

VII. IMPLEMENTATION OF THE REVISED CORPORATE NUCLEAR PERFORMANCE PLAN

TVA has already implemented many of the improvements described in this revised Corporate Nuclear Performance Plan, and many other improvements will be implemented within a short period of time. Moreover, before TVA operates any other nuclear units, it will implement those improvements which are essential for TVA to assure effective management of its nuclear activities.

The improvements which TVA considers essential for the effective management of its nuclear activities are as follows:

- Installing a new senior nuclear management workforce - This improvement is essentially complete. Although TVA expects that a few additional changes will be made in its middle-level and senior nuclear managers, the central core of TVA's new senior management is in place and is sufficient to provide the necessary leadership and direction for TVA's nuclear program.
- Restructuring of TVA's nuclear organization - TVA's nuclear organization has been restructured and the responsibility and authority for management of all of its nuclear activities has been centralized in Nuclear Power. The new TVA organization became effective on July 1, 1988 establishing the structure for Nuclear Power. Position descriptions have been developed and the lower tier organization functions have been defined and put in place. Although some realignments in the Nuclear Power organization have taken place

since that time, they have been accomplished while maintaining clear lines of authority and responsibility and the centralized direction and control of its nuclear activities.

- Establishing the TVA Nuclear Power Employee Concern Program - This program has been implemented.

In addition to the above actions, TVA has, as a part of its evaluations, listed the commitments that have been made in this Volume 1. In so doing, it has classified each as to whether it is an ongoing activity (O), a program or activity that was required to be complete prior to restart of Sequoyah (R), or a long-term program (L) that will be completed as this Nuclear Performance Plan is implemented. This listing is set forth in Appendix 8 together with TVA's current appraisal of progress on each item. Items that have been completed or for which procedures or programs have been implemented to meet ongoing commitments are classified as complete (C), that is, complete through TVA closure but not necessarily closed by NRC. The schedule for completion of those items not yet complete is given under the Progress Column. Further specific actions will be identified in the plant-specific Nuclear Performance Plans or in other submissions to the NRC. TVA will implement these actions expeditiously in order to further increase the effectiveness of its management.

The major programmatic implementation schedule for each long-term activity will be addressed specifically for each plant depending on the significance of the long-term program to that plant. Appendix 8

contains a listing of commitments indicating which activities are intended to be long term. Long term for these purposes means after restart of Sequoyah unit 2, the TVA unit first restarted. The Nuclear Performance Plan for each plant contains the specific status of CNPP commitments relating to restart or fuel load for that plant. Because of the relationship of each long-term program to the schedule for plant-specific activities, the major milestone schedule is being provided with each plant-specific Nuclear Performance Plan. For example, the elements of the major milestone schedule for the long-term program for developing an integrated nuclear procedure system, Section VI.C.1.a(2), required for Browns Ferry restart is available in the Browns Ferry Nuclear Performance Plan. Also, long-term improvements in planning and integration of nuclear activities required for Browns Ferry restart, Section VI.C.2, although not specifically required for Sequoyah restart, is addressed with major milestones and accomplishments in the Browns Ferry Nuclear Performance Plan.

VIII. CONCLUSION

TVA has reached three major milestones toward the completion of the CNPP goals and has demonstrated its ability to conduct and support the activities at its nuclear plants safely and professionally. The milestones are that both Sequoyah Nuclear Units have been restarted and operated successfully and the nuclear fuel has been reloaded into BFN Unit 2. In reaching these milestones, TVA has taken several steps to improve the management of its nuclear program and to restore employee confidence in TVA's management. These steps include (1) installing a new experienced senior nuclear management workforce to provide leadership and direction for TVA's nuclear activities, (2) restructuring TVA's nuclear organization to provide clear lines of authority and responsibility and provide centralized management of TVA's nuclear program, (3) establishing an Employee Concern Program to identify and resolve employee concerns regarding TVA's nuclear activities, and (4) taking various actions to improve TVA's nuclear management programs, such as establishing a corporate program to manage and track commitments, upgrading the corrective action program to provide for timely and effective corrective action, providing centralized business planning, accounting, and budgeting, and establishing the project management approach and centralized direction in the execution of planning, scheduling, and cost estimating activities for major Nuclear Power projects. Additionally, TVA is continuing to evaluate specific elements of its nuclear program to determine whether further improvements can be made. As a result of this process, TVA will have taken significant action to address the root cause of the problems in TVA's nuclear program and to assure that TVA's plants can be safely operated.

IX. REFERENCES

1. Letter dated September 17, 1985, from William J. Dircks (NRC) to Charles Dean (TVA), with Enclosure 1, SALP Board Report, and Enclosure 2, Request for Information Under 10 CFR 50.54(f) Related to Staff Concerns.
2. Letter dated November 1, 1985, from Charles Dean (TVA) to William J. Dircks (NRC) transmitting TVA's Corporate Nuclear Performance Plan.
3. Letter dated December 20, 1985, from B. J. Youngblood (NRC) to H. G. Parris (TVA).
4. Letter dated May 2, 1986, from S. A. White (TVA) to Victor Stello (NRC) enclosing the Office of Nuclear Power (NPG) Employee Concern Program.
5. Letter dated January 15, 1986, from S. A. White (TVA) to Victor Stello (NRC) regarding briefings with the TVA Board.
6. Letter dated January 17, 1986, from J. A. Domer (TVA) to Harold R. Denton (NRC), with enclosures.
7. Letter dated March 10, 1986, from S. A. White (TVA) to Nunzio Palladino (NRC) forwarding the Revised Corporate Nuclear Performance Plan.

