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June 24, 2025

United States Nuclear Regulatory Commission
Attention: Document Control Desk
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DOMINION ENERGY NUCLEAR CONNECTICUT, INC.
DOMINION ENERGY SOUTH CAROLINA, INC.
VIRGINIA ELECTRIC AND POWER COMPANY
MILLSTONE POWER STATION UNITS 1, 2 & 3 AND ISFSI
VIRGIL C. SUMMER NUCLEAR STATION UNIT 1 AND ISFSI
NORTH ANNA POWER STATION UNITS 1 & 2 AND ISFSI
SURRY POWER STATION UNITS 1 & 2 AND ISFSI
SUBMISSION OF REVISION 38 OF THE
QUALITY ASSURANCE TOPICAL REPORT

Pursuant to 10 CFR 50.54(a)(3), attached is the required periodic update of the Nuclear Facility Quality Assurance Program Description Topical Report, DOM-QA-1, Revision 38, for Dominion Energy Nuclear Connecticut, Inc., Dominion Energy South Carolina, Inc., and Virginia Electric and Power Company. The previous periodic update dated June 6, 2024, provided Revision 36 of the Nuclear Facility Quality Assurance Program Description Topical Report to the Nuclear Regulatory Commission.

Attachment 1 provides a summary of the changes made for DOM-QA-1 Revisions 37 and 38 under the provisions of 10 CFR 50.54 since the previous submittal on June 6, 2024. Attachment 2 provides a discussion of the changes made to DOM-QA-1. Attachment 3 provides a complete version of DOM-QA-1, Revision 38.

If there are any questions, please contact Julie Hough at (804) 273-3586.

Sincerely,

James Holloway

James E. Holloway
Vice President – Nuclear Engineering and Fleet Support
Virginia Electric and Power Company
Dominion Energy Nuclear Connecticut, Inc.
Dominion Energy South Carolina, Inc.

COMMONWEALTH OF VIRGINIA)
)
COUNTY OF HENRICO)

The foregoing document was acknowledged before me, in and for the County and State aforesaid, today by James E. Holloway, who is Vice President – Nuclear Engineering and Fleet Support, of Virginia Electric and Power Company, Dominion Energy Nuclear Connecticut, Inc., and Dominion Energy South Carolina Inc. He has affirmed before me that he is duly authorized to execute and file the foregoing document on behalf of these Companies, and that the statements in the document are true to the best of his knowledge and belief.

Acknowledged before me this 24 day of June, 2025.

My Commission Expires: 06/30/28

ALLEN T ULMER
NOTARY PUBLIC
REG. #00286846
COMMONWEALTH OF VIRGINIA
MY COMMISSION EXPIRES JUNE 30, 2028

Notary Public

Commitments made in this letter: None

Attachments:

1. Summary of Changes Made to DOM-QA-1
2. Discussion of Changes Made to DOM-QA-1
3. Facility Quality Assurance Program Description Topical Report, DOM-QA-1, Revision 38

cc: U.S. Nuclear Regulatory Commission
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U. S. Nuclear Regulatory Commission
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ATTACHMENT 1

SUMMARY OF CHANGES MADE TO DOM-QA-1

Millstone Power Station, Units 1, 2, and 3 and ISFSI
Virgil C. Summer, Unit 1 and ISFSI
North Anna Power Station, Unit 1 and 2 and ISFSI
Surry Power Station, Unit 1 and 2 and ISFSI

Revision 37 and Revision 38 of Topical Report DOM-QA-1, "Nuclear Facility Quality Assurance Program Description."

The analysis provided with this submittal addresses the changes made to DOM-QA-1 as follows:

- Change Request 2024-002 revised the QAPD (DOM-QA-1) to increase the internal audit interval from two years (24 months) to 36 months for certain programs (Revision 37).
- Change Request 2025-001 revised DOM-QA-1 to reflect organizational changes made in 2025 (Revision 38).
- Change Request 2025-002 revised DOM-QA-1 to remove a statement that required senior management approval at V. C. Summer Nuclear Station (VCSNS) for revisions to emergency plan and security implementing procedures (Revision 38).

The following table provides a summary of changes made to DOM-QA-1 resulting from the evaluations described above. Attachment 2 of this submittal identifies each change and the evaluation of whether the change reduces the commitments in DOM-QA-1 as accepted by the NRC.

