POWER OPERATIONS, GE, RICHLAND, WASHINGTON

FEB 51 - APR 53 U.S. ARMY - KOREA

EDUCATION

1957 B.S. GENERAL ENGINEERING, UNIVERSITY OF PORTLAND

NUCLEAR SITE DIRECTOR, BROWNS FERRY NUCLEAR PLANT
H. P. POMREHN

WORK EXPERIENCE

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| JUN 86 - PRESENT | NUCLEAR SITE DIRECTOR, BROWNS FERRY NUCLEAR PLANT, TVA (BECHTEL) |
| 1985 - JUN 86 | PROJECT MANAGER, WESTERN POWER DIVISION, KOREAN NUCLEAR PROJECTS UNITS 5, 6, 7, AND 8 - BECHTEL POWER CORPORATION |
| 1982 - 1985 | DEPUTY MANAGER, BUSINESS DEVELOPMENT AND BUSINESS DEVELOPMENT MANAGER - BECHTEL POWER CORPORATION |
| 1975 - 1982 | PROJECT ENGINEER AND DIVISION CHIEF PLANT DESIGN ENGINEER - BECHTEL POWER CORPORATION |
| 1967 - 1975 | ASSISTANT CHIEF NUCLEAR AND ENVIRONMENTAL SYSTEMS ENGINEER, ENGINEERING SUPERVISOR, AND SENIOR ENGINEER - BECHTEL POWER CORPORATION |
| 1964 - 1967 | PROJECT SCIENTIST, NUCLEAR POWER REACTOR OPERATION - HOLMES AND WARVER |
| 1960 - 1964 | NAVAL REACTORS BRANCH - U.S. NAVY |

EDUCATION

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| 1960 | B.S., MECHANICAL ENGINEERING, UNIVERSITY OF SOUTHERN CALIFORNIA |
| 1965 | M.S., ENGINEERING, GEORGE WASHINGTON UNIVERSITY |
| 1969 | M.S., INDUSTRIAL ENGINEERING (OPERATIONS RESEARCH), UNIVERSITY OF SOUTHERN CALIFORNIA |
| 1975 | Ph.D., ENGINEERING, UNIVERSITY OF SOUTHERN CALIFORNIA |

NUCLEAR SITE DIRECTOR
WATTS BAR NUCLEAR PLANT
GEORGE TOTO

WORK EXPERIENCE

| | |
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| AUG 86 - PRESENT | NUCLEAR SITE DIRECTOR, WATTS BAR NUCLEAR PLANT, TVA WESTINGHOUSE WATER REACTOR DIVISION (WRD) |
| FEB 85 - AUG 86 | MANAGER OF REACTOR MECHANICAL PROJECTS, WESTINGHOUSE (WRD) |
| AUG 79 - FEB 85 | MANAGER, ADVANCED ENGINEERING, WESTINGHOUSE ELECTRIC CORPORATION (WRD) |
| FEB 78 - AUG 79 | MANAGER, A1W SHUTDOWN PROGRAM, NRF PROJECT, WESTINGHOUSE BETTIS ATOMIC POWER LABORATORY (WBAPL), WEST MIFFLIN, PA |
| FEB 74 - FEB 78 | MEMBER OF GENERAL MANAGER'S STAFF, DUQUESNE LIGHT COMPANY, SPECIAL ASSIGNMENT, (WBAPL) |
| FEB 72 - FEB 74 | MANAGER, FIELD ENGINEERING AND REFUELING OPERATIONS, NAVAL REACTORS PROGRAM, (WBAPL) |
| SEP 71 - FEB 72 | MANAGER, FIELD ENGINEERING, NAVAL REACTORS PROGRAM, (WBAPL), WEST MIFFLIN, PA. |
| JAN 69 - SEP 71 | RESIDENT MANAGER, FIELD ENGINEERING, SUBMARINE CONSTRUCTION, OVERHAUL & REFUEL, (WBAPL), BRMO, NEWPORT NEWS, VA. |
| OCT 66 - JAN 69 | RESIDENT MANAGER, FIELD ENGINEERING, SUBMARINE CONSTRUCTION, OVERHAUL & REFUEL, (WBAPL), BRMO, PUGET SOUND |
| DEC 62 - OCT 66 | SR. ENGINEER (TEST), FIELD ENGINEERING, REACTOR PLANTS FOR SUBMARINES, (WBAPL), BRMO GROTON, CONN. |
| JUL 61 - DEC 62 | SR. ENGINEER, PLANT ANALYSIS, REACTOR PLANTS FOR SUBMARINES, (WBAPL), WEST MIFFLIN, PA. |
| DEC 59 - JUL 61 | TEST ENGINEER, FIELD ENGINEERING, REACTOR PLANTS FOR SUBMARINES, (WBAPL), BRMO GROTON, CONN. |