8. Letter dated May 1, 1986, from B. J. Youngblood (NRC) to Steven A. White (TVA) and enclosure.
9. Letter dated April 22, 1987, from James G. Keppler (NRC) to S. A. White (TVA).
10. NRC Safety Evaluation Report on Tennessee Valley Authority: Revised Corporate Nuclear Performance Plan, NUREG-1232 Vol. 1, dated July 1987.
11. Letter dated October 6, 1987, from John A. Zwolinski (NRC) to S. A. White (TVA), forwarding Safety Evaluation on the Tennessee Valley Authority Employee Concerns Special Program.
12. Letter dated September 30, 1987, from John A. Zwolinski (NRC) to S. A. White (TVA), forwarding Safety Evaluation of the Tennessee Valley Authority Employee Concern Program.

MEMORANDUM OF UNDERSTANDING

The MEMORANDUM OF UNDERSTANDING, dated January 7, 1987, between the Board of Directors of the Tennessee Valley Authority and STEMAR Corporation, is no longer applicable and is deleted by Revision 6.

APPENDIX 4
RESUMES OF SELECTED TVA SENIOR
NUCLEAR MANAGERS

INDEX TO RESUMES

<u>TVA Managers</u>	<u>Name</u>	<u>Page</u>
Senior Vice President, Nuclear Power	O. D. Kingsley	3
Vice President & Nuclear Technical Director	C. H. Fox	4
Vice President, Nuclear Power Production	J. R. Bynum	6
Vice President, Nuclear Business Operations	S. B. Fisher	7
Vice President, Nuclear Engineering	F. L. Moreadith	8
Vice President, Nuclear Assurance and Services	N. C. Kazanas	9
Manager of Nuclear Human Resources	S. E. Wallace	11
Chairman, Nuclear Safety Review Boards	W. H. Hannum	12
Site Director MBN	R. A. Pedde	13
Staff Manager, Nuclear Power	T. J. McGrath	15
Site Director, BFN	O. J. Zeringue	17
Site Director, SQN	J. T. Lapoint	18

SENIOR VICE PRESIDENT
NUCLEAR POWER
OLIVER D. KINGSLEY, JR.

WORK EXPERIENCE

OCT 88 - PRESENT	SENIOR VICE PRESIDENT, NUCLEAR POWER, TVA, CHATTANOOGA
JAN 85 - OCT 88	VICE PRESIDENT, NUCLEAR OPERATIONS, SYSTEM ENERGY RESOURCES, INC. (MISSISSIPPI POWER AND LIGHT COMPANY), JACKSON, MISSISSIPPI
MAY 84 - JAN 85	DIRECTOR, NUCLEAR PLANT SUPPORT, SOUTHERN COMPANY SERVICES
JAN 80 - APR 84	MANAGER, NUCLEAR ENGINEERING AND TECHNICAL SUPPORT, ALABAMA POWER COMPANY
SEPT 78 - JAN 80	ASSISTANT MANAGER, NUCLEAR GENERATION DEPARTMENT, ALABAMA POWER COMPANY
AUG 77 - SEPT 78	PLANT MANAGER, FARLEY NUCLEAR POWER PLANT
SEPT 72 - AUG 77	ASSISTANT PLANT MANAGER, FARLEY NUCLEAR PLANT
APR 71 - SEPT 72	SENIOR ENGINEER, NUCLEAR GENERATION DEPARTMENT, ALABAMA POWER COMPANY
MAR 66 - APR 71	COMMISSIONED OFFICER, U.S. NAVY, NUCLEAR SUBMARINE FORCE

EDUCATION

1965 B.S., ENGINEERING PHYSICS, AUBURN UNIVERSITY

LICENSES/CERTIFICATES

1977 U.S. NUCLEAR REGULATORY COMMISSION, SENIOR REACTOR OPERATOR LICENSE, FARLEY NUCLEAR PLANT

VICE PRESIDENT & TECHNICAL DIRECTOR
NUCLEAR POWER
CHARLES HAYDEN FOX, JR.

WORK EXPERIENCE

JUL 88 - PRESENT	VICE PRESIDENT & TECHNICAL DIRECTOR, NUCLEAR POWER, TVA, CHATTANOOGA
FEB 87 - JUL 88	DEPUTY MANAGER, ONP, TVA, CHATTANOOGA
SEP 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 (CHIEF ENGINEER), CLINCH RIVER BREEDER REACTOR PROJECT, OAK RIDGE, TENNESSEE
JUN 81 - NOV 81	FUNCTIONED AS ENGINEER MANAGER, ENRICHMENT EXPANSION PROJECTS OFFICE, DOE-OAK RIDGE OPERATIONS.
SEP 80 - NOV 81	DEPUTY ENGINEER 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, 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 - MAR 71 DEVELOPMENT ENGINEER AND PLANNING CONSULTANT,
NUCLEAR DIVISION, UNION CARBIDE NUCLEAR
DIVISION

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

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, WISCONSIN CERTIFICATE E-18590

