

**TENNESSEE VALLEY AUTHORITY**

CHATTANOOGA, TENNESSEE 37401

5N 38A Lookout Place

July 31, 1986

The Honorable Lando W. Zech, Jr., Chairman  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Mr. Chairman:

In the Matter of )  
Tennessee Valley Authority )

Docket Nos. 50-259  
50-260  
50-296  
50-327  
50-328  
50-390  
50-391  
50-438  
50-439

On March 10, 1986, I submitted a Revised Corporate Nuclear Performance Plan (CNPP). As stated in my cover letter of that submittal, the progress of implementation of the Revised CNPP would be monitored and when progress was made, I would provide this additional information to the NRC staff. The enclosed Revision 2 of the Revised CNPP reflects recent senior management changes.

TVA will continue to monitor the progress of implementation of the Revised CNPP and provide additional information to the NRC staff as needed.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

*S. A. White*

S. A. White  
Manager of Nuclear Power

Sworn to and subscribed before me  
this 31<sup>st</sup> day of July 1986.

*Paulette H. White*

My Commission Expires 8-24-88

Enclosure

cc: See page 2

8608050199 860731  
PDR ADICK 05000259  
P PDR

B021  
1/36

The Honorable Lando W. Zech, Jr., Chairman

July 31, 1986

Enclosure

cc (Enclosure):

Commissioner Asselstine  
Commissioner Bernthal  
Commissioner Roberts  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Mr. Harold Denton (5)  
Director, Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

U.S. Nuclear Regulatory Commission (5)  
Region II  
Attention: Dr. J. Nelson Grace, Regional Administrator  
101 Marietta Street, NW, Suite 2900  
Atlanta, Georgia 30323

✓ Mr. Victor Stello (40)  
Acting Executive Director of Operations  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Mr. James Taylor, Director (5)  
Office of Inspection and Enforcement  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555



REVISED CORPORATE NUCLEAR PERFORMANCE PLAN  
INSTRUCTION SHEET  
FOR REVISION 2

REMOVE

i  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
95  
96

Appendix 4 1 of 28  
25 of 29

Appendix 7 1 of 10  
2 of 10  
3 of 10  
4 of 10  
5 of 10  
6 of 10  
7 of 10  
8 of 10  
9 of 10  
10 of 10

INSERT

i  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
95  
96

Appendix 4 1 of 29  
25 of 29

Appendix 7 1 of 12  
2 of 12  
3 of 12  
4 of 12  
5 of 12  
6 of 12  
7 of 12  
8 of 12  
9 of 12  
10 of 12  
11 of 12  
12 of 12

## CONTENTS

<u>Contents</u>	<u>Page</u>
MESSAGE FROM THE TVA BOARD OF DIRECTORS	1
MESSAGE FROM THE MANAGER OF NUCLEAR POWER	4
EXECUTIVE SUMMARY	9
I. PURPOSE	18
II. INTRODUCTION	20
A. History and Background	20
B. Outline of TVA's Approach to Solving its Nuclear Problems	21
1. Effective Management of Nuclear Activities	22
2. Restructuring of Nuclear Organization	22
3. Restoring Employee Trust	23
4. Improving Control of Nuclear Activities	23
III. HIRING, DEVELOPMENT, AND RETENTION OF EXPERIENCED NUCLEAR MANAGERS	25
A. TVA's Short-Term Actions to Provide for a Sufficient Number of Experienced Nuclear Managers	25
1. TVA's New Senior Nuclear Management Team	26
2. New Middle-Level Nuclear Managers	34
3. Ongoing Short-Term Staffing	36
B. TVA's Long-Term Actions to Provide for a Sufficient Number of Experienced Nuclear Managers	37
1. Recruiting Program	37
2. Management Development	38
C. Conclusions	39
IV. RESTRUCTURING OF TVA'S ORGANIZATION	41
A. Introduction	41



nuclear experience, including positions of Manager of Fuel and Services Licensing and Manager of Operating Reactor Licensing for GE. Mr. Gridley is in charge of TVA's nuclear safety and licensing activities.