MAY 56 - DEC 59

ENGINEER, 55M POWER PLANT, PLANT ANALYSIS,
REACTOR PLANTS FOR SUBMARINES, (WBAPL)

SEP 53 - APR 56

STARTUP & SHIFT SUPERVISOR, GASEOUS DIFFUSION
PLANT, ENRICHED URANIUM, GOODYEAR ATOMIC
CORP., PORTSMOUTH, OHIO

SUMMERS OF
49, 50, 51, & 52

STUDENT ENGINEER, TESTING W J-34 JET ENGINE,
CERTIFICATION OF COMPONENTS, U.S. NAVY YARD,
PHILADELPHIA, PA., AERO ENG LAB

EDUCATION

SEP 49 - JUN 53

B.S. ELECTRICAL ENGINEERING, UNIVERSITY OF
PENNSYLVANIA, PHILADELPHIA, PA.

LICENSES AND REGISTRATIONS

REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, NO. E27514

DIRECTOR OF NUCLEAR MANAGER'S REVIEW GROUP
RONALD K. SEIBERLING

WORK EXPERIENCE

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| APR 86 - PRESENT | DIRECTOR OF NUCLEAR MANAGER'S REVIEW GROUP, TVA, CHATTANOOGA (INPO) |
| 1980 - APR 86 | EVALUATION TEAM MANAGER FOR PLANT AND CORPORATE EVALUATIONS - INSTITUTE OF NUCLEAR POWER OPERATIONS |
| 1979 - 1980 | POWER RESOURCES MANAGER - MISSISSIPPI POWER AND LIGHT COMPANY |
| 1976 - 1979 | MAINTENANCE SUPERVISOR/OPERATIONS AND MAINTENANCE SUPERINTENDENT - GRAND GULF NUCLEAR STATION - MISSISSIPPI POWER AND LIGHT COMPANY |
| 1972 - 1976 | PROJECT OFFICER AT DIVISION NAVAL REACTORS - U. S. ATOMIC ENERGY COMMISSION, WASHINGTON, D.C. - U.S. NAVY |
| 1969 - 1972 | ENGINEER OFFICER OF NUCLEAR POWERED SUBMARINE, USS NARWHAL - U.S. NAVY |
| 1962 - 1969 | VARIOUS DIVISION OFFICER AND TRAINING ASSIGNMENTS IN TWO NUCLEAR POWERED SUBMARINES |

EDUCATION

| | |
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| 1962 | B. S. MARINE ENGINEERING AND NUCLEAR SCIENCE - STATE UNIVERSITY OF NEW YORK MARITIME COLLEGE |
| | MBA PROGRAM - MISSISSIPPI COLLEGE - 15 HOURS COMPLETED |

Status
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R - Restart of Sequoyah
L - Long Term programs

APPENDIX 8

Status of Corporate Nuclear Performance Plan
(Vol. 1) Commitments

| <u>Commitment</u> <u>Item</u> | <u>Vol. 1</u> <u>Rev. 4</u> <u>Page</u> | | <u>Status</u> | <u>Progress Applicable to Sequoyah Restart</u> |
|---|---|--|---------------|---|
| <u>III. Hiring, Development, and Retention of Senior Nuclear Managers</u> | | | | |
| 1 | 54 | TVA will continue the recruitment of experienced managers as well as other experienced professionals from the nuclear industry to serve as permanent TVA employees. | O | Since October 1985, 99 permanent TVA managers have been recruited and hired into mid-level and above positions. In addition, a nuclear recruiting organization has been established, with satellite operations stationed at Sequoyah, Chattanooga, and Knoxville. |
| 2 | 55 | ONP plans to develop experienced nuclear managers from within its own organization. | L | A Manager of Management Training has been hired to implement an ONP Management Training Program. In addition, a Program Manager has been assigned to develop requirements for the ONP Management Development and Training Program. The Program Manager will report, on a project basis, directly to the Manager, ONP. |
| <u>IV. Restructuring of TVA's Organization</u> | | | | |
| 3 | 70 | ONP will develop standard procedures to control interfaces with support organizations. | L | The effort is part of the long term program as identified in commitment items 5 and 15. Development of Interoffice agreements has been initiated. |
| 4 | 76 | Position descriptions will be written for each of TVA's nuclear directors, managers, and specialists defining the duties and responsibilities for which an individual will be held accountable and against which performance will be measured. These descriptions will be reviewed and subject to approval by a review team composed of senior TVA and consultant personnel who will report to the Manager of Nuclear Power. | R | Position descriptions have been written and issued for management positions which were approved on October 31, 1986. |
| 5 | 76 | The Manager of Nuclear Power is providing guidance to the organization through the issuance of a Policy and Organization Manual that sets forth policy in major areas and defines the organizational structure (in command chart format) together with the charter for each key functional component of the organization. | R | The Policy and Organization Manual (P&OM) was issued 12/31/86. |