VICE PRESIDENT, NUCLEAR POWER PRODUCTION
NUCLEAR POWER
JOSEPH R. BYNUM

WORK EXPERIENCE

JUL 88 - PRESENT	VICE PRESIDENT, NUCLEAR POWER PRODUCTION, NUCLEAR POWER, TVA, CHATTANOOGA
OCT 87 - JUL 88	ASSISTANT MANAGER OF NUCLEAR POWER, OFFICE OF NUCLEAR POWER, TVA, CHATTANOOGA
OCT 82 - OCT 87	PLANT MANAGER, ARIZONA NUCLEAR POWER PLANT, PALO VERDE NUCLEAR POWER PROJECT
JAN 81 - OCT 82	ASSISTANT PLANT SUPERINTENDENT, TVA, BROWNS FERRY NUCLEAR PLANT
JAN 80 - JAN 81	ASSISTANT PLANT SUPERINTENDENT, SPECIAL TEST COORDINATOR, TVA, SEQUOYAH NUCLEAR PLANT
NOV 75 - JAN 80	STARTUP AND PLANT SUPPORT SECTION SUPERVISOR, TVA, DIVISION OF NUCLEAR POWER
FEB 75 - NOV 75	TEMPORARY ASSIGNMENT, WESTINGHOUSE ELECTRIC CORP
JUN 72 - FEB 75	STARTUP ENGINEER, TVA, BROWNS FERRY NUCLEAR STATION

EDUCATION

1969	B.S., ELECTRICAL ENGINEERING, GEORGIA INSTITUTE OF TECHNOLOGY
1971	M.S., NUCLEAR ENGINEERING, GEORGIA INSTITUTE OF TECHNOLOGY

VICE PRESIDENT, NUCLEAR BUSINESS OPERATIONS
NUCLEAR POWER
S. B. FISHER

WORK EXPERIENCE

JUL 88 - PRESENT VICE PRESIDENT, NUCLEAR BUSINESS OPERATIONS,
NUCLEAR POWER, TVA, CHATTANOOGA, TN

SEP 87 - JUL 88 DIRECTOR, NUCLEAR BUSINESS OPERATIONS, OFFICE
OF NUCLEAR POWER, TVA, CHATTANOOGA, TENNESSEE

JAN 87 - SEP 87 MANAGER, PLANNING AND FINANCIAL STAFF, TVA,
CHATTANOOGA, TENNESSEE

JAN 85 - JAN 87 PRESIDENT, FISHER SERVICES INC., MANAGEMENT
CONSULTING FIRM, AUGUSTA, NEW JERSEY
UNDER CONTRACT WITH ILLINOIS POWER TO SERVE AS
THE MANAGER OF NUCLEAR SUPPORT, RESPONSIBLE
FOR FINANCE AND BUDGET, PLANNING, SCHEDULING
AND ESTIMATING, PERSONNEL AND DOCUMENT CONTROL.

MAR 80 - JAN 85 DIRECTOR, FISCAL AND INFORMATION MANAGEMENT,
GENERAL PUBLIC UTILITIES NUCLEAR CORPORATION,
PARSIPPANY, NEW JERSEY

SEP 72 - MAR 80 CONTROLLER AND DIRECTOR OF FINANCE, MARTIN
MARIETTA CORPORATION, DENVER, COLORADO

MAY 68 - SEP 72 CORPORATE FINANCIAL ANALYST, FAIRCHILD
INDUSTRIES, GERMANTOWN, MARYLAND

SEP 59 - MAY 68 BUSINESS MANAGER, RESEARCH AND DEVELOPMENT AND
INFORMATION SYSTEMS GROUPS, MARTIN MARIETTA
CORPORATION, DENVER, COLORADO

SEP 53 - SEP 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

VICE PRESIDENT, NUCLEAR ENGINEERING
NUCLEAR POWER
F. L. MOREADITH

WORK EXPERIENCE

JAN 89 - PRESENT	VICE PRESIDENT, NUCLEAR ENGINEERING, TVA, KNOXVILLE
JAN 88 - JAN 89	ENGINEERING MANAGER, NUCLEAR ENGINEERING, TVA, KNOXVILLE
JUL 87 - JAN 88	PROGRAM DIRECTOR FOR TVA CONTRACTS, GILBERT/COMMONWEALTH, INC. (G/C), READING, PA
JAN 82 - JUL 87	VICE PRESIDENT AND MANAGER OF ENGINEERING, POWER AND INDUSTRIAL SYSTEMS DIVISION, G/C, READING, PA
DEC 80 - JUN 82	MANAGER OF PROJECTS, POWER DIVISION, G/C, READING, PA
MAR 78 - JAN 82	MANAGER, STRUCTURAL DEPARTMENT AND CHIEF STRUCTURAL ENGINEER, G/C, READING, PA
JUL 73 - MAR 78	SUPERVISOR, TECHNICAL SERVICES, STRUCTURAL ENGINEERING, G/C, READING, PA
JUL 72 - JUL 73	CONSULTING ENGINEER, G/C, READING, PA
1966 - 1972	ASSOCIATE PROFESSOR OF ENGINEERING, OLD DOMINION UNIVERSITY
1964 - 1966	ASSISTANT PROFESSOR OF ENGINEERING, OLD DOMINION UNIVERSITY
1963 - 1964	INSTRUCTOR, CIVIL ENGINEERING, N. C. STATE UNIVERSITY

EDUCATION

1959 B.S. CIVIL ENGINEERING, NORTH CAROLINA STATE UNIVERSITY
1961 M.S. CIVIL ENGINEERING, NORTH CAROLINA STATE UNIVERSITY
1964 PhD CIVIL ENGINEERING, NORTH CAROLINA STATE UNIVERSITY