Director of Nuclear Managers Review Group (Ronald K. Seiberling)- Mr. Seiberling is an INPO employee. TVA has arranged a loan agreement with INPO for Mr. Seiberling's services as Director of Nuclear Managers Review Group. Mr. Seiberling has approximately twenty-nine years of nuclear experience, including the position of Operations and Maintenance Superintendent at Mississippi Power & Light's Grand Gulf Nuclear Plant.

Manager of Nuclear Personnel (Marilyn E. Taylor) - Ms. Taylor is a TVA employee. Prior to being assigned to her current position, Ms. Taylor had twenty years of experience in personnel relations, including a position of Director of Personnel for TVA. Ms. Taylor is in charge of TVA's personnel programs for nuclear activities.

Manager of Nuclear Procedures Staff (L. L. Jackson) - Mr. Jackson is a TVA employee. He has approximately fifteen years of nuclear experience, including his prior position as Chemistry Department Manager and Evaluation Team Manager for the Institute of Nuclear Power Operations (INPO). Mr. Jackson is the Assistant

to the Manager of Nuclear Power and is in charge of TVA's nuclear procedures development activities.

Manager of Planning and Financial Staff (John C. Krummel) - Mr Krummel is an employee of Stone & Webster Engineering Corporation. TVA has contracted with Stone & Webster for Mr. Krummel's services as Manager of Planning and Financial Staff. Mr. Krummel has 27 years of experience, 21 of which has been in contract administration, procurement, and financial management. Mr. Krummel has held positions as Procurement Manager for the U.S. DOE's Continuous Electron Beam Accelerator Project, and Project Contracts Manager for Stone & Webster on the U.S. DOE's Clinch River Breeder Reactor Project. Mr. Krummel is in charge of TVA's Nuclear planning, scheduling and financial control activities.

Chairman, Nuclear Safety Review Board (William H. Hannum) - TVA has hired William H. Hannum as a permanent TVA employee to be Chairman of the Nuclear Safety Review Boards. Dr. Hannum has more than twenty-eight years of nuclear experience, including positions of Director, West Valley Project Office of the U.S. Department of Energy, Deputy Director General of the Organization for Economic Cooperation and Development (OECD) Nuclear Energy Agency, Deputy Manager, Idaho Operations Office U.S. Department of



Energy, and Assistant Director for Reactor Safety, U.S.-ERDA (DOE). Dr. Hannum will be in charge of the activities of the Nuclear Safety Review Boards.

b. Existing Senior Nuclear Managers

TVA's remaining senior nuclear managers are existing TVA employees with extensive nuclear experience. As listed below, Herbert L. Abercrombie, Nuclear Site Director of Sequoyah, has more than fifteen years of nuclear experience; J. P. Darling, Nuclear Project Manager of Bellefonte has more than fifteen years of nuclear experience; R. Joe Johnson, Director of Nuclear Training, has more than twenty years of nuclear experience; Eric K. Sliger, Manager, Employee Concern Program, has more than 15 years of nuclear experience; and R. W. Cantrell, Chairman, Nuclear Safety Review Boards (interim), has more than nineteen years of nuclear experience.

c. Resumes

The resumes of each of TVA's senior nuclear managers are provided in Appendix 4. As is demonstrated by the resumes in Appendix 4 and the summaries provided above, TVA's new management team has extensive nuclear

management experience encompassing essentially all facets of design, construction, and operation of nuclear power reactors. These individuals are well qualified to provide the necessary leadership and proper direction for TVA's nuclear activities.

## 2. New Middle-Level Nuclear Managers

TVA has also hired experienced individuals to serve as permanent TVA employees in middle-level nuclear managerial positions. These individuals include:

- John G. Walker, Deputy Nuclear Site Director of Browns Ferry Nuclear Plant, with about twenty years of nuclear experience including positions of Bechtel's Project Manager for Enrico Fermi Nuclear Plant Unit 2 and Manager of Operating Plant Services for Bechtel's Ann Arbor Office.
- Mark B. Whitaker, Jr., Deputy Manager of Nuclear Safety and Licensing, with more than fifteen years of nuclear experience, including positions of Group Manager of Regulatory and Support Services, Group Manager of Engineering and Licensing for South Carolina Electric and Gas Company.



