



Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402

CNL-17-012

January 17, 2017

10 CFR 50.4  
10 CFR 50.71(e)

ATTN: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

Browns Ferry Nuclear Plant, Units 1, 2, and 3  
Renewed Facility Operating License Nos. DPR-33, DPR-52, and DPR-68  
NRC Docket Nos. 50-259, 50-260, and 50-296

Sequoyah Nuclear Plant, Units 1 and 2  
Renewed Facility Operating License Nos. DPR-77 and DPR-79  
NRC Docket Nos. 50-327 and 50-328

Watts Bar Nuclear Plant, Units 1 and 2  
Facility Operating License No. NPF-90 and NPF-96  
NRC Docket No. 50-390 and 50-391

Subject: **Organization Topical Report, TVA-NPOD89-A**

Reference: Tennessee Valley Authority letter to NRC, "TVA Organization Topical Report, TVA-NPOD89-A," dated February 13, 2015

In accordance with Title 10, *Code of Federal Regulations* (10 CFR) 50.71(e), "Maintenance of records, making of reports," enclosed is Revision 22 of Tennessee Valley Authority (TVA) Organization Topical Report (TVA-NPOD89-A). TVA's Organization Topical Report provides organizational descriptions for the TVA Nuclear Power Group, including Browns Ferry Nuclear Plant, Sequoyah Nuclear Plant, Watts Bar Nuclear Plant (WBN), and Nuclear Construction. This report is referenced in the Updated Final Safety Analysis Reports (UFSARs) for each of TVA's operating nuclear power plants and must comply with the update submittal frequency requirements for the UFSARs.

In the reference letter, TVA committed to provide a revised Organization Topical Report (TVA-NPOD89-A) describing the WBN Unit 2 operating organization within 90 days of commercial operation. WBN Unit 2 entered commercial operation on October 19, 2016. Therefore, the revised Organization Topical Report (TVA-NPOD89-A) is due on or before January 17, 2017.

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Revision 22 of the TVA Organization Topical Report (TVA-NPOD89-A), which reflects the incorporation of WBN Unit 2 into the TVA operating fleet is provided in the enclosure to this letter.

Currently, one individual is serving as both the Executive Vice President Generation and the Chief Nuclear Officer. Effective January 23, 2017, this position will be split as reflective in the enclosure, with the current Senior Vice President of Operations assuming the Chief Nuclear Officer position. It is expected that the Senior Vice President of Operations position will remain as shown in the enclosure.

There are no new regulatory commitments contained in this letter. If you have any questions regarding this submittal, please contact Ed Schrull at (423) 751-3850.

Respectfully,



J. W. Shea  
Vice President Nuclear Licensing

Enclosure:

Organization Topical Report, TVA-NPOD89-A, Revision 22

cc (Enclosures):

NRC Regional Administrator - Region II  
NRC Senior Resident Inspector - Browns Ferry Nuclear Plant  
NRC Senior Resident Inspector - Sequoyah Nuclear Plant  
NRC Senior Resident Inspector - Watts Bar Nuclear Plant  
NRC Project Manager - Browns Ferry Nuclear Plant  
NRC Project Manager - Sequoyah Nuclear Plant  
NRC Project Manager - Watts Bar Nuclear Plant