LICENSES/CERTIFICATES

LICENSED PROFESSIONAL ENGINEER

**VICE PRESIDENT, NUCLEAR ASSURANCE AND SERVICES
NUCLEAR POWER
NICHOLAS C. KAZANAS**

WORK EXPERIENCE

JAN 89 - PRESENT	VICE PRESIDENT, NUCLEAR ASSURANCE AND SERVICES, NUCLEAR POWER, TVA, CHATTANOOGA
JUL 88 - JAN 89	VICE PRESIDENT, NUCLEAR QUALITY ASSURANCE, NUCLEAR POWER, TVA, CHATTANOOGA
MAR 87 - JULY 88	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

MANAGER OF NUCLEAR HUMAN RESOURCES
NUCLEAR POWER
SUE E. WALLACE

WORK EXPERIENCE

JAN 89 - PRESENT	MANAGER OF NUCLEAR HUMAN RESOURCES, TVA, CHATTANOOGA
JUL 88 - DEC 88	ACTING VICE PRESIDENT, HUMAN RESOURCES, TVA, KNOXVILLE
OCT 83 - JUN 88	ASSISTANT TO THE DIRECTOR OF PERSONNEL, TVA, KNOXVILLE
SEP 78 - SEP 83	CHIEF, ORGANIZATION AND MANAGEMENT PLANNING BRANCH, DIVISION OF PERSONNEL, TVA, KNOXVILLE
AUG 74 - AUG 78	PERSONNEL STAFF OFFICER, DIVISION OF PERSONNEL, TVA, KNOXVILLE
MAR 71 - JUN 72 (FULL TIME) AND SEPT 67 - MAR 71 (PART TIME)	ADMINISTRATIVE ASSISTANT, EVANSTON COMMUNITY COMMITTEE AND EVANSTON POLICE DEPARTMENT, JUVENILE DIVISION, EVANSTON, ILLINOIS

EDUCATION

1971	B.A. POLITICAL SCIENCE - NORTHWESTERN UNIVERSITY, EVANSTON ILLINOIS
1974	M.B.A. CORNELL UNIVERSITY, ITHACA, NEW YORK

NUCLEAR SAFETY REVIEW BOARD CHAIRMAN
NUCLEAR POWER
WILLIAM H. HANNUM

WORK EXPERIENCE

AUG 86 - PRESENT	NUCLEAR SAFETY REVIEW BOARD CHAIRMAN, TVA, CHATTANOOGA
AUG 82 - AUG 86	DIRECTOR, WEST VALLEY PROJECT OFFICE, U.S. DEPARTMENT OF ENERGY, WEST VALLEY, NEW YORK
1977 - AUG 82	DEPUTY DIRECTOR GENERAL, OECD NUCLEAR ENERGY AGENCY; PARIS, FRANCE
1976 - 1977	DEPUTY MANAGER, IDAHO OPERATIONS OFFICE, ERDA, IDAHO FALLS, IDAHO
1973 - 1976	ASSISTANT DIRECTOR FOR NUCLEAR SAFETY, REACTOR DEVELOPMENT DIVISION, U.S. ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION, WASHINGTON, DC.
1968 - 1973	CHIEF, REACTOR PHYSICS, U.S. ATOMIC ENERGY COMMISSION, WASHINGTON, DC.
1967 - 1968	EXCHANGE SCIENTIST, U.K. ATOMIC ENERGY ESTABLISHMENT, WINFRITH, DORSET, ENGLAND
1963 - 1967	ASSISTANT GROUP LEADER, LOS ALAMOS SCIENTIFIC LABORATORY, LOS ALAMOS, NEW MEXICO
1958 - 1963	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

SITE DIRECTOR
WATTS BAR NUCLEAR PLANT
NUCLEAR POWER
ROBERT A. PEDDE

WORK EXPERIENCE

MAY 88 - PRESENT	SITE DIRECTOR, WATTS BAR NUCLEAR PLANT
JAN 88 - MAY 88	DEPUTY SITE DIRECTOR, WATTS BAR NUCLEAR PLANT
JAN 87 - FEB 88	ACTING DIRECTOR, NUCLEAR CONSTRUCTION
JUL 86 - JAN 88	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

STAFF MANAGER, NUCLEAR POWER
THOMAS J. McGRATH

WORK EXPERIENCE

APR 89 - PRESENT	STAFF MANAGER, NUCLEAR POWER, TVA, CHATTANOOGA
DEC 88 - APR 89	ACTING NUCLEAR MAINTENANCE MANAGER, TVA, CHATTANOOGA
SEPT 88 - DEC 88	OUTAGE PROGRAM PLANNING MANAGER, TVA, CHATTANOOGA
APR 88 - SEPT 88	ACTING MAINTENANCE SUPERINTENDENT, TVA, WATTS BAR NUCLEAR PLANT
AUG 87 - APR 88	MANAGER OF PROJECTS, TVA, WATTS BAR NUCLEAR PLANT
MAY 87 - AUG 87	ASSISTANT NUCLEAR SITE REPRESENTATIVE, TVA, SEQUOYAH NUCLEAR PLANT
MAY 86 - MAY 87	DIRECTOR, PROGRAM MANAGEMENT, LOCKHEED SHIPBUILDING COMPANY
NOV 84 - MAY 86	DIRECTOR, QUALITY ASSURANCE AND DIRECTOR, LSD SHIPBUILDING PROGRAM, LOCKHEED SHIPBUILDING COMPANY
1978 - NOV 84	NAVAL REACTORS REPRESENTATIVE AT PUGET SOUND NAVAL SHIPYARD
1976 - 1978	ASSISTANT NAVAL REACTORS REPRESENTATIVE AT ELECTRIC BOAT DIVISION, GENERAL DYNAMICS
1975 - 1976	ENGINEERING MANAGER, SHIPPINGPORT ATOMIC POWER STATION UPGRADE FOR LWBR
1974 - 1975	ASSISTANT TO THE DEPUTY DIRECTOR, NAVAL REACTORS
1968 - 1974	VARIOUS ENGINEERING, SUPERVISORY AND MANAGEMENT POSITIONS IN NAVAL REACTORS INCLUDING STEAM GENERATOR PROGRAMS