- Richard P. Denise, Assistant to the Manager of Nuclear Power, with about twenty years of nuclear experience, including position of the Director of the Division of Reactor Safety for NRC Region IV.
- Lawrence E. Martin, Project Manager, with more than twenty years of nuclear experience including a position of Section Chief with NRC Region IV.

TVA has also contracted for experienced individuals to serve as middle-level nuclear managers. These individuals include:

- James E. Huston, Deputy Director of Nuclear Quality Assurance, with more than twenty years of nuclear experience, including a position of Manager of Quality Assurance for SWEC.
- L. J. Sas, Deputy Director of Engineering has more than 15 years of nuclear engineering experience including position of Vice President of Ebasco.
- John A. Kirkebo, Manager of Engineering and Technical Services, with more than twenty years of nuclear experience, including the position of Assistant Engineering Manager for SWEC's Cherry Hill Operations Center.

- Alan K. Priest, Manager of Projects for Construction and Modifications, with more than fifteen years of nuclear experience, including the position of Bechtel's Assistant Project Manager for the South Texas Project.
- F. E. DiCola, Manager of Operations Engineering Services, with more than 17 years of nuclear experience including the position of Manager of Plant Services Department at SWEC's Cherry Hill Operations Center.

### 3. Ongoing Short-Term Staffing

TVA anticipates that additional experienced nuclear managers will be hired and other changes in managers will be made as TVA's new nuclear management team continues its evaluation of TVA's nuclear program.

Many members of TVA's new nuclear management team are contract personnel who are obligated to serve TVA for a period of two years. TVA expects that this period of service will be sufficient for these new managers to identify the problems in its nuclear program, to determine what actions are necessary to correct those problems and prevent their recurrence, and to have TVA's nuclear program well on the road to recovery. TVA recognizes that this two



year period will not be sufficient to cure all of its problems and it may be necessary to extend the contracts of some contract personnel. However, as is discussed below, TVA expects that this period will be sufficient for it to acquire additional experienced nuclear managers as permanent TVA employees.

B. TVA's Long-Term Actions to Provide for a Sufficient Number of Experienced Nuclear Managers

Since many members of TVA's new management team are not permanent TVA employees, TVA must make arrangements to replace these individuals eventually with experienced nuclear managers who are permanent TVA employees. TVA plans to take two actions to accomplish this.

1. Recruiting Program

First, as an ongoing program TVA will continue to recruit experienced managers from the nuclear industry to serve as permanent TVA employees.

Since most of the new contract managers will be serving for a two-year period, TVA will have sufficient time to satisfy at least part of its nuclear management needs by this method.

Given the statutory limits on salaries of TVA employees, TVA does not expect that it will be able to recruit all of the necessary experienced nuclear managers from outside of TVA.

Accordingly, as is discussed below, TVA is also planning to develop experienced nuclear managers from within its own organization. This is a long-term program that has several aspects as follows.

## 2. Management Development

In general, TVA has a large staff of technically competent individuals, many of whom possess the potential for developing into excellent nuclear managers. Some of these individuals are already serving in senior and middle level managerial positions within TVA's organization. TVA intends to develop the managerial potential of the best of these individuals by placing them as deputies to TVA's new nuclear management team. These deputy managers are identified in Table 1. As a result of the deputies' close working relationship with the new nuclear management team and the guidance which the managers will provide to the deputies, TVA anticipates that these permanent TVA employees will quickly develop their managerial skills and



experience and will be ready to assume senior management positions within TVA's nuclear organization when the contract managers' terms with TVA expire.

Since the basic salaries of TVA's senior nuclear managers are below industry norms due to statutory limitations, TVA will continue to experience difficulties in recruiting experienced nuclear managers. However, through the use of its management development system, TVA will have a continuous source of experienced nuclear managers who will be prepared to assume responsibilities as senior managers within TVA's nuclear organization. Therefore, while turnover of senior nuclear management personnel will remain a concern to TVA, it has taken steps to mitigate its effects.