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E. Improvements in Specific Functional Areas

1. Quality Assurance

| | | | | |
|---|----|--|---|---|
| 6 | 80 | The long-term program will result in a standardized Nuclear Quality Assurance Program for TVA. | L | The interim NQAM was approved and issued in November 1986. Topical Report Rev. 9 was released for NRC approval November 14, 1986. Approval of the topical report was received January 30, 1987. A draft schedule for completion of the ultimate NQAM is under review. The draft schedule shows a completion date of October 16, 1987. The ultimate NQAM is being developed and is expected to be approved by June 30, 1987. Full implementation is planned for October 16, 1987. |
| 7 | 81 | Where required, additional QA or QC procedures will be written to cover new functions. | R | QA and QC procedures required for SQN startup have been written and are issued. Implementation will be complete when training has been verified on April 1, 1987. |
| 8 | 81 | DNQA internal QA and QC procedure will be consolidated into a single set of procedures. Functions that will be performed uniformly throughout DNQA will be identified and the multiple procedures that now exist will be replaced by a single procedure applicable to all organizations. | L | The consolidation and standardization of DNQA procedures are well under way. All internal procedures currently identified will be approved and issued in a single manual by July 1, 1987. |
| 9 | 81 | As new procedures are developed throughout the ONP, the DNQA will review and concur in those that implement quality assurance requirements. | O | ONP Directive 4.4 Rev 0 was approved on 11/5/86. It establishes the responsibility to DNQA to review and concur with new ONP procedures. QA Topical Report TVA-TR75-1A, Rev. 9 list all manuals covering quality related activities during design. |

V. Restoring Employee Confidence in TVA Nuclear Management

1. Special Program at Watts Bar for Resolving Employee Concerns

| | | | | |
|----|----|---|--|---|
| 10 | 98 | After the review group identifies a generic condition, the appropriate site department will perform a root cause analysis of each such condition and will require TVA line management to evaluate the condition and recommend action to remedy the root cause of the condition. | L R (For Potential Safety Significant Conditions) | This is an ongoing item. The anticipated completion date is 4/87 for SQN restart items and 8/87 for total program closure (all plants). |
|----|----|---|--|---|

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|------------------------|---------------------------|---|---------------|---|
| 11 | 100 | TVA plans to make the results of the Watts Bar Employee Concern Special Program (WBECSP) available to all present TVA nuclear employees. The summary report will be available as requested to interested parties as well as to former TVA nuclear employees who left the nuclear program between March 31, 1985, and the date the summary report is issued. | L | This will be completed once the WBN ECSP is completed. A special program has been implemented to address SQN restart. Anticipated completion date is 4/87 for SQN restart items and 8/87 for total program closure (all plants). |
| 12 | 100 | The Office of General Counsel or the Inspector General will investigate and report separately on cases involving wrongdoing, misconduct, intimidation, or harassment. | 0 | 40 I&H and safety related wrongdoing concerns expressed to QTC relate to SQN. 20 are closed and completed. 11 are inactive awaiting NRC information and will be administratively closed by 4/1/87 if no information received. The remaining 9 are in the investigation and report writing phase and will be completed by 4/1/87. |
| 13A, B | 101-105 | TVA will review the WBECSP concerns and the ONPECP to identify any trends and the collective significance of the concerns, to identify the root causes of any adverse trends, and to develop appropriate corrective action. | 0 | The Employee Concerns Task Group (ECTG) has reviewed and identified all concerns for generic applicability to SQN. These trends are presently being evaluated for SQN restart and will be made available in a final report for SQN restart. Anticipated completion date is 4/87 for SQN restart items and 8/87 for total program closure (all plants). For the "new" Employee Concern Program (ECP), total data volume reached a point in August 1986, whereby meaningful trends were analyzed. These trends were reported on a monthly basis beginning in August 1986 to TVA higher level management, ECP site representatives, and the NRC. The enhanced computerized data base was made available to all ECP personnel on January 22, 1987. The data base is used for tracking and trending of employee concern information. |