EDUCATION

1968	B.S. CHEMICAL ENGINEERING, UNIVERSITY OF NOTRE DAME
1969	BETTIS REACTOR ENGINEERING SCHOOL - MASTERS DEGREE EQUIVALENT (NUCLEAR ENGINEERING)

- 1972 GRADUATE STUDIES IN CHEMICAL ENGINEERING, CATHOLIC UNIVERSITY
OF AMERICA
- 1987 NUCLEAR PLANT SENIOR MANAGEMENT COURSE, INSTITUTE OF NUCLEAR
POWER OPERATIONS

SITE DIRECTOR
BROWNS FERRY NUCLEAR PLANT
OSWALD J. (IKE) ZERINGUE

WORK EXPERIENCE

JAN 89 - PRESENT	SITE DIRECTOR, BROWNS FERRY, TVA, ATHENS, AL
OCT 87 - JAN 89	PLANT MANAGER, PALO VERDE UNIT 3, ARIZONA PUBLIC SERVICE, WINTERSBURG, AZ
NOV 83 - OCT 87	TECHNICAL SUPPORT MANAGER, PALO VERDE, ARIZONA PUBLIC SERVICE, WINTERSBURG, AZ
OCT 82 - OCT 83	NSSS ENGINEERING AND ANALYSIS GROUP SUPERVISOR, TVA, CHATTANOOGA, TN
JAN 80 - OCT 82	PWR ENGINEERING AND ANALYSIS SECTION SUPERVISOR, TVA, CHATTANOOGA, TN
AUG 78 - JAN 80	NUCLEAR ENGINEER, STARTUP AND SUPPORT SECTION, TVA, CHATTANOOGA, TN
OCT 77 - AUG 78	ENGINEERING TRAINING ASSIGNMENT AT WESTINGHOUSE, TVA, PITTSBURG, PA
OCT 75 - OCT 77	NUCLEAR ENGINEER, RESULTS SECTION BFN, TVA, ATHENS, AL

EDUCATION

1974	B.S. NUCLEAR ENGINEERING, NORTH CAROLINA STATE UNIVERSITY
1/74 - 1/75	GRADUATE COURSEWORK, MECHANICAL ENGINEERING, NORTH CAROLINA STATE UNIVERSITY

SITE DIRECTOR
SEQUOYAH NUCLEAR PLANT
JOHN T. LAPOINT

WORK EXPERIENCE

JUL 88 - PRESENT	SITE DIRECTOR, TVA, SEQUOYAH NUCLEAR PLANT
APR 87 - JUL 88	DEPUTY SITE DIRECTOR, SEQUOYAH NUCLEAR PLANT
AUG 83 - APR 87	ASSISTANT TO THE PROJECT MANAGER, STONE AND WEBSTER ENGINEERING CORPORATION RESPONSIBLE FOR VARIOUS MANAGEMENT ASSIGNMENTS, INCLUDING THE CERTIFICATION OF THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS' SYSTEMS ON THE UNIT 2 PROJECT FOR NIAGARA MOHAWK POWER CORPORATION'S NINE MILE POINT NUCLEAR STATION AND ESTABLISHING PLANNING GROUP TO IDENTIFY ALL REMAINING WORK NECESSARY TO TURN OVER SYSTEMS FOR TESTING BEFORE STARTUP.
JUN 63 - AUG 83	U. S. NAVY QUALIFIED AS "ENGINEERING OFFICER OF THE WATCH", THE INDIVIDUAL RESPONSIBLE FOR TOTAL REACTOR PLANT OPERATION. SERVED AS AN INSTRUCTOR TEACHING NUCLEAR OPERATIONS TO OFFICERS AND ENLISTED PERSONNEL.

EDUCATION

NAVAL NUCLEAR POWER SCHOOL, 12-MONTH COURSE IN NUCLEAR ENGINEERING, INCLUDING 6 MONTHS AT AN OPERATING NAVAL NUCLEAR PROTOTYPE

APPENDIX 7

TVA's Response to NRC's Request for Additional
Information dated May 1, 1986

This appendix is maintained as a historical record and is not updated.

Required Completion
O - Ongoing Activity
R - Restart of Sequoyah
L - Long Term programs
C - Complete by TVA but not necessarily closed by NRC

APPENDIX 8

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

<u>Commitment Item</u>	<u>Vol. 1 Rev. 6 Page</u>		<u>Required Completion</u>	<u>Summary of Progress</u>
III. <u>Hiring and Development of Senior Nuclear Managers</u>				
1	50	TVA will continue the recruitment of experienced managers as well as other experienced professionals from the nuclear industry to serve as permanent TVA employees.	C	A management position exists which has the responsibility to recruit experienced managers for Nuclear Power. From October 1985 to present, Nuclear Power has hired 311 M-5's or above in its effort to bring experienced managers into Nuclear Power.
2	51	NP plans to develop experienced nuclear managers from within its own organization.	C	<p>The following steps have been taken to address the development of managers through systematic development and replacement of managerial talent in NP.</p> <ol style="list-style-type: none">1. Issuance of a manager's instruction by the Senior Vice President of Nuclear Power establishing a program to broaden experience of high performing mid-level managers in preparation for greater responsibility in the organization. Complete September 10, 1987. (Reference Managers Instruction Number 002)2. A management training program has been implemented which consists of Orientation to Nuclear Supervision (OTNS), Supervisor Development Course (SDC), and Managing for Excellence (MFE), as well as, other management training courses given on "as needed" basis.3. Establishment of a Human Resources Development (HRD) organization within Nuclear Human Resources (NHR) that has designed management development and replacement planning for use by line managers.4. On going assistance from the HRD staff to assist line managers and NHR managers in implementing management development and succession planning activities.5. Implementation of a Performance Planning and Evaluation System to assess management skills, provide performance feedback, and establish individual development plans. <p>In that these are on going processes, these commitments are considered to be met.</p>