TABLE 1 – Summary Description of DOM-QA-1 Changes

DOM-QA-1 Section	Revision Number	Change Request Number	Summary Description of Change
Revised Section 18.5, "Internal Audits" Revised Appendix C, Section 9, "Regulatory Guide 1.33, Rev.2, Feb. 1978," (5) (a-d)	37	2024-001	Revised the QAPD (DOM-QA-1) to increase the internal audit interval from two years (24 months) to 36 months for certain programs
Revised Table of Contents Section 1.2.2 – 1.2.6 Revised the following Sections in 1.2 "Responsibility and Authority" • 1.2.1, "Chief Nuclear Officer" • 1.2.2, "Nuclear Fleet Operations" • 1.2.2.1, "Protection Services" • 1.2.3, "Facility Operations" • 1.2.3.1, "Facility Operations, Maintenance, & Radiological Protection" • 1.2.3.1.1, "Operations" • 1.2.3.1.2, "Maintenance" • 1.2.3.1.3, "Maintenance Preparation, Execution, and Outage Activities" • 1.2.3.1.4, "Radiological Protection & Chemistry" • 1.2.3.2, "Plant Support" • 1.2.3.2.1, "Training" • 1.2.3.3.2, "Emergency Preparedness & Licensing" • 1.2.4, "Engineering Services" • 1.2.4.1, "Nuclear Analysis and Fuel & Regulatory Assurance"	38	2025-001	Revised DOM-QA-1 to reflect organizational changes in 2025

TABLE 1 – Summary Description of DOM-QA-1 Changes

DOM-QA-1 Section	Revision Number	Change Request Number	Summary Description of Change
• 1.2.4.1.1, “Nuclear Analysis & Fuel” • 1.2.4.1.2, “Nuclear Fleet Licensing” • 1.2.4.1.3, “Nuclear Emergency Preparedness” • 1.2.4.2, “Design Engineering and Programs” • 1.2.4.3, “Facility Engineering” • 1.2.4.4, “Engineering Projects” • 1.2.4.5, “Information Technology” • 1.2.4.6, “Supply Chain Management” • 1.2.5, “Fleet Performance & Organizational Effectiveness” • 1.2.5.1, “Fleet Operations and Training” • 1.2.5.2, “Nuclear Organizational Effectiveness and Performance Improvement” • 1.2.5.3 “Nuclear Communications” • 1.2.6, “Nuclear Oversight” Section 10, “Inspection” • 10.1, “General Description” Appendix A, “Organizational Relationships of Key Management & Functional Groups”			

TABLE 1 – Summary Description of DOM-QA-1 Changes

DOM-QA-1 Section	Revision Number	Change Request Number	Summary Description of Change
Appendix B, “Management and Independent Review Activities,” Section 5.1 (1)			
Revised Section 1.2.3.1, “Facility Operations, Maintenance, and Radiological Protection”	Rev. 38	2025-002	Revised DOM-QA-1 to remove a statement that required senior management approval at VCSNS for revisions to emergency plan and security implementing procedures.

ATTACHMENT 2

DISCUSSION OF CHANGES MADE TO DOM-QA-1

Millstone Power Station, Units 1, 2, and 3 and ISFSI
Virgil C. Summer, Unit 1 and ISFSI
North Anna Power Station, Unit 1 and 2 and ISFSI
Surry Power Station, Unit 1 and 2 and ISFSI

DOM-QA-1, Revision 37, QAPD Change 2024-001

This change replaces the two-year frequency requirement with a 36-month frequency requirement and maintains the 25 percent grace period, ensuring that the period between audit performance will not exceed 45 months. This change includes mention of the grace period allowance in the body of DOM-QA-1, section 18.5, for additional clarification.

This change also removed the previous alternative commitment from ANSI/ANS 3.2-2012 which permitted a frequency extension one year at a time up to 4 years, based on the results of an annual evaluation. The 36-month interval provides a more conservative internal audit interval with a similarly described annual evaluation. The requirements of 10 CFR Part 50, Appendix B, and administrative controls will continue to be met with this change. This change does not impact audits performed to meet specific regulations (e.g. Security, Fitness for Duty/Unescorted Access Authorization, and Emergency Preparedness). These audits will continue to be performed at a frequency permitted by applicable regulatory requirements.