#### C. Conclusions

TVA has taken and will be taking both short-term and long-term actions to increase the number of experienced managers for its nuclear program. By obtaining experienced nuclear managers, TVA is providing the necessary leadership and proper direction for its nuclear program. In particular, by establishing the new management team headed by Mr. White, TVA has provided a necessary ingredient for resolving the remaining problems in TVA's nuclear program and placing the program on the road to recovery.

TABLE 1  
TVA'S NUCLEAR MANAGEMENT DEVELOPMENT SYSTEM

<u>Senior Management Position</u>	<u>Name of Senior Manager</u>	<u>Status of Senior Manager - TVA Employee or Contractor</u>	<u>Name of Deputy or Assistant Manager</u>	<u>Status of Deputy or Assistant Manager - TVA Employee or Contractor</u>
Manager of Nuclear Power	Steven A. White	Contractor	Charles C. Mason William T. Cottle	TVA Employee TVA Employee
Director of Nuclear Quality Assurance	Richard B. Kelly	Contractor	James E. Huston	Contractor
Director of Nuclear Engineering	William C. Drotleff	Contractor	L. J. Sas	Contractor
Director of Nuclear Construction	Brian R. McCullough	Contractor	William R. Brown, Jr.	TVA Employee
Acting Director of Nuclear Services	Cloin G. Robertson	TVA Employee	Richard A. Sessoms	TVA Employee
Site Director of Sequoyah	Herbert L. Abercrombie	TVA Employee	N/A	--
Site Director of Browns Ferry	Hugo P. Pomrehn	Contractor	John G. Walker	TVA Employee
Site Director of Watts Bar	William T. Cottle*	TVA Employee	N/A	--
Project Manager of Watts Bar 2	Robert A. Pedde	TVA Employee	N/A	--
Project Manager of Bellefonte	James P. Darling	TVA Employee	N/A	--
Director of Nuclear Safety and Licensing	Richard L. Gridley	Contractor	Mark B. Whitaker, Jr.	TVA Employee
Director of Nuclear Training	R. Joe Johnson	TVA Employee	Leo H. Sain	TVA Employee
Manager of Nuclear Personnel	Marilyn E. Taylor	TVA Employee	N/A	--
Manager of Planning and Financial Staff	John C. Krummel	Contractor	J. L. McAnally	TVA Employee
Manager of Nuclear Procedures Staff	L. L. Jackson	TVA Employee	N/A	
Director of Nuclear Managers Review Group	Ronald K. Seiberling	Contractor	N/A	

\*Interim assignment



## a. Nuclear Procedures Systems

TVA is developing a new system of ONP Policies, Directives, Standards, Procedures and Instructions to govern its nuclear activities, including activities at its nuclear plants. To manage this effort, TVA has established a Nuclear Procedures Staff (NPS), the manager of which reports directly to the Manager of Nuclear Power as a member of the senior management team. The NPS is responsible for managing the restructuring of the ONP procedures system and has been given adequate resources for accomplishing this effort. As discussed below, the actual development of the procedures will be performed on both a short-term and long-term basis.

- 1) 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. Whenever possible, the above procedures will be based upon those provisions of

existing procedures which provide effective control of the activities in question. The end result will be approved procedures required for the startup, operation and support of the respective nuclear plant.

- 2) In the long-term, TVA is planning to develop 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. The ONP Policies, Directives, and Standards are upper-tier documents which establish ONP management position and interface responsibilities, authorities, and uniform methods for implementing requirements. The lower-tier Procedures and Instructions will represent a detailed extension of the upper-tier documents by delineating the responsibilities, authorities, requirements and actions to be accomplished at the user level.

b) Programmatic controls

The establishment of this procedure system ensures ONP centralized control, technical uniformity, and continuity for the manner in which all corporate and



APPENDIX 4

RESUMES OF TVA'S SENIOR  
NUCLEAR MANAGERS

MANAGER, NUCLEAR PROCEDURES STAFF  
LARRY L. JACKSON

WORK EXPERIENCE

DEC 85 - PRESENT	ASSISTANT TO THE MANAGER OF NUCLEAR POWER, TVA
APR 80 - DEC 85	CHEMISTRY DEPARTMENT MANAGER, LEAD TEAM EVALUATOR, 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
------	--