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Completion

Summary of Progress

IV. Restructuring of TVA's Organization

- 3 62 NP will develop standard procedures to control interfaces with support organizations.
- 4 66 Position descriptions will be written for each of TVA's nuclear vice presidents, duties and responsibilities for which an individual will be held accountable and 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 Senior Vice President of Nuclear Power.
- 5 70 The Senior Vice President 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 organization description for each key functional component of the organization.

- C This effort is part of the long-term program as identified in commitments 5 and 15. The NP Standard establishing administrative requirements for Interoffice Agreements was approved in March 1987. The development of draft Interoffice Agreements in accordance with the Standard was completed in July 1987. The Interoffice Agreements were approved in February 1989.
- C Position descriptions have been written and issued for all management positions.
- C The Policy and Organization Manual (P&OM) was issued 12/31/86 to reflect the organization in effect at that time. The P&OM will be updated as necessary. This commitment is complete.

E. Improvements in Specific Functional Areas

1. Quality Assurance

- 6 72 The long-term program will result in a standardized Nuclear Quality Assurance Program for TVA.

- C The interim NQAM was approved and issued in November 1986. The Topical Report Rev. 9 was released for NRC approval November 14, 1986 and subsequently approved by the NRC on January 30, 1987. The NQAM contains a corporate QA requirements volume defining generic requirements and procedures applicable to design, construction, and operations. As the Nuclear Procedures System is developed, QA requirements contained in the NQAM are being transferred to corporate-level Directives and Standards through a controlled transition process.
- The Topical Report Revision 10 was submitted to NRC on May 4, 1988 in accordance with 10 CFR 50.54(a) (3). TVA has developed a Nuclear Quality Assurance Program Plan which will be implemented upon review and approval by NRC. (Approval will be assumed by TVA 60 days after submittal to the Commission if no letter is received from the appropriate reviewing office.) This plan was submitted to NRC on March 30, 1989 and will replace the existing

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Summary of Progress

Commitment Item	Rev. 6 Page	Required Completion	Summary of Progress
7	75	C	TVA Topical Report Revision 10, once approved and implemented. In addition, the NQAM will be transitioned into Directives, Standards, and site level procedures through the Nuclear Procedures System.
			All QA and QC procedures identified to cover new functions have been written.
8	75	C	The NQA internal procedures have been consolidated into a single set, and have been approved, issued and implemented. Functions that will be performed uniformly throughout NQA have been identified, and the multiple procedures that now exist are being replaced by a single procedure applicable to all organizations. All procedures have been approved.
9	75	C	NP Directive 4.4 Rev 0 was approved on 11/5/86. It establishes the responsibility for NQA to review and concur with new NP procedures. QA Topical Report TVA-TR75-1A, Rev. 9 lists all manuals covering quality related activities during design, construction, and operation. This commitment is complete.

V. Restoring Employee Confidence in TVA Nuclear Management

1. Special Program at Watts Bar for Resolving Employee Concerns

10	96	C	This item is complete. All reports have been submitted to NRC (2/6/89). Root cause analysis of identified conditions are contained in those reports and recommended actions are either complete or in progress to correct these conditions.
11	97	O	Anticipated completion date is 6/15/89.
12	97	C	TVA Code of Conduct XIII and TVA Instruction, PM-7, defines the investigative role of the OIG. OGC has no investigative role in IH and wrongdoing. This commitment is complete.

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Summary of Progress

13A, B 101 TVA will review the MBECSP concerns and the NPECP 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.

C

The ECTG has reviewed and identified all concerns for generic applicability to SQN. These trends have been evaluated for SQN restart and will be included within the ECTG and Category Reports. 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 and ECP site representatives. 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.

13C 101 The Site Representative will periodically determine employee understanding of and satisfaction with the ECP.

C

The ECSP program summary report was sent to NRC on February 6, 1989.

This activity is proceduralized. 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. Improvements in TVA's Nuclear Management Systems and Programs

C. Improving Management Systems and Controls

1. Improvements in Programs and Procedures

14 117 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.

C SQN

- (1) An interim directive defining the interim procedure system for SQN was approved and issued September 5, 1986. Additionally the administrative Standards for developing Directives, Standards, Procedures, and Instructions for each of the headquarters departments and sites have been approved.
- (2) A list of corporate-level procedures that are required for SQN startup has been compiled and is maintained by the Nuclear Procedures Staff. The list identifies corporate-level procedures requiring revision before SQN unit 2 startup.
- (3) SQN site procedures required for the restart of SQN units 1 and 2 have been revised. Preparation and revision to corporate-level procedures required for BFN unit 2 restart will be completed by June 1989.

Details on site implementing procedures for BFN and WBN will be contained in Volume 3 and 4, respectively.