Analysis:
Regulation 10 CFR 50.54(a)(3) states that each licensee may make a change to a previously accepted quality assurance program description (QAPD) without prior NRC approval, provided the change does not reduce the commitments in the program description as accepted by the NRC. Further, 10 CFR Part 50.54(a)(3)(ii) describes one of seven change scenarios that are not considered to be a reduction in commitment: "The use of a quality assurance alternative or exception approved by an NRC Safety Evaluation (SE), provided that the bases of the NRC approval are applicable to the licensee's facility." The NRC SE issued for Comanche Peak Nuclear Plant on May 16, 2022 (ADAMS Accession No. ML22129A072) approved the increase of the internal audit interval from 24 months to 36 months supplemented by an interim analysis or evaluation of functional area performance. This requested change was approved for Comanche Peak Units 1 and 2 and the collocated independent spent fuel storage installation. Dominion Energy invokes the Comanche Peak NRC SE (ADAMS Accession No. ML22129A072) for changes to the QAPD as allowed by 10 CFR 50.54(a)(3)(ii).

This change to the Dominion Energy Nuclear Facility Quality Assurance Program Description, DOM-QA-1, applies to all Dominion Energy nuclear power plants and collocated independent spent fuel storage installations. This change does not remove any 10 CFR 50 Appendix B requirements or other administrative controls.

DOM-QA-1, Revision 38, QAPD Change 2025-001

This revision reflects organizational changes made in 2025 to align the Dominion Energy organizational structure with the organizational structures in place at other fleet nuclear operators in the United States, and includes additional leadership positions in Operations, Maintenance, Engineering, and fleet performance monitoring. A new senior executive management position will report directly to the Chief Nuclear Officer (CNO), and will

oversee fleet nuclear operations as well as the Protection Sevices group. Quality Control Inspection responsibilities at North Anna Power Station (NAPS) and Surry Power Station (SPS) will be moved to the nuclear quality assurance department (Nuclear Oversight) from the current program owner (Nuclear Safety and Licensing). The reporting structure for the Radiological Protection (RP) and Chemistry group is aligned to report to the senior management position responsible for Operations, Maintenance, and RP. Responsibility for industrial safety programs and implementation of fire protection measures is moved from Nuclear Safety and Licensing to the senior management position responsible for Operations. Nuclear Training and the activities of the onsite independent review group are moved to the Plant Support group, which was formerly known as Nuclear Safety and Licensing.

Analysis:
Regulation 10 CFR 50.54(a)(3) states that each licensee may make a change to a previously accepted QAPD without prior NRC approval, provided the change does not reduce the commitments in the program description as accepted by the NRC. Further, 10 CFR 50.54(a)(3) describes seven change scenarios that are not considered to be a reduction in commitment, of which 10 CFR 50.54(a)(3)(vi) “Organizational revisions that ensure that persons and organizations performing quality assurance functions continue to have the requisite authority and organizational freedom, including sufficient independence from cost and schedule when opposed to safety considerations” is applicable to this change.

This organizational change is a re-alignment of resources, and creation of additional leadership positions that does not reduce the quality assurance program effectiveness or impact the organization performing quality assurance functions. One change involves movement of persons performing quality assurance functions (QC Inspection personnel at NAPS and SPS only) to the nuclear quality assurance group. These personnel will continue to have requisite authority, organizational freedom, and independence from operating pressures, since the nuclear quality assurance group reports directly to the CNO. These organizational changes do not remove any 10 CFR 50 Appendix B requirements or other administrative controls and do not reduce the effectiveness of the quality assurance program. Therefore, prior NRC approval is not required under the provisions of 10 CFR Part 50.54(a)(3).

DOM-QA-1, Revision 38, QAPD Change 2025-002

This change removed an administrative requirement that existed in the previous VCSNS site QAPD (i.e., prior to joining Dominion Energy), which established a requirement for the plant manager position to authorize final approval of emergency plan and security plan implementing procedures. This provision was transferred to DOM-QA-1 during the transition of VCSNS into Dominion Energy processes and procedures, including transition into the Dominion Energy fleet organizational structure.

Analysis:
Regulation 10 CFR Part 50.54(a)(3) describes seven change scenarios that are not

considered to be a reduction in commitment, of which 10 CFR 50.54(a)(3)(vi) “Organizational revisions that ensure that persons and organizations performing quality assurance functions continue to have the requisite authority and organizational freedom, including sufficient independence from cost and schedule when opposed to safety considerations” applies to this change.

This revision resulted from a previous organizational change that does not impact quality assurance functions, roles, or administrative requirements. Nuclear security programs and the Emergency Plan are not subject to the QA program requirements under 10 CFR Part 50, Appendix B and are maintained in accordance with their respective regulations (10 CFR 73 for Security and 10 CFR 50.47 for the Emergency Plan). The organizational description in DOM-QA-1, Section 1, already describes nuclear facility management positions that have specific responsibility for the development and maintenance of the Security and EP programs. The positions are Manager, Nuclear Protection Services, (Security) and the Manager, Nuclear Emergency Preparedness, respectively. This change removes the redundant responsibility that existed after the full VCSNS organizational integration.