PROFESSIONAL MEMBERSHIPS

CURRENT	AMERICAN HEALTH PHYSICS SOCIETY
---------	---------------------------------

CAREER HIGHLIGHTS

- o PARTICIPATED IN THE DEVELOPMENT OF THE INSTITUTE OF NUCLEAR POWER OPERATION'S (INPO) FIRST EVALUATION CRITERIA FOR CHEMISTRY AND RADIOLOGICAL PROTECTION, PERFORMED THE FIRST INPO EVALUATIONS IN THESE AREAS AND LATER FORMED A CHEMISTRY DEPARTMENT AT INPO AS THE FIRST CHEMISTRY DEPARTMENT MANAGER. QUALIFIED AND SERVED AS A LEAD TEAM MANAGER AND CORPORATE EVALUATOR.
- o MEMBER OF THE U.S. NRC INSPECTION AND ENFORCEMENT INVESTIGATION TEAM FOR THE INVESTIGATION OF THE THREE MILE ISLAND ACCIDENT (CO-AUTHOR OF NUREG-0600).



## APPENDIX 7

### TVA RESPONSES TO NRC'S REQUEST FOR ADDITIONAL INFORMATION DATED MAY 1, 1986

The NRC in its letter from Mr. B. J. Youngblood to Mr. S. A. White, dated May 1, 1986 listed, in the enclosure to that letter, several questions regarding the revised Corporate NPP as submitted by TVA on March 10, 1986. This appendix provides TVA's response to those specific requests.

As stated in the revised Corporate NPP, TVA has continued its evaluation process, has refined its plans, and has now implemented the organizational changes and a number of the corrective actions that had previously been set-forth as planned. In light of these developments, a further revision of the Corporate NPP is provided which incorporates approved organizational changes and which identifies completed corrective actions (as well as those that will be long-term or ongoing).

The following listing is provided to assist with the location of revised sections of the Corporate NPP that respond to the NRC's above mentioned questions.

#### NRC Questions on Section IV - Restructuring of TVA's Organization

1. Provide details regarding the implementation of the reorganization, including the location and makeup of the corporate departments (such as size, position descriptions, personnel expertise). Identify and discuss interim measures that will be taken for any portion of the organization

that is essential for assuring safe operation that is not expected to be fully implemented prior to restart or fuel load of your nuclear facilities. Provide a basis for the acceptability of these interim measures in lieu of the fully operational organization.

#### RESPONSE

The Office of Nuclear Power organization and its relationship to the TVA Board, as well as the details regarding implementation of the reorganization, are described in Section IV and the approved organization charts are set forth in Figures 2 and 3.

Position descriptions are being developed and, as noted in Section VII and Appendix 8, those applicable to each of the plants will be completed before restart of the subject plant.

Abstracts of key managerial personnel resumes and their assigned areas of responsibility are provided in Section III of the Corporate NPP and experience resumes are provided in Appendix 4.

As stated in Section VII, before TVA operates any of its nuclear plants, it will implement those improvements which are essential for TVA to assure effective management of its nuclear activities. Also Technical Specification revisions and the QA Topical Report (TVA-TR75-1A) revisions will include updated descriptions of the new organization applicable to each plant and the implementation of the Nuclear QA program respectively.



2. Describe the Office of Engineering project engineering concept.

RESPONSE

Section IV.E.2 has been expanded to describe the Project Engineering Organization within the Division of Nuclear Engineering and its reporting relationship to the Site Director.

3. Describe how the Office of Nuclear Power interfaces with their counterparts at the site and the procedure to resolve site disagreements with Office of Nuclear Power technical guidance.

RESPONSE

The Office of Nuclear Power is the entire nuclear organization and includes both corporate and site components. The relationship of the various divisions and staff departments to the site organization is described in Sections IV.C and IV.D both of which have been revised to respond to this question. Figure 3 illustrates the relationship between the sites and the ONP headquarters. The site-specific volumes of the NPP address the organization at the site in more detail.

4. Describe how support organizations, e.g., Procurement, interface with the Office of Nuclear Power.

RESPONSE

The interfaces between the ONP and other of TVA's organizations providing support to the ONP are described in an expanded Section IV.B (see specifically IV.B.2).