**Enclosure**

**Organization Topical Report  
TVA-NPOD89-A, Revision 22**

**TENNESSEE VALLEY AUTHORITY**  
**ORGANIZATION TOPICAL REPORT, TVA-NPOD89-A**  
**REVISION 22**  
**JANUARY 2017**

## ORGANIZATION DESCRIPTION

### LIST OF REVISIONS

REVISION 0.....	June 1, 1989
REVISION 1.....	August 13, 1990
REVISION 2.....	April 18, 1991
REVISION 3.....	April 17, 1992
REVISION 4.....	December 27, 1993
REVISION 5.....	December 16, 1994
REVISION 6.....	June 29, 1995
REVISION 7.....	June 27, 1997
REVISION 8.....	August 25, 1999
REVISION 9.....	August 25, 2000
REVISION 10.....	August 24, 2001
REVISION 11.....	August 26, 2002
REVISION 12.....	August 22, 2003
REVISION 13.....	August 31, 2004
REVISION 14.....	August 30, 2005
REVISION 15.....	June 22, 2006
REVISION 16.....	August 30, 2007
REVISION 17.....	August 29, 2008
REVISION 18.....	August 31, 2009
REVISION 19.....	August 31, 2011
REVISION 20.....	September 3, 2013
REVISION 21.....	February 13, 2015
REVISION 22.....	January 17, 2017

**TVA NUCLEAR POWER GROUP  
ORGANIZATION DESCRIPTION**

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## **Abstract**

This Topical Report (TVA-NPOD89-A) includes the organizational descriptions for the Tennessee Valley Authority (TVA) Nuclear Power Group (NPG) including the Browns Ferry (BFN), Sequoyah (SQN), Watts Bar (WBN) Nuclear Plants, and the Corporate NPG organization. This report contains the senior management, technical support and operating organization descriptions, and organization charts that meet the “content” guidance of Nuclear Regulatory Commission’s (NRC’s) Regulatory Guide 1.70, Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants - LWR Edition, Rev. 3 (November 1978).

Qualification requirements and training descriptions specified in the standard format document will continue to be addressed in each plant's Final Safety Analysis Report. The detailed TVA Quality Assurance organization and program description is contained in the NPG Quality Assurance Plan (TVA-NQA-PLN89-A) and is not repeated herein.

The original purpose of the NPG Organization Description (TVA-NPOD89-A) was to establish a controlled, single-source document and a disciplined process for communicating the organizational structure and position descriptions to the NRC. TVA-NPOD89-A will be referenced in future revisions of our license applications including the Safety Analysis Reports, Technical Specifications, the Nuclear Quality Assurance Plan, and other documents that may refer to the NPG organization. This topical report is updated as necessary to reflect major organizational changes. Because this topical report encompasses multiple plants, subsequent updates to the Topical Report will be provided on a biennial basis to ensure that TVA meets the refuel cycle criterion of 10 CFR 50.71(e) for each unit at each site.



## **Introduction**

### **TVA Corporate Organization**

The Tennessee Valley Authority (TVA) is an agency of the federal government whose major policies, programs, and organization are determined by a part-time, nine member Board of Directors (BOD) structure pursuant to the TVA Governance Restructuring provisions of the Consolidated Appropriations Act, 2005. The BOD members are appointed by the President of the United States and confirmed by the Senate for five-year terms. The BOD selects a Chief Executive Officer (CEO) who also serves as President to manage TVA's day-to-day business. The BOD shapes the long-term business strategies, recommends major program initiatives, and guides TVA's day-to-day operations.