ATTACHMENT 3

Facility Quality Assurance Program Description Topical Report, DOM-QA-1, Revision 38

Millstone Power Station, Units 1, 2, and 3 and ISFSI
Virgil C. Summer, Unit 1 and ISFSI
North Anna Power Station, Unit 1 and 2 and ISFSI
Surry Power Station, Unit 1 and 2 and ISFSI

Dominion Energy®

Nuclear Facility Quality Assurance Program Description

Topical Report DOM-QA-1

Revision 38

Introduction

This topical report provides the quality assurance program description (QAPD) for Dominion Energy's nuclear power station units that are commercially operational or are in decommissioning, and independent spent fuel storage installations, hereinafter referred to as facility or nuclear facility. The quality assurance program applies to activities during design, construction, operation, and decommissioning of the nuclear facility. Activities affecting quality include siting, designing, procuring, fabricating, handling, shipping, receiving, storing, cleaning, erecting, installing, inspecting, testing, operating, maintaining, repairing, refueling, modifying, and decommissioning. The quality assurance program provides adequate confidence to management and regulatory agencies that structures, systems, and components (SSCs) will perform satisfactorily in service and that programs for coping with emergencies perform as required. This report describes the policy, principles, and standards that establish the planned and systematic actions used to assure quality is achieved in all activities affecting the safety of the nuclear facility. These policies, principles, and standards are developed into administrative and implementing documents. The administrative and implementing documents govern the various aspects of day-to-day activities for the facility.

Dominion Energy's Nuclear Facility QAPD is referred to by several generic titles within the administrative controls for the facilities. These include Chapter 17.2 of the UFSAR, the Operational Quality Assurance Program, the Quality Assurance Plan (or Program), the QA Topical Report, and other similar designations. These are used interchangeably to refer to this document that represents Dominion Energy Management's philosophy and methodologies for complying with the 18 criteria of 10 CFR 50, Appendix B, or the alternative treatment for the SSCs categorized through the risk-informed process under the voluntary regulation in 10 CFR 50.69, where such a license amendment has been issued for a particular facility. This topical report is incorporated by reference into the appropriate chapter of the FSAR for the applicable facilities as the operational quality assurance program description. Within this QAPD, the term "Company" is used to refer to those parts of the parent company (Dominion Energy) which are under the purview of the Chief Nuclear Officer as described in Section 1 of this QAPD.

The quality assurance measures and administrative controls established by this QAPD are comparable to those implemented during the construction, operational, and decommissioning activities conducted prior to the effective date of this QAPD. Conformance of the existing structures, systems, and components (including new, spare, and replacement items in storage, in stock, or on order) to the previous QA program requirements shall be treated as conforming to the requirements of this QAPD. Where new or updated requirements are established by this QAPD, they are not retroactively applied, but will be applied to the activities conducted subsequent to the effective date of this QAPD.

Policy

This policy provides the expectations to safely design, construct, operate, and decommission Dominion Energy's nuclear facilities. Each employee and Supplier is responsible for the quality of their work. Maintaining quality of workmanship, whether physical or programmatic, ensures that our nuclear facilities are designed, constructed, operated, and decommissioned safely, efficiently, and economically and that regulatory commitments are met. Suppliers providing items and services affecting safety of the nuclear facilities are also expected to implement a quality assurance program or quality controls that meet regulatory requirements.

The QAPD is the top-level policy document that establishes the manner in which quality is to be achieved and presents Dominion Energy's overall philosophy regarding achievement and assurance of quality. Quality assurance programs focus employees' and Suppliers' attention on regulatory requirements and management expectations while requiring identification of concerns. Implementing documents assign more detailed responsibilities and requirements and indicate the organizational interfaces involved in conducting activities within the scope of the QAPD. These programs will be implemented for safety-related activities affecting structures, systems, and components. As identified within the QAPD and Company documents, applicable elements of the quality assurance program will be applied to selected activities that are not safety-related, but support safe facility operations. The Dominion Energy Nuclear quality assurance program will comply with the requirements of 10 CFR 50, Appendix B, the approved facility license, and applicable codes and standards as further described in this QAPD. Compliance with the QAPD and implementing documents is mandatory for personnel directly or indirectly associated with implementation of the Dominion Energy quality assurance program.