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| 13C | 103 | | |
| | | The Site Representative will periodically determine employee understanding of and satisfaction with the ECP. | O This activity is ongoing. Various means have been utilized to determine employee understanding of and satisfaction with the program. Selected interviews have been conducted, mini surveys have been conducted. Formal survey was released November 1986. Audit reports concerning the program have demonstrated employee understanding. Employee Concern Program Instruction 1, sec. 5.3, requires the subject activity. |
| VI. <u>Improvements in TVA's Nuclear Management Systems and Programs</u> | | | |
| C. <u>Improving Management Systems and Controls</u> | | | |
| 1. <u>Improvements in Programs and Procedures</u> | | | |
| 14 | 120- 121 | In the short term, TVA will prepare standards for developing directives and procedures for each of the headquarters departments and sites and will assure that those corporate-level nuclear procedures required to control corporate-level activities which support the safe operation of each nuclear plant are in place. Also in the short-term, the existing nuclear procedures at each site will be revised to correct documented deficiencies, reflect the new organization and reflect installed plant modifications. | R (1) An interim directive defining the interim procedure system for SQN was approved and issued September 5, 1986. (2) A list of corporate-level procedures that are required for SQN startup has been compiled and is maintained by the Nuclear Procedures Branch. The list identifies corporate level procedures requiring revision. (3) SQN site procedures are being reviewed to identify those requiring revision. Of the total of 2623 procedures required, 34 percent are not required for restart 11 percent are required with no revision, 16 percent required have been revised, and 39 percent are in the revision process. Expect to be completed two months prior to restart. |
| 15 | 121 | In the long term, TVA is developing an integrated Nuclear Procedures System to aid the administration of the ONP activities. The restructured ONP procedure hierarchy will consist of five (5) levels of documentation designated as Policies, Directives, Standards, Procedures, and Instructions | L (1) Status of policies is reported under commitment item 5. (2) The Policy and Directive governing the new Nuclear Procedures System have been approved and issued. Standards and Directives are under development. |

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Document Control and Records Management

A review of the ONP Document Control and Records Management program and facilities has been initiated. Several issues are still pending in DCKM: (1) acquisition, control, and upgrading of RIMS and (2) integration of divisional document control units at all sites into one Document Control Unit per site. Implementation plans for this integration have been initiated at Knoxville, Sequoyah, Bellefonte, and Browns Ferry Nuclear Plants.

BFN, Division of Nuclear Engineering (DNE), and Division of Nuclear Services (DNS) have established that one organization onsite will be responsible for document control and records management and the associated reprographics and micrographics functions. A transition plan to bring nuclear RIMS into ONP has been prepared.

ADP

Centralized control of acquisition of software and equipment has been established, and the responsibility for software change control has been identified and instituted.

NQAM Part I, Section 2.2.1, Rev. 1, QA for Computer Software Systems was approved for implementation on February 14, 1987.

Additional personnel resources have been identified and are being acquired.

Responsibility for defining integration plan assigned to Planning Staff. Initial high-level studies complete. Project proposal underway to scope subject data bases and identify subject data base interfaces.

Review of the proposal at the 11/20/86 Information Systems managers meeting resulted in consensus agreement to the goals but disagreement in methodology for developing the data bases. By the end of March, 1987 a plan will be in place to identify the consensus strategy that will be utilized for this long term project.

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| D. <u>Improving TVA's Nuclear Corrective Action Program</u> | | | | |
| 1. <u>Assuring Timely Corrective Action</u> | | | | |
| 18 | 135 | The Tracking and Reporting of Open Items (TROI) computer system is being implemented as the single corporate system for tracking CAQs. | R | Essentially complete at SQN. DNQA internal procedures have been approved and issued. Training on DNQA Procedures to be complete by March 30, 1987. |
| 19 | 136 | The analysis of trend data will be the responsibility of line managers. DNQA will identify QA trend indicators and perform a corporate-wide QA trend analysis on an ongoing basis. | L | Implementation is nearly complete. QA is preparing monthly reports. The trend analysis program now includes all CAQs adverse trends based on these CAQs will be evaluated to determine their root cause, and recommendations made to remedy the problem. |
| 2. <u>Identification of the Root Cause of Problems</u> | | | | |
| 20 | 137- 138 | Each significant CAQ will be individually analyzed to determine its root cause and to recommend action to remedy that cause. CAQs will be categorized, such as, responsible group for cause, type of condition, type of matter or item which is deficient and immediate cause of the condition. Adverse trends will be evaluated to determine their root cause and to recommend action to remedy that cause, to enable management to perform its own assessment and ensure that appropriate remedial action is implemented. | O | A new CAQ procedure has been approved and issued and will be implemented throughout ONP within 120 days of its issue date. NQAM, Part I, Section 2.16, Rev. 1, corrective action was issued 11/10/86. March 30, 1987 is the implementation date. The program is in place and CAQs have been entered for trending. |