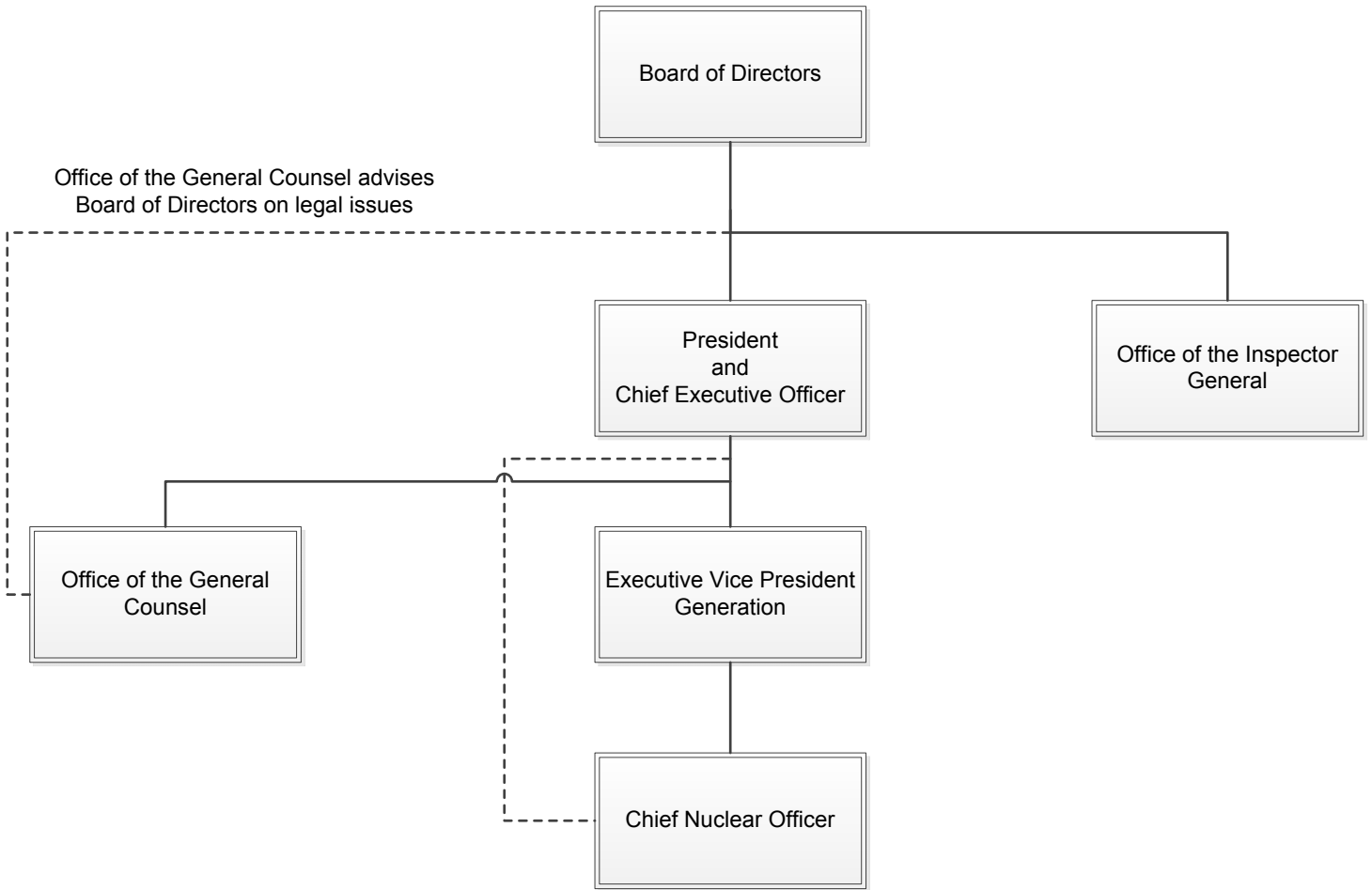
The CEO is responsible for managing all aspects of TVA, including power production, transmission, power trading, resource management programs, and economic development, as well as TVA's corporate functions. The CEO heads TVA's Senior Management Committee and chairs its Leadership Team.

The Executive Vice President Generation is responsible for optimizing TVA's fleet of generation resources, including nuclear, coal, gas, hydroelectric and renewables, to meet the energy demands of the Tennessee Valley. The Executive Vice President Generation reports directly to the CEO.

The Chief Nuclear Officer (CNO) is responsible for the overall safety, efficiency, and economy of TVA's Nuclear Power Program and the overall NPG organization. The CNO reports directly to the Executive Vice President Generation.

The Corporate Organization leadership and reporting relationships are shown in Figure 1.

**Figure 1: Corporate Organization**



I. Executive Vice President Generation

The Executive Vice President Generation is responsible for leading the operations of all of TVA's generating assets including Nuclear; Coal Operations; Gas Operations; Power Supply and Fuels; Generation Construction; Engineering, Environmental and Support Services; and River Operations & Renewables. The position leads the activities of these organizations in accordance with the goals, vision, and values established by the CEO and the Board of Directors and is responsible for establishing short-term and long-term objectives, plans, and policies subject to the approval of the CEO. The Executive Vice President Generation reports directly to the CEO.