The management position responsible for Nuclear Oversight is responsible for interpretations and clarifications of the requirements of the QAPD, and is delegated the responsibility and authority to maintain and update the QAPD, including approving changes that do not constitute a reduction in the commitment of the program description accepted by the NRC. Where conflicts in opinion arise that cannot be resolved at that level, they are escalated to the CNO position for resolution.

Signed *Signature on file* *Date:* _____

Daniel G. Stoddard

Senior Vice President & Chief Nuclear Officer

Basis

This QAPD is based on 10 CFR 50, Appendix B, as amended. The requirements of 10 CFR 50, Appendices A (General Design Criterion I) and R, 50.48, 50.54, 50.55a, 50.59, 50.82; 10 CFR 21; 10 CFR 71, Subpart H; and 10 CFR 72, Subpart G are also included in the development and application of this QA program. Where a facility is granted a license amendment to comply with the voluntary requirements in regulation 10 CFR 50.69 for risk-informed categorization and treatment of SSCs for nuclear power reactors, this QAPD establishes quality assurance requirements to be applied to the alternative treatment where such treatment is permitted.

Dominion Energy is committed to carrying out the provisions of various NRC Regulatory Guides and industry quality assurance standards of ASME, ANSI, and ANS that expound on the 18 criteria of 10 CFR 50, Appendix B. The specific commitments, clarifications, and alternatives are described in detail within the QAPD.

This QAPD is intended to be a comprehensive, up-to-date description of the Company's quality assurance program for nuclear facilities. This topical report will be revised in accordance with 10 CFR 50.54(a).

Applicable Facilities

This QAPD is applicable to activities at or for the following Dominion Energy power stations, and any associated or specific Independent Spent Fuel Storage Installation and/or radioactive waste storage/processing facilities at the power station site:

- Millstone Power Station (MPS)
- North Anna Power Station (NAPS), excluding North Anna Unit 3 activities
- Surry Power Station (SPS)
- Virgil C. Summer Nuclear Station (VCS)

LIST OF EFFECTIVE SECTIONS

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Section 1 Organization

1.1 General Description

This section describes the key organizational groups performing activities for the Company's nuclear facilities and their responsibilities governed by the Quality Assurance Program Description (QAPD) Topical Report. The reporting relationships are depicted in the organization charts of Appendix A.

The Company's organizational structure ensures compliance with regulatory requirements and industry standards for the implementation of this QAPD. The organizational structure is delineated through the organizational charts, the duties and responsibilities described below and in the policy statement, and written job or functional descriptions contained in implementing documents. These individuals and groups described herein are responsible for performing or verifying activities affecting quality. The Company may delegate all or part of the activities of planning, establishing, and implementing the quality assurance program to others, but retains the responsibility for the program's effectiveness. When activities are delegated to organizations outside the Company, procedures require the establishment of interface requirements including defining authorities and lines of communication as appropriate for the delegated functions. However, the Company retains and exercises responsibility for the scope and effective implementation of the quality assurance program.

The organization consists of three main parts: corporate management, facility operations, and support groups. Corporate management is responsible for overall management of the Company's nuclear facilities through all the phases from initial siting to decommissioning. The support groups provide management, technical, and oversight support for activities such as design, construction, operation, modification, and decommissioning and report to corporate management. The support groups may be located at corporate offices or at a nuclear facility site. The facility operations groups are responsible for overall operational activities of assigned nuclear facilities in accordance with the facility license. The operations groups are typically assigned responsibility for one or more nuclear power station units and any Independent Spent Fuel Storage Installations and/or radioactive waste processing/storage facilities at a particular site.

The overall structure of the organization described herein is applied for the Millstone, North Anna, Surry, and V.C. Summer facilities; while there may be slight variations in responsibilities between facilities, the overall reporting relationships remain. Depending on the scope of the activities, one or more individuals may be assigned the described management responsibilities. As the amount of certain activities changes, such as construction or decommissioning, the organizational structure may change and will be reflected in a change to these descriptions.

1.2 Responsibility and Authority

1.2.1 Chief Nuclear Officer

The chief nuclear officer (CNO) has overall responsibility and authority for the implementation of all activities associated with the safe and reliable design, construction, operation, and decommissioning of the Company's nuclear facilities. The CNO establishes the Company's quality assurance policy and is responsible for implementing the quality assurance program during operating activities, including related decommissioning activities. The CNO has the authority to resolve disputes related to implementation of this QAPD for which resolution is not achieved at lower levels within the organization. There are four functional groups reporting to the CNO that affect the safety of the nuclear facilities governed in accordance with this quality assurance program: operations, engineering, fleet performance, and oversight.