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|--|---------------------------|---------------|--|
| <u>3. Identification of Problems Applicable to More than One Plant</u> | | | |
| 21 | 139 | R | Existing NER program being managed by DNS&L is being upgraded and restaffed. Information meetings have been held with NRC to include their methods and screening criteria into our program where feasible. Corporate and site schedules are being revised to strengthen the program by defining responsibilities and interfaces and developing a feedback mechanism for recommendations. Procedures for NER were issued in January 1987. The TVA NER Program has developed the interim procedure PMP 0601.01, Nuclear Experience Review. Division procedure DNSL-DVP-6.1-2, Rev. 0, has been written and approved (1/13/87). Implementation of these procedures will be in approximately 90 days. Job descriptions and personnel interviews have been completed. Personnel have been selected. |
| 22 | 139-140 | L | See progress on item 21. Presently there is a corporate data base which includes most (but not all) of the items described in PMP 0601.01. As experience is gained, enhancements will be made. Plans are to merge the NER data base into the singular data base being developed for TVA. At that time all major changes and requirements will be made. |
| <u>E. Programmatic Improvements</u> | | | |
| <u>1. Improvements in Operations</u> | | | |
| 23 | 142 | R | QA policy issued. |
| 24 | 142 | O | Plant-specific improvements have been incorporated at WBN, SQN, and BFN. Training now in progress. Item is complete for SQN. |

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The ONP headquarters organizations will have L
personnel with expertise in operations, maintenance, chemistry, health physics, planning, scheduling, and other disciplines relevant to the overall operation and maintenance of nuclear plants. These personnel will assist management with the development of TVA policy, goals and objectives for operation and maintenance activities, will monitor implementation of policy through onsite assessments of plant programs and observation of work activities, and assess site performance through review of performance data.

Status

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DNE

DNE has created a project services branch responsible to provide the Manager, Project Engineering and collectively the branch chiefs and director, schedule and cost progress for each unit. S&W, GE, and Bechtel planners are augmenting TVA staffs; also hiring good people is quite possible in this area. A draft instruction manual has been prepared, as well as branch instructions on preparation of project reports, schedule analyses, and conduct of design review meetings.

Operations Engineering Services (OES) is assisting the plants study their long-term maintenance needs, and introduce reliability-centered maintenance (RCM) similar to INPO pilot programs modeled on FAA experience. The next phase is to develop plan to implement RCM at each site after the respective restart. Planning of scheduled maintenance will be give greater attention.

A draft of the Maintenance Directive was completed on October 1, 1986, and distributed for comments on October 3, 1986. The comments were incorporated into a second draft which was distributed to the maintenance working group on October 29, 1986.

The first draft of the Chemistry and Radiochemistry Directive was completed on October 15, 1986, and has been distributed within TVA for comments. Resolution of comments and preparation of a final draft for submittal to the DSRC is anticipated by 4/15/87. The Chemistry Program Manager is working with SQN personnel to develop a model chemistry program for SQN which will be used as the basis for preparing the directive.

DNS

The organizational structure has been identified, and individuals have been assigned to assist in the development of directives and standards.

Candidates for permanent headquarters staff positions not yet filled are being interviewed.

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The Radiological Controls (RC) organization has been restructured. Out of six key managerial positions, one has been retained, three have been filled through recruitment from outside TVA, and two have been filled through reassignment.

The RC program is being enhanced and upgraded through changes in the dosimetry program, increased credential requirements for key positions, and enhancements to the Radiation Protection Plan.

Currently identified enhancements will be completed in 1987.

Planning and Financial Management

The status of this commitment relative to the Planning and Financial Staff is given in No. 16 above.