5. Provide details of the Quality Assurance (QA) organizational changes and of the revised QA standards and procedures (including the QA Topical Report).

RESPONSE

Section IV.E.1 discusses the changes in the QA organization that have been implemented. The Topical Report is being updated to reflect the approved organization. (This will be Rev. 9 when approved by the NRC.) A brief description of the structure of and changes to the QA standards and procedures is also included.

6. Describe how the revised nuclear training program is to be implemented.

RESPONSE

The implementation of TVA's Nuclear Training Program is a very extensive subject covering subprograms as varied as those for training crafts personnel, to those for technical training for operators and management systems training for selected ONP staff and line managers. Section IV E.3 is expanded somewhat to address this question and the



site-specific volumes of the NPP address revised training programs as applicable to the respective sites. Supporting details are found in separate TVA training program manuals.

7. Describe the functions and responsibilities of the new Engineering Assurance department (discussed during meetings with the staff), including its relationship with the Quality Assurance and Nuclear Engineering departments.

#### RESPONSE

The Engineering Assurance function responsibilities and the interrelationship with the Divisions of Nuclear Engineering and Nuclear Quality Assurance is described in Section IV.E.2.

#### NRC Questions on Section V - Restoring Employee Confidence in TVA Nuclear Management

1. Describe the procedure to resolve conflicts between review groups and the line organization.

#### RESPONSE

Section V.B.1 has been revised to discuss the roles of the review groups and the line organization in the Special Program for resolving employee concerns at Watts Bar. This discussion includes a brief summary of the procedure for escalating differences, or conflicts, to a level of management that can and will resolve the conflict.

2. Describe the procedure for providing the group close-out reports to all TVA employees and other interested parties.

RESPONSE

Section V.B. also contains a discussion of TVA's current plans to make the employee concerns program reports available to TVA employees. As stated in section V.B.1, interested parties will be provided copies upon request.

3. Describe the duties and responsibilities of the TVA Inspector General.

RESPONSE

Section VI.B.1 and Appendix 5 have been expanded to define the duties and responsibilities of the Inspector General.

4. Describe the procedures, if any, by which TVA employees can approach the TVA Board on safety concerns or differing professional opinions.

RESPONSE

Section V.C. and Appendix 6 provide the subject policy and a discussion of its application within TVA's nuclear activities.



NRC Questions on Section VI - Improvements in TVA's Nuclear Management Systems and Programs

1. Provide the charter and resumes of the group of experts that will advise the TVA Board.

RESPONSE

Section VI.B.1 discusses the means by which the TVA Board will be kept informed of important developments in the ONP. The primary outside advisor function is to be provided by INPO through evaluations of ONP corporate performance. Section VI.B.2 discusses methods by which ONP top management will remain informed and obtain needed advice and management information.

2. Provide the resume of the individual developing the interim corporate-level nuclear standards and TVA nuclear power directives. What resources are at his disposal?

RESPONSE

The manager responsible for development of TVA's nuclear procedures system as described in Section VI.C.1 is L. L. Jackson. His resume is provided in Appendix 4 and a synopsis is included in Section III. The resources under his direction are discussed in Section VI.C.1 as well. TVA has also retained the services of M. H. Sturdivant & Associates to

support the Manager, Nuclear Procedures Staff and the Manager, Nuclear Power during the development of its nuclear procedures system. M. H. Sturdivant's resume is attached to this Appendix 7 for reference.

3. Describe the modifications to your nuclear programs initiated to ensure the timely resolution and tracking of conditions adverse to quality (CAQ). Describe your central Nuclear Information System and the control system for planning, scheduling, and budgeting nuclear activities.

RESPONSE

Section VI.D.1 describes the improved tracking system for CAQs.

Section VI.C.2 describes the functions of the Planning and Financial Staff for the planning, scheduling, and budgeting of TVA's nuclear activities. This section also outlines the principal features of the nuclear management information system.

4. Describe TVA's program to upgrade operating plant procedures.

RESPONSE

Section VI.C.1 describes the key aspects of the short- and long-term programs to upgrade operating plant procedures. Specific improvements and changes to procedures are addressed in the site-specific volumes of the NPP.