Subsections 1.2.2 through 1.2.6 and Appendix A, describe the onsite organizational functions and relationships for the Millstone, North Anna, Surry, and V. C. Summer facilities and their relationship to the supporting offsite groups.

1.2.2 Nuclear Fleet Operations

A senior executive management position is responsible for overall operation of the assigned Company nuclear facilities, including Protection Services. The necessary responsibility and authority for the management and direction of all activities related to the safe and efficient operation and decommissioning has been delegated by the Chief Nuclear Officer.

1.2.2.1 Protection Services

A senior management position is responsible for providing nuclear facility protective services, including physical security, security force operations, training and qualification programs for security personnel, maintenance and testing activities for security equipment for the facility, nuclear facility access programs, and fitness for duty programs.

1.2.3 Facility Operations

An executive management position is responsible for operations of their assigned Company nuclear facilities. The necessary responsibility and authority for the management and direction of all activities related to the safe and efficient operation and decommissioning has been delegated by the senior executives. This responsibility includes ensuring quality through implementation of this QAPD in all the activities related to operation such as maintenance, testing, start-up and shutdown, refueling, fuel storage, and modification.

1.2.3.1 Facility Operations, Maintenance, and Radiological Protection

A senior management position is responsible for safe operations, maintenance, radiological protection, and chemistry of their assigned nuclear facilities including those activities necessary for safe storage and handling of spent nuclear fuel during decommissioning. The position responsibilities include: directing the operations, maintenance, planning, and site services groups; implementing facility modifications; and maintaining compliance with requirements of the operating license, Technical Specifications, and applicable federal, state, and local laws, regulations, and codes. For VCS, this position also approves the reports that evaluate and provide recommendations to prevent recurrence of events that are reportable pursuant to the site's technical specification 6.9 and forwards such reports to the chairman of the FSRC.

1.2.3.1.1 Operations

Operations is responsible for operating the facility in accordance with the applicable license, including those facilities in a decommissioning phase that still contain nuclear fuel. Overall facility operation is directed by a senior management position responsible for Operations activities who is also responsible, through the systematic approach to training (SAT) process, for review of normal and emergency training and retraining programs to ensure they are effective.

Operations activities include monitoring and controlling day-to-day operation of the nuclear facility; responding to alarms; manipulating facility equipment; coordinating facility operations to manage work such as maintenance, testing, and modifications; and moving nuclear fuel. The Operations organization contains supervision and staff for shift operations, including shift managers, unit supervisors, licensed control room operators, and non-licensed operators. Operations is also responsible for the shift technical advisor function and industrial safety and loss prevention including fire protection measures. In the absence of the individual filling the management position responsible for shift operations, the individual filling the supervisor position responsible for shift operations will assume these responsibilities.

The staff for operating units, when approved by the NRC and documented in this QAPD, may be responsible for activities related to an adjacent decommissioned unit’s spent fuel pool and auxiliary systems, providing that the transfer of responsibility does not impact the capability to perform their operating duties, including day-to-day functions, and

accident and transient mitigation. Minimum shift composition will be in accordance with the nuclear facility's Technical Specifications. Specifically, the following allowances are approved:

- Millstone Unit 2 Operations is responsible for operations regarding the Millstone Unit 1 Spent Fuel Pool Island and auxiliary systems.

1.2.3.1.2 Maintenance

Overall facility maintenance is directed by a senior management position responsible for on-line planning, scheduling, routine maintenance activities, installation, alterations, adjustment and calibration, replacement and repair of plant electrical and mechanical equipment, and instruments and controls. The responsibilities include performance of surveillances required by Technical Specifications, establishing standards and frequency of calibration for instrumentation and control devices, and ensuring instrumentation and related testing equipment are properly used, inspected and maintained. Facility maintenance is also responsible for facility project support, including project construction and project controls and serves as the primary organization interface with outside organizations for capital projects.

1.2.3.1.3 Maintenance Preparation, Execution, and Outage Activities

Management positions are responsible for planning and scheduling preventive maintenance, online-maintenance, and outage activities, including modification, and surveillance test and inspection activities, within the constraints imposed by operational, regulatory, and system load requirements.