The Nuclear Power Group (NPG) is responsible for nuclear plant engineering and design, operation, quality assurance, and compliance with regulatory requirements. NPG plans and manages the Nuclear Program to meet the requirements of TVA's Power Program consistent with safety, environmental, quality, and economic objectives. The Executive Vice President Generation is responsible for assuring that the Inspection and Testing Services organization supports Nuclear Construction activities in accordance with the Nuclear Quality Assurance Plan (NQAP).

The general organization of TVA's NPG is shown in Figure 2.

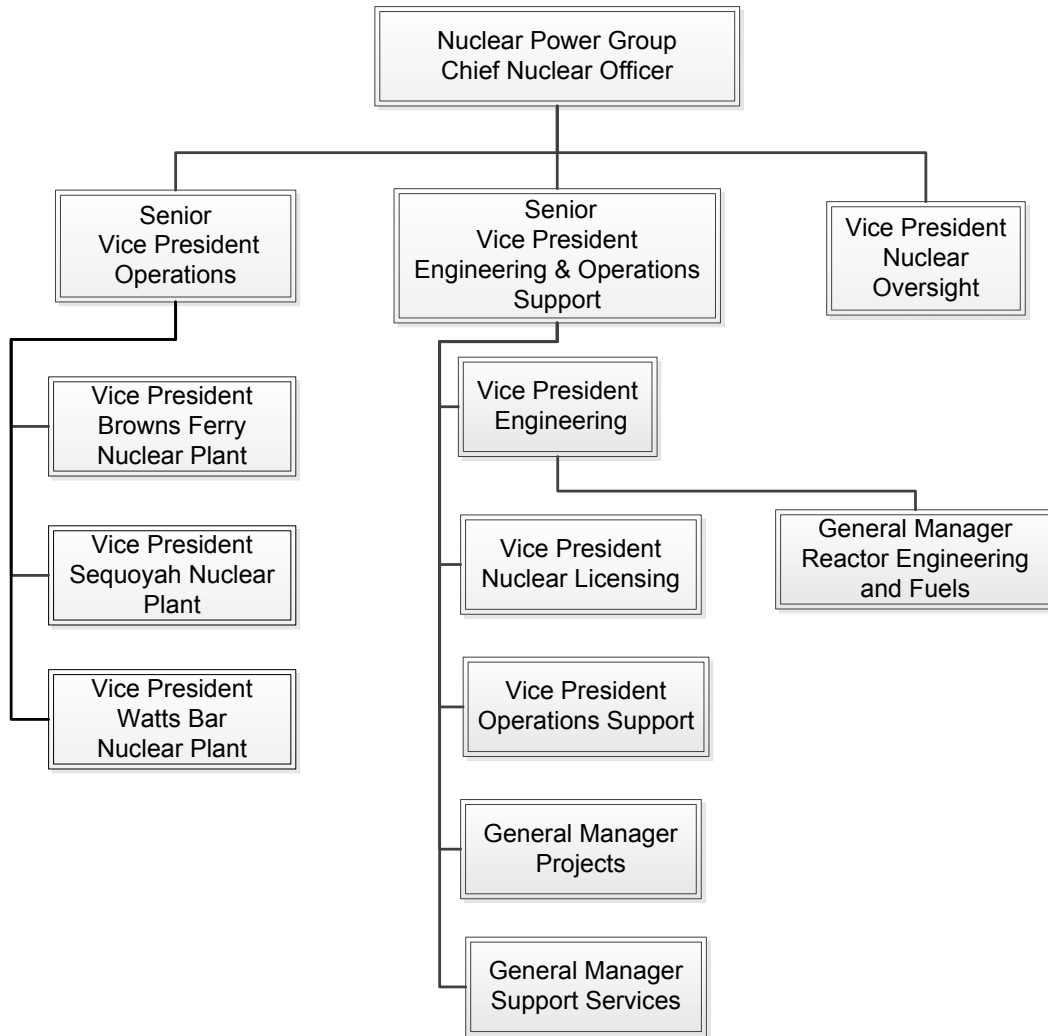
A. Senior Vice President and Chief Nuclear Officer (CNO)