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Completion

Summary of Progress

15 118 In the long term, TVA is developing an integrated Nuclear Procedures System to aid the administration of the NP activities. The restructured NP procedure hierarchy will consist of five (5) levels of documentation designated as Policies, Directives, Standards, Procedures and Instructions.

C

- (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. The administrative Standards for Directives, Standards, Procedures, and Instructions have also been approved and issued. Other program Directives and Standards are being developed.

2. Improvements in Planning and Integration of Nuclear Activities

16 121 Nuclear Business Operations provides the overall direction to nuclear sites and headquarters departments in the execution of business planning, scheduling, accounting, and budgeting activities of TVA's nuclear activities.

C

The Long Range Planning and Nuclear Budget and Cost Control organizations were formed under Nuclear Business Operations to provide overall direction for NP in business planning, and budgeting activities. Under the present nuclear organization, the Nuclear Finance and Planning organization under Nuclear Business Operations will continue to provide overall direction for Nuclear Power in business planning, accounting, and budgeting activities; and the new Special Projects organization under Nuclear Technical Direction will provide overall direction to nuclear sites and headquarters departments in the execution of planning, scheduling, and cost estimating activities for Nuclear Power projects.

The newly formed Special Projects organization is responsible for the development of the Integrated Living Schedule.

17 123 The Division of Nuclear Services* will establish a system of data bases that can be utilized by the responsible NP department using the concept of sharing computer-stored data among cooperating organizations.

C

General

The Information Management Program is being restructured within N&S to improve control of corporate information systems, based on experience during the past year.

Personnel

Candidates for top level managerial positions in this organization have been interviewed. The Information Systems Manager of Management Systems has been hired.

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 has been implemented.

*Function is now under the Vice President,
Nuclear Assurance and Services

Required
Completion

Summary of Progress

Responsibility for defining the integration plan has been assigned to the Planning Staff. Initial high-level studies are complete and a project proposal is underway to scope the needed data bases and identify their interfaces.

By the end of March 1987 a plan was to be in place to identify the consensus strategy for this long term project. The plan was completed on time; however, execution of the plan has been deferred, pending restructuring of the Information Management Program.

The first implementation milestone is the creation of a list of TVA computer applications currently used to supply NP's information needs. The initial list was created on schedule. The information systems workplan No. 1 has been issued, showing NP priorities and objectives.

Responsibility for defining the requirements for an integrated CM system has been assigned to the CM Branch. The implementation of the master component part of the CM system has begun and the definition of the requirements for the Controlled Document System has been started.

D. Improving TVA's Nuclear Corrective Action Program

1. Assuring Timely Corrective Action

18 132 The Tracking and Reporting of Open Items (TROI) computer system is being implemented as the single corporate system for tracking CAQs as specified by the NQA program and procedures.

C

Implementation is complete. (Administrative CAQ programs are tracked and trended by approved Procedures.)

19 132 The analysis of trend data will be the responsibility of line managers. NQA identifies QA trend indicators and perform a corporate-wide QA trend analysis on an ongoing basis.

C

Implementation is complete. QA is preparing monthly reports. The trend analysis program now includes all CAQRs. Adverse trends based on these CAQs will be evaluated to determine their root cause, and recommendations made to remedy the problem. This commitment is complete.

2. Identification of the Root Cause of Problems

20 132- 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 if the CAQ is significant the root cause of the condition. Adverse trends will be evaluated to determine their root cause and to recommend

C

A new CAQR procedure has been approved and issued and implementation throughout NP is complete. NQAM, Part I, Section 2.16, Rev. 4, Corrective Action, was issued 5/18/88. The program is in place and CAQs have been entered for trending. This commitment is complete.

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action to remedy that cause, to enable management to perform its own assessment and ensure that appropriate remedial action is implemented.

3. Identification of Problems Applicable to More than One Plant

- | | | | | |
|---|-----|--|---|---|
| 21 | 134 | Licensing personnel, under the direction of the Manager of Nuclear Licensing and Regulatory Affairs will be responsible for managing the TVA Nuclear Operating Experience Review program system for internally and externally identified problems or events. This system will be used to develop experience review reports, screen information for applicability to TVA, and develop corrective recommendations or positions to be provided to sites, engineering and training personnel to take immediate corrective action if necessary. | C | <p>Existing NER program being managed by NLRA 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.</p> <p>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). Job descriptions and personnel interviews have been completed. PMP 0601.01 and DNSL-DVP-6.1-2, Rev. 0 were implemented March 30, 1987. As of July 20, 1987, all personnel were in place except for the secretarial position which was being filled on a temporary basis. This job was filled on 10/13/87.</p> <p>This commitment is complete.</p> |
| 22 | 134 | A corporate nuclear operating experience data base to interface with all facets of the TVA nuclear organization will provide the management tool to track all experience review items and to establish a feedback mechanism to ensure recommendations are factored into respective programs of operations, design, construction, and training. | C | <p>The NER database is established to track all NER items and provide a feedback mechanism to ensure recommendations are factored into the respective program for operation, design, construction, and training.</p> |
| <p>E. <u>Programmatic Improvements</u></p> | | | | |
| <p>1. <u>Improvements in Operations</u></p> | | | | |
| 23 | 136 | TVA's nuclear management will monitor for procedural noncompliance when conducting plant performance assessments. Procedures will specify progressive disciplinary action for failure to follow procedures. | C | <p>QA policy issued. This commitment is complete.</p> <p>BFN and WBN implementation details will be contained in Volume 3 and 4, respectively.</p> |
| 24 | 137 | TVA has made plant-specific improvements in operator training. | C | <p>Plant-specific improvements for startup have been incorporated and the item is complete for SQN. PMP 0202.05 defines the nuclear plant operator training program. Functional training simulators to aid in operator development are now at BFN, SQN and WBN. An operator evaluation and assessment group has been organized.</p> |