1.2.3.1.4 Radiological Protection and Chemistry

Radiological Protection & Chemistry carries out health physics and chemistry functions and maintains sufficient organizational freedom and independence from operating pressures. A qualified supervisor or manager is assigned to fulfill the radiological protection manager position described in Section 2.5 of this QAPD. The radiological protection responsibilities include scheduling and conducting radiological surveys, contamination sample collection, determining contamination levels, assigning work restrictions through radiation work permits, administering the personnel monitoring program, and maintaining required records in accordance with federal and state codes. The chemistry responsibilities include maintaining primary and secondary plant chemistry in

accordance with established program requirements. This position responsibilities also include environmental compliance program monitoring.

1.2.3.2 Plant Support

A senior management position is responsible for ensuring that facility plant support activities are implemented, which includes responsibility for directing and coordinating accredited training programs, site licensing and emergency preparedness programs, records management, performance improvement, corrective action and operating experience programs, and fleet procedures. This position is independent of cost and scheduling concerns associated with operations and maintenance to avoid undue pressures when carrying out independent nuclear safety review functions. Performance Improvement is responsible for ensuring that fleet procedures are prepared in accordance with applicable regulatory requirements, industry quality standards and this QAPD. Responsibility also includes the corrective action program and the review of NRC and industry issuances, significant events, and other operating experience to meet independent nuclear safety review requirements.

1.2.3.2.1 Training

A management position is responsible for the training of personnel who operate or support the nuclear facilities. Training responsibilities include: determining the need for training based on information provided by the various groups, developing performance-based training programs, implementing training programs to support employee and facility needs, and evaluating training programs. Certain functional groups may be assigned responsibility for the development and conduct of their own training programs provided these groups are not required to have a systems approach to training under 10 CFR 50.120.

1.2.3.2.2 Emergency Preparedness and Licensing

A management position is responsible for the site development and maintenance of the Company radiological emergency plans and coordination with required off-site radiological emergency response groups for the nuclear facilities. This includes managing the overall scheduling and coordination of emergency plan testing, training and exercises with federal, state, and local agencies, and working with corporate and facility personnel to ensure emergency plans meet all the requirements and commitments. This position is also responsible for

managing site licensing activities and quality assurance records management.

1.2.4 Engineering Services

An executive management position is responsible for the engineering functions supporting design and construction activities and long-term nuclear operations. These are accomplished through nuclear engineering, projects, nuclear analysis and fuel, and information technology. Responsibilities include system level implementation of the requirements established by this QAPD for the nuclear facilities and facility specific engineering and technical support required for day-to-day operations. Where implementation of any or all of these functions is delegated to organizations outside the Company, procedures require the establishment of interface documents including defining lines of communication and authorities as appropriate for the delegated functions. However, this executive management position retains responsibility for the scope and effective implementation of the quality assurance program for those functions.

1.2.4.1 Nuclear Analysis and Fuel and Regulatory Assurance

A senior management position is responsible for nuclear fuel procurement and supporting activities, nuclear fuel analysis, nuclear safety engineering, fleet licensing coordination, and leading and providing strategy for fleet emergency preparedness.

1.2.4.1.1 Nuclear Analysis and Fuel

Nuclear Analysis and Fuel management positions are responsible for design, evaluation, and analysis of reactor cores; fuel and reactor performance; spent fuel storage; accident and radiological consequence analysis; and probabilistic risk assessment. Nuclear Analysis and Fuel provides support to reactor engineering for the operating power stations. Nuclear Analysis and Fuel is also responsible for nuclear fuel procurement; assurance of nuclear fuel quality through surveillances and inspections at Company and Supplier facilities; and special nuclear material accountability. The responsible management position has the authority to control further processing or installation of nonconforming materials. The authority delegated to inspection and surveillance personnel is delineated in procedures. Nuclear Analysis and Fuel is also responsible for providing engineering oversight of dry cask spent fuel storage system fabrication, including approval of nonconformance disposition.

1.2.4.1.2 Nuclear Fleet Licensing

A management position for Nuclear Fleet Licensing is responsible for providing regulatory compliance and licensing support through NRC communications, and maintaining and acquiring licenses required for continued and extended operations. Nuclear Fleet Licensing is responsible for ensuring controlled documents (such as manuals, instructions, procedures, and drawings) and QA records are maintained at corporate in accordance with applicable regulatory requirements, industry quality standards, and this QAPD.

1.2.4.1.3 Nuclear Emergency Preparedness

A management position for Nuclear Emergency Preparedness is responsible for providing regulatory compliance and proficient organizational response to declared station emergencies. Nuclear Emergency Preparedness is responsible for developing, maintaining, and implementing controlled documents (such as program descriptions, procedures, manuals, and instructions) to ensure effective emergency response in accordance with applicable regulatory requirements and industry guidance.