The CNO is the senior nuclear manager with direct authority and responsibility for the management, control, and supervision of TVA's Nuclear Power Program and for the execution of nuclear programs, policies, and decisions that the BOD approves or adopts. The CNO has corporate responsibility for overall plant nuclear safety and shall take measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support in the plant so that continued nuclear safety is assured. The CNO reports directly to the Executive Vice President Generation.

The CNO is responsible for the overall safety, efficiency, and economy of nuclear operations. The CNO establishes management and operating policies and procedures related to TVA's Nuclear Program and is responsible for personnel, planning, scheduling, licensing, engineering and design, construction, operation, quality assurance, training, maintenance, and technical and administrative matters related to these programs. The CNO coordinates activities and functions of NPG with other TVA organizations in order to carry out TVA's corporate policy and to meet corporate goals and objectives. This position is responsible for all aspects of TVA's interface and relations with the NRC and other entities with jurisdiction over or interest in TVA's Nuclear Program. Other responsibilities include: development and implementation of an effective radiological Emergency Preparedness Program; directing shutdown of nuclear facilities when deemed appropriate; and development of long-range, strategic plans for all NPG programs, activities, and facilities. Quality Assurance reports directly to the Vice President, Nuclear Oversight, but has direct access to the CNO. This provides independence and freedom to effectively ensure conformance to Quality Assurance Program requirements.

The CNO's direct reports are provided in Figure 2. These functions are described in more detail in subsequent sections of this Topical Report.

**Figure 2: Nuclear Power Group**



A. Chief Nuclear Officer (CNO) (continued)

1.0 Senior Vice President Engineering and Operations Support

This position is responsible for the Engineering and Operations Support associated with producing safe and reliable nuclear power. Responsibility includes: Nuclear Engineering, Nuclear Projects, Nuclear Fuels, Extended Power Up-rate, Nuclear Support Services, Performance Improvement, Licensing, Emergency Preparedness, Security Operations, and External Events recovery responsibilities.

1.1 Vice President Engineering

This position is responsible for establishing and directing engineering functions within the NPG. This includes Corporate Design Engineering, Plant Engineering, Programs Engineering, and Computer Engineering. Responsibilities include governance and oversight of Site Engineering functions and policy compliance for NPG's fleet in regard to engineering functions. In addition, this position advises NPG executives on technical issues affecting the sites and provides direction to the Site Engineering Directors.

For National Fire Protection Association (NFPA) matters, the Corporate Engineering Chief Engineer (Vice President Engineering) serves as the TVA Authority Having Jurisdiction (AHJ) and is responsible for approving fire protection equipment installation or procedure design basis matters which do not require prior NRC approval. For issues which require prior approval, the NRC is considered the AHJ. This position also serves as the point of contact with other organizations on fire protection related matters.

1.1.1 General Manager Reactor Engineering and Fuels

This position is responsible for the management of Reactor Engineering and Fuels program to support safe operation of TVA nuclear facilities.

1.2 Vice President Nuclear Licensing

This position provides oversight and direction of the NPG Licensing functions in support of the operations of TVA's licensed nuclear plants. This position is responsible for the development of regulatory vision and strategy for regulatory issues for both Corporate and Sites and providing policy recommendations. This position provides governance and oversight of the site licensing organizations.

1.3 Vice President Operations Support

This position provides corporate governance of the various functional areas (maintenance, operations, radiation protection, chemistry, work control) for TVA's nuclear fleet in order to ensure consistency across sites. This position provides oversight and directs the Performance Improvement organization. This position is responsible for the nuclear training organization.