Sections VI.E.1 and VI.E.2 address programmatic improvements in Operations and Maintenance including procedures.

5. Describe TVA's program to upgrade the nuclear preventative maintenance program, the maintenance planning process, and training of maintenance personnel.

#### RESPONSE

Section VI.E.2 discusses the program to improve performance in the area of nuclear maintenance. At present, the Nuclear Managers Review Group has been assigned the task of conducting a thorough review of all aspects of TVA's maintenance program. Findings from this review group will be evaluated by the Manager of Nuclear Power and the Nuclear Site Directors to develop both centralized and site-specific plans for improving maintenance. Further details are provided in the site-specific volumes of the NPP.

6. The plan outlines two acceptable phases of efforts to resolve the existing welding problems at Sequoyah and Watts Bar. However, there is insufficient information to judge whether or not the plan will lead to improvements in the welding program for TVA facilities. To make this determination, we need to know what TVA intends to do in the following areas:
  - simplification of Code and regulatory commitments to provide clear guidance to workers,

- the process for maintaining welder's certification,
- the process for QC inspector's training and certification and
- the extent of involvement of NDE examiners in the design phase to ensure access for inspection and fabrication.

#### RESPONSE

Section VI.E.3 discusses improvements in welding. The details of TVA's Welding Project are provided in Volume I - "Welding Project Review Plan" submitted to the NRC on February 7, 1986. The results of the review plan implementation are provided in separate reports on each of the plants. Interim measures have been undertaken to assure continued high quality of welds at all of the plants, these are discussed in site specific volumes of the Nuclear Performance Plan. As is stated in Section VI.E.3, when the entire program review is completed, TVA will address specific actions that are appropriate to correct the deficiencies, if any, that are found.

7. Provide a description of how the centralized design control program will function. Demonstrate how the previous problems with design and modification control will be solved by this centralized responsibility.



**RESPONSE**

Section VI.E.4 addresses this question specifically and provides an illustration to demonstrate how design change control is established and how modification control is effected.

CONSULTANT TO MANAGER OF NUCLEAR POWER  
M. H. STURDIVANT

WORK EXPERIENCE

MAR 86 - PRESENT	CONSULTANT TO THE MANAGER OF NUCLEAR POWER, NUCLEAR PROCEDURES DEVELOPMENT, TVA, CHATTANOOGA
AUG 85 - MAR 86	PROJECT MANAGER, NUCLEAR MISSION PROCEDURES, TOLEDO EDISON, DAVIS-BESSE
OCT 84 - JUL 85	PROJECT MANAGER, DOCUMENTATION SYSTEMS, NIAGARA MOHAWK, NINE MILE 2
MAR 84 - SEP 84	PROJECT MANAGER, QUALITY ASSURANCE TRAINING, AMERICAN ELECTRIC POWER, DONALD C. COOKE
AUG 83 - FEB 84	PROJECT DIRECTOR, ADMINISTRATIVE AND SUPPORT PROCEDURES, CINCINNATI GAS AND ELECTRIC, WILLIAM H. ZIMMER
AUG 80 - AUG 83	PROJECT TEAM MEMBER FOR RESTART, PUBLIC SERVICE INDIANA, MARBLE HILL
MAY 80 - AUG 80	TECHNICAL WRITER, INGALLS SHIPBUILDING CORPORATION, PASCAGOULA, MISSISSIPPI
SEP 76 - MAY 80	TECHNICAL WRITER, SPECIAL PROJECTS AT NIAGARA MOHAWK, METROPOLITAN EDISON, AND TVA WHILE ALSO A DOCTORAL STUDENT AND INSTRUCTOR, UNIVERSITY OF TENNESSEE, KNOXVILLE
FEB 76 - JUN 76	DIRECTOR TECHNICAL WRITING SEMINARS, EG&G, LAS VEGAS, NEVADA
JUN 75 - AUG 75	TECHNICAL WRITER, TODD SHIPYARDS

EDUCATION

1954 - BA, EDUCATION, UNIVERSITY OF NORTH CAROLINA, CHAPEL HILL  
1976 - MA, ENGLISH, UNIVERISTY OF NEVADA, LAS VEGAS