26 144 An expanded corporate nuclear performance reporting system is being developed to collect key performance indicators for trending an analysis L

The corporate-level performance report has been revised to include the INPO-suggested performance parameters and to include not only generation data but also data on compliance, health physics, safety, and cost. The performance reporting staff at SQN has been reorganized to allow it more convenient and ready access to pertinent performance data. The style and content of the BFN plant performance reports are being modified to more accurately reflect the information needs of the reviewing managers.

27 144 TVA will implement a system engineer program at each nuclear site. L

The System Engineering Section will be initially manned with approximately ten engineers prior to restart. The Sequoyah procedures will be developed as a long-term program.

Status
O - Ongoing Activity
R - Restart of Sequoyah
L - Long Term programs

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Status Progress Applicable to Sequoyah Restart

2. Improvements in Maintenance

| | | | | |
|----|-----|---|---|--|
| 28 | 146 | The NMRG was charged with the responsibility of conducting a comprehensive review of corrective and preventive maintenance at Sequoyah, Browns Ferry, and Watts Bar Nuclear Plants. | | The Nuclear Manager's Review Group (NMRG) has completed all work on a comprehensive review of maintenance at SQM, WBN, and BFN. The report of review results was submitted to NRC on September 30, 1986. Report was resubmitted 12/17/86 with action items assigned. Findings from the report are being evaluated and corrective action plans are being developed. |
| 19 | 147 | Improvements are being made in the nuclear site preventive maintenance programs to emphasize reducing recurring corrective maintenance requirements, improving use of predictive maintenance techniques, and minimizing preventive maintenance backlogs and deferrals. The results of analysis of equipment history and availability and NPRDS data will be fed into the preventive maintenance programs and shared between sites to obtain optimum preventive maintenance intervals. | L | The organization is in the developmental stages to provide more management attention to maintenance activities. SQM-58 has been revised to include the trending program for NPRDS, 10 CFR 50.49 equipment, and other failure mechanisms. So far the plant has received three trending reports from NPRDS data base for review and analysis. Efforts are under way to get a contractor on site to review SQM preventive maintenance program to include the following tasks: review vendor manuals, review existing PM activities and/or alternate predictive monitoring techniques, document basis for PM activities, establish master list of equipment with prioritization methods for planning, scheduling, and tracking. |
| 10 | 148 | The planning and scheduling process for maintenance activities is being upgraded so that the full scope of significant maintenance activities will be defined in advance of performing the activity, will be coordinated with the appropriate organizations, including operations and quality assurance, and will be completed prior to closeout of the work item. | R | The planning organization is not fully implemented yet, however some of the positions have been filled. The plant is in the process of filling additional planning positions within the organization. The planning organization is in the process of implementing a program to prioritize, track, and coordinate maintenance work with the different organizations on site. The maintenance planners are having daily coordination meetings with appropriate interface organizations to plan, schedule, and coordinate maintenance activities for the following day. Major activities are either discussed in the daily meeting or in a specially called meeting which includes all affected plant organizations. Site procedures are being revised to reflect these coordination activities. Estimated completion dated is April 2, 1987. Continuous improvement is expected as implementation of the program progresses. |

Status
O - Ongoing Activity
R - Restart of Sequoyah
L - Long Term programs

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|-----------------------------------|---|---|---------------|---|
| 31 | 148- 149 | Training of nuclear maintenance personnel is being upgraded at all sites. Accreditation of instrument technician, electrical, and mechanical maintenance training is being pursued. This long-term program will result in a system where maintenance activities which require specialized skills will be identified and only those personnel evaluated as possessing the required skills will be assigned responsibility for performing the work. | L | I&C training programs have been accredited by INPO. Electrical and Mechanical Program for SQN and WBN have had initial evaluation by INPO (August 11-19, 1986). A followup visit should be conducted by INPO in early 1987 with accreditation expected by mid-year. The initial INPO visit for the BFN Electrical and Mechanical Program is scheduled for May 18-22, 1987. A followup visit will most likely occur later in 1987 with accreditation expected by early 1988. |
| 3. <u>Improvements in Welding</u> | | | | |
| 32 | 150 | The Welding Project will determine the adequacy of the nuclear welding program to control welding and identify any deficiencies in the program and propose corrective actions or improvements. | R | The Phase II Welding Project report for Sequoyah has been submitted to and reviewed by NRC. NRC's Final Safety Evaluation Report for SQN is complete and is being reproduced for public distribution. Response to SER which completed this item, was submitted to NRC 1/30/87. |
| 33 | 151 | TVA is initiating appropriate changes to programs as the changes are identified by the welding projects at each site. | L | No further actions necessary for SQN restart. |