1.4 General Manager Projects

This position is responsible to strategically manage, direct, and integrate the diverse functions associated with the planning, development, and execution

of capital and O&M projects. Provides leadership and direction for the development of strategic plans for plant projects, including system wide initiatives, to maximize the efficiency and utilization of TVA Nuclear assets. Accountable for ensuring that all services performed comply with operational, engineering, regulatory, environmental, and safety requirements as appropriate. Develops key partnerships and alliances with major support vendors to NPG and provides oversight of these alliances.

1.5 General Manager Support Services

This position provides oversight and directs the Support organization which provides technical support to NPG in the following areas: Emergency Preparedness, Security Operations, Nuclear In-Processing, and External Events. Serves as key member of the NPG executive team and advises the CNO and other corporate and site management on a wide range of Nuclear Support issues. Ensures all managed activities are conducted in accordance with appropriate TVA and external regulations and policies.

2.0 Vice President Nuclear Oversight

The Vice President, Nuclear Oversight reports directly to the CNO and is responsible for directing and managing the NPG Oversight organization, including Quality Assurance (QA). The responsibility for QA includes oversight to ensure implementation of NPG's QA Programs for evaluating program effectiveness for design, construction, safety and reliability, and operation of TVA's nuclear plants. This includes review of the NQAP and QA internal procedures. QA has an indirect reporting structure to the CNO to provide independence and freedom to effectively ensure conformance to QA Program requirements.

3.0 Senior Vice President Operations

This position reports directly to the CNO and provides oversight of the NPG operating nuclear plants. This position is also responsible for nuclear safety culture and organizational effectiveness. The Senior Vice President Operations direct reports are the Nuclear Plant Site Vice Presidents for Browns Ferry Nuclear Plant (BFN), Sequoyah Nuclear Plant (SQN), and Watts Bar Nuclear Plant (WBN).

3.1 Site Vice President (Typical for the operating nuclear plants)

This position is responsible and accountable for activities at the site including operations, modifications, maintenance, support, training, and engineering services. The Site Vice President's direct reports and functional reporting relationships are provided in Figure 3.

3.1.1 General Manager, Site Operations (BFN Only)

This position is responsible for the day to day operations, with direct reports and functional reporting relationships provided in Figure 3.

3.1.2 Director Site Engineering

This position is responsible for management and execution of site projects to provide overall management of the Engineering Design, Systems Engineering, Engineering Support, Technical Support, and Components Test and Inspection functions at the

site. This function specifically includes managing activities necessary for capital work in support of the operating units and refueling outages.

3.1.2.1 Senior Manager Systems Engineering

Responsible for integrated management and execution of site projects to provide overall management of the engineering functions at the site, including both outage and on-line support. This responsibility specifically includes managing activities necessary for system health and capital work in support of the operating unit(s), refueling outages, and to recover units from unplanned outages safely, within budget, on schedule, in accordance with applicable requirements.

3.1.2.2 Senior Manager Design Engineering

Responsible for integrated management and execution of site projects to provide overall management of the engineering functions at the site, including both outage and on-line support. This responsibility specifically includes managing activities necessary for capital work in support of the operating unit(s), refueling outages, and to recover units from unplanned outages safely, within budget, on schedule, in accordance with applicable requirements.

3.1.2.3 Manager Reactor Engineering

Plans and directs the Reactor Engineering section functions to ensure the reliable and efficient performance of assigned plant equipment in accordance with applicable requirements.

3.1.3 Director Training

This position directs the planning, development, implementation, and evaluation of Training Programs to ensure sufficient qualified personnel to operate, maintain, and modify the nuclear power plant.

3.1.4 Director Site Projects (Senior Manager at SQN and WBN)

This position is responsible for cost engineering functions including estimating, forecasting, trending/scope control, data analysis, and reporting. Other responsibilities include ensuring technical and programmatic cost requirements of the site organizations and for planning and scheduling of major modifications and projects.