<u>Commitment Item</u>	<u>Vol. 1 Rev. 6 Page</u>		<u>Required Completion</u>	<u>Summary of Progress</u>
25	138	The NP headquarters organizations will have 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 IVA 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.	C	<p>The Nuclear Power headquarters organizations are in place, functioning responsibilities have been defined, and staffed to authorized headcount levels continues.</p> <p>In that these core organizations are staffed to a functioning level this commitment has been met.</p> <p>NP-DIR.5.8 defines the functions of the manager of Chemistry and Environmental. NP DIR.10.2 defines the responsibilities of Manager of Radiological Control.</p>
26	138	An expanded corporate nuclear performance reporting system is being developed to collect key performance indicators for trending and analysis	C	<p>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 and BFN has been reorganized to allow it more convenient and ready access to pertinent performance data. This commitment has been completed.</p>
27	138	IVA will implement a system engineer program at each nuclear site.	O	<p>As of April 1, 1988, a Plant Systems Engineer and a design project systems engineer were assigned to each of the 72 systems at SQN. Discipline staffed systems engineering specialist were assigned to 84 of the 92 systems at SQN. A procedure has been implemented at SQN that defines the responsibilities of the plant systems engineer.</p> <p>BFN implementation is described in Volume 3. WBN will be addressed in Volume 4.</p>
28	140	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.	C SQN	<p>The Nuclear Manager's Review Group (NMRG) completed work on a comprehensive review of maintenance at SQN, WBN, and BFN. The report of review results was submitted to NRC on Sept. 30, 1986. Report was resubmitted 12/27/86 with action items assigned. Findings from the report were evaluated and a comprehensive corrective action plan was submitted to S. A. White on April 28, 1987. All findings and corrective actions are being tracked on TROI. In an NRC exit meeting on July 31, 1987, all maintenance-specific findings with identified restart actions were closed for restart with the balance of corrective actions having long-term solutions. This commitment is complete for SQN.</p> <p>BFN implementation is described in Volume 3. WBN will be addressed in Volume 4.</p>

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2. Improvements in Maintenance

29	141 142	Improvements are being made in the nuclear site preventive maintenance. These improvements emphasize reducing recurring corrective maintenance requirements, improving use of predictive maintenance, and adherence to established preventive maintenance routines. Analysis of equipment performance history and maintenance history, including reliability and availability information from NPRDS and TVA sources, will be used, together with vendor recommendations, to develop optimum preventive maintenance routines.	0	<p>A contract has been awarded for upgrade of the Sequoyah Nuclear Plant (SQN) Preventive Maintenance (PM) Program, and the contractor has begun mobilization. The work effort is being structured to provide a comprehensive, efficient method for selecting equipment for PM and identifying, evaluating, and documenting PM activities. The equipment will be systematically evaluated to determine appropriate activities and frequencies based on commitments, vendor recommendations, maintenance history, contribution to risk and availability, and engineering judgment. Activities will be identified for all equipment conditions; stored, operating, and laid up. The results of the evaluation shall be documented in a concise format and maintained in controlled files along with copies of reference materials used for the evaluation. The output of the process will describe actions necessary to ensure preservation of equipment.</p> <p>For SQN, the PM upgrade for critical equipment is scheduled to be complete by the end of September 1989.</p> <p>BFN implementation is described in Volume 3 and WBN implementation will be described in Volume 4.</p>
30	142	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 activity.	C SQN	<p>The plant maintenance planning organization has been established and has daily coordination meetings with appropriate interface organizations to plan, schedule, and coordinate maintenance activities for the following day. The maintenance planning organization interfaces with Planning and Scheduling organizations to establish a priority for work, integrate the maintenance activities, and coordinate scheduling and tracking to completion. This commitment is complete for SQN.</p> <p>Onsite planning and scheduling activities will continue to improve as additional improvements are made to the computerized data handling systems.</p> <p>BFN implementation is described in Volume 3. WBN implementation will be described in Volume 4.</p>
31	142	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.	C	<p>The Sequoyah, Browns Ferry, and Watts Bar maintenance training programs have been accredited by INPO.</p>

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3. Improvements in Welding

32	145	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.	C SQN	<p>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. Response to SER, which completed this item, was submitted to NRC 1/30/87. This commitment is complete for SQN.</p> <p>Inspection Report 50-327 and 50-328/87-21 documents closure of open welding issues for Sequoyah including programmatic improvements</p> <p>BFN and MBN implementation will be described in Volumes 3 and 4, respectively.</p>
33	145	TVA is initiating appropriate changes to programs as the changes are identified by the welding projects at each site.	C SQN	<p>No further actions necessary for SQN restart.</p> <p>BFN and MBN implementation details will be as described in Volumes 3 and 4, respectively.</p>
34	70	Future updates to organization descriptions will be made through submittal of, and change to, an organization description topical report.	L	Organization description topical report is being prepared.
35	124	The Configuration Management function will include a controlled master equipment list and a master design document list.	L	Planning is complete and compilation of input data has started.
36	123	Implementation of the Integrated Living Schedule (ILS) program will be an ongoing effort applied to each nuclear plant as it reaches operational status.	O	Policy Statement has been issued and planning is underway.

APPENDIX 9

TVA's Response to NRC's Request for
Information dated April 23, 1987

This appendix is maintained as a historical record and is not updated.