3.1.5 Director Plant Support

This position is responsible for the Site Performance Improvement, Emergency Planning, and Site Licensing functions.

### 3.1.6 Senior Manager Site Quality Assurance

This position provides oversight of quality activities associated with the operation of the plant. Responsibilities are described in detail in TVA's NQAP. This position reports to the General Manager, QA (Corporate) and has a reporting relationship (dotted line) to the Site Vice President.

### 3.1.7 Plant Manager

This position is responsible for ensuring that plant operations and support activities are conducted in accordance with applicable requirements. Responsible for overall plant safe operation and has control over those resources necessary for safe operation and maintenance of the plant. This position's direct reports and areas of administrative responsibilities are provided in Figure 4.

#### 3.1.7.1 Director Maintenance

This position is responsible for planning, directing, and managing the plant's Maintenance Program to ensure that equipment and systems are maintained in accordance with operability and reliability engineering practices and requirements.

##### 3.1.7.1.1 Superintendent Instrumentation and Controls

Manage the activities of the Instrumentation and Controls Maintenance business unit. Provides long-range business unit planning that meets site financial objectives and technical requirements. Management of the Corrective, Preventive, and Outage Maintenance Programs for all plant instrumentation equipment to ensure that equipment functions properly and meet desired performance objectives.

##### 3.1.7.1.2 Superintendent Electrical

Manage the activities of the Electrical Maintenance business unit. Provides long-range business unit planning that meets site financial objectives and technical requirements. Management of the Corrective, Preventive, and Outage Maintenance Programs for all plant electrical equipment to ensure that equipment functions properly and meet desired performance objectives.

##### 3.1.7.1.3 Superintendent Mechanical

Manage the activities of the Mechanical Maintenance business unit. Provides long-range business unit planning that meets site financial objectives and technical requirements. Management of the Corrective, Preventive, and Outage Maintenance



Programs for all plant mechanical equipment to ensure that equipment functions properly and meet desired performance objectives.

3.1.7.1.4 Manager CMO

Manage the Component Engineering functions to ensure the reliable and efficient performance of assigned plant equipment and components, in accordance with applicable requirements.

3.1.7.2 Senior Manager Radiation Protection

This position guides programs and activities at the plant ensuring that all operations, maintenance, modifications and engineering activities are conducted in a radiological safe manner and protect plant personnel, systems and equipment.

3.1.7.3 Senior Manager Chemistry

This position guides programs and activities at the plant ensuring that all operations, maintenance, modifications, and engineering activities that potentially impact plant chemistry/environmental are conducted in a manner consistent with applicable requirements.

3.1.7.4 Director Work Management

This position provides overall responsibility for planning, coordination, scheduling and monitoring of all on-line and outage work. Responsible for establishing work priorities and coordinating shift turnover; managing the plant scheduling processes; and ensuring efficient and effective management of the work control function.

3.1.7.5 Director Operations

This position provides responsibility for planning, organizing, and setting policy, and support activities. These activities include operational strategies for generation, water and waste usage, approval authority for system enhancements, and prioritization of maintenance activities.

3.1.7.5.1 Superintendent Operations

This position is responsible for plant operations. The superintendent, through the Shift Manager, manages the day-to-day operation of the facility, refueling operations, start-up, operational testing, water and waste processing, and plant operations. The shift crew for an operating unit normally consists of the Shift Manager, Unit Supervisor, Nuclear Unit Operators, and Assistant Unit Operators.

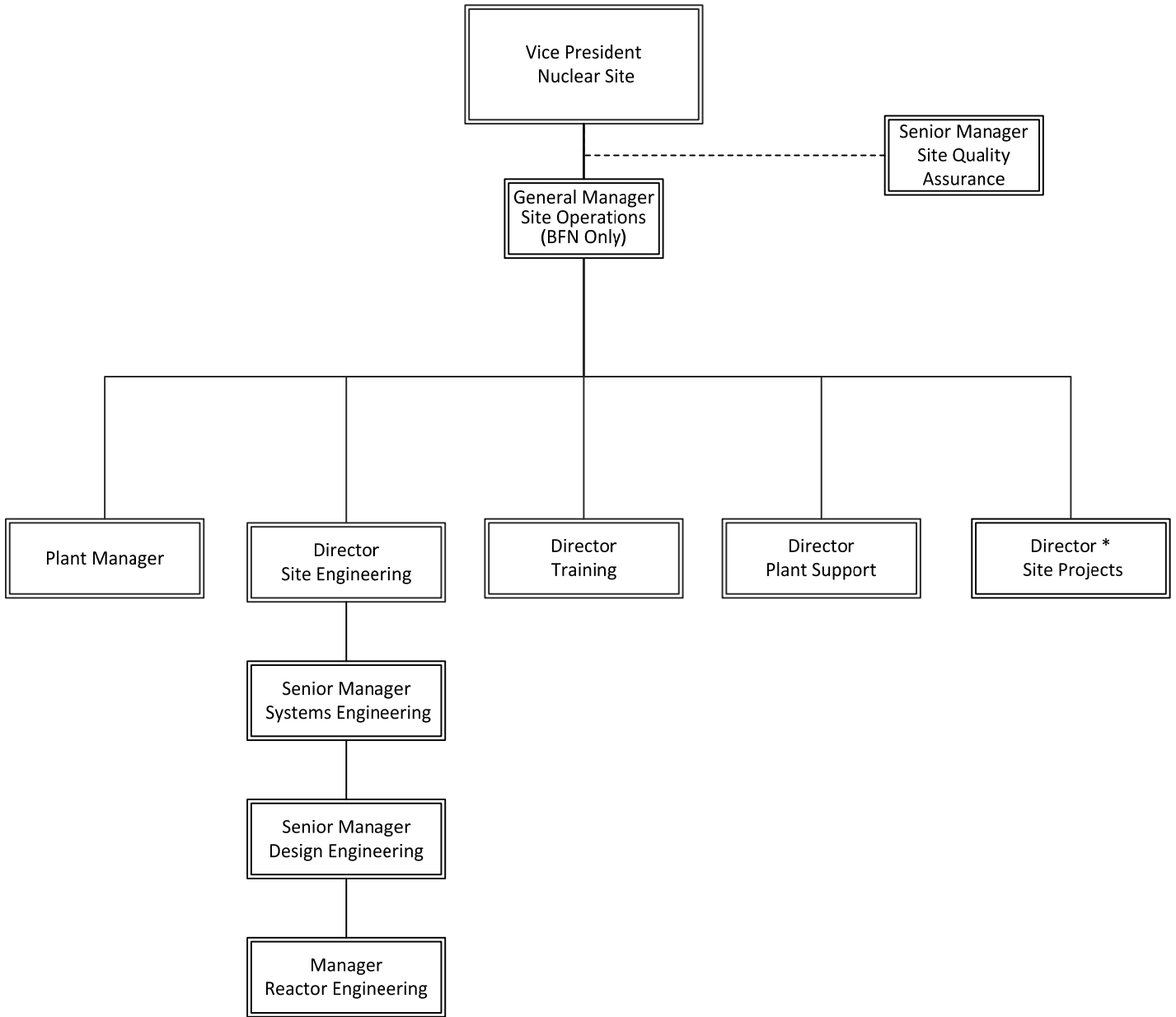
3.1.7.5.2 Superintendent Operations Support

This position is responsible for budget preparation, training oversight, performance monitoring, the Fire Protection Program and assists the Manager, Operations, in overall program direction for operations.

3.1.7.5.3 Superintendent Operations Outage Support

This position is responsible for all operations outage execution and preparation.

**Figure 3: Site Vice President (Typical for Browns Ferry, Sequoyah, and Watts Bar)**



\* Senior Manager at SQN and WBN

**Figure 4: Plant Manager (Typical for Browns Ferry, Sequoyah, and Watts Bar)**