1.2.4.2 Design Engineering and Programs

A senior management position is responsible for design engineering and programs, including classifying SSCs; developing, maintaining, and implementing design control and engineering programs, including those for nondestructive examination (NDE) and facility in-service inspection and test (ISI/IST) programs; performing independent design checks and reviews; developing and revising facility drawings; ensuring the design basis for the facility is maintained; ensuring configuration management, including design and configuration control; and providing engineering technical support for the operating facilities.

1.2.4.3 Facility Engineering

A senior management position is responsible for managing engineering resources providing day-to-day technical support for facility operations. The functions include engineering, reactor engineering, and technical support at a system and component level to ensure optimum design basis performance, system reliability, and optimum component performance and reliability. Support is also provided in developing and implementing testing programs, tracking and scheduling test performance, and evaluating test results. The test programs include inservice inspections, Technical Specification surveillances, post-modification and post-maintenance testing, and nondestructive examinations. Facility Engineering is responsible for performing technical reviews and performance monitoring of key

structures, systems, and components to meet independent nuclear safety review requirements.

1.2.4.4 Engineering Projects

A senior management position is responsible for managing engineering resources providing nuclear project and construction support. These functions include planning, project management, project construction controls, and subsequent license renewal activities. The position is responsible for the implementation of large projects for the nuclear facilities on behalf of the Company. Implementation includes development of the detailed scope, estimate, schedule, cost, design, procurement, construction, testing, and closeout of each project. Nuclear Projects focuses on defined projects separate from ongoing routine engineering projects.

1.2.4.5 Information Technology

A senior management position is responsible for direction and support of information technology for the nuclear organizations and facilities. Responsibilities include: network infrastructure maintenance and upgrade, network and application security, network operations; automation strategy, application development and support, automation training; development and maintenance of the software control program; and oversight, maintenance, and repair of the Emergency Response Facility Computer System.

1.2.4.6 Supply Chain Management

A senior management position is responsible for material management, purchasing, procurement engineering, Supplier surveillance functions, and source and receipt inspection. This position has the authority to control further processing or installation of nonconforming materials. This authority is delegated to inspection and surveillance personnel as delineated in procedures.

1.2.5 Fleet Performance & Organizational Effectiveness

A senior management position is responsible for the establishment and implementation of nuclear fleet organizational effectiveness, outage oversight, performance improvement, and nuclear communications. Nuclear organizational effectiveness initiatives include establishing an integrated nuclear strategic model that incorporates best practices for industry learning and development, with specific focus on leadership development.

1.2.5.1 Fleet Operations and Training

A senior management position is responsible for assessing fleet and facility performance to identify areas for improvement and recommend actions to improve

performance and the training of personnel who support the nuclear facilities. Training responsibilities include: determining the need for training based on information provided by the various groups, developing performance-based training programs, implementing training programs to support employee and facility needs, and evaluating training programs. Certain functional groups may be assigned responsibility for the development and conduct of their own training programs provided these groups are not required to have a systems approach to training under 10 CFR 50.120.

1.2.5.2 Nuclear Organizational Effectiveness and Performance Improvement

A management position is responsible for the establishment, implementation, and oversight of Nuclear Organizational Effectiveness initiatives, including assessing fleet and facility to identify areas for improvement and recommend actions to improve performance.

1.2.5.3 Nuclear Communications

A management position is responsible for leading and providing daily guidance to staff providing media relations support to the nuclear facilities. Manages communications functions for all nuclear power stations. Serves as primary media spokesman and prepares and distributes news releases, standby statements, audiovisual materials, brochures, and other communication materials to media representatives, employees, and constituents.

1.2.6 Nuclear Oversight

A senior management position is responsible for the verification of effective Company and Supplier QA program development, documentation, and implementation, and the effective performance of Nuclear Oversight activities. This position is responsible for the performance of independent audits of facility operations related to quality and safety with lines of communication to the executive management position responsible for facility operations. This position is independent of cost and scheduling concerns associated with construction, operations, maintenance, modification, and decommissioning activities for performing quality assurance program verification. Where implementation of any or all of these functions is delegated to Suppliers, procedures require the establishment of interface documents including defining lines of communication and authorities as appropriate for the delegated functions. However, this management position retains responsibility for the scope and effective implementation of the quality assurance program for those functions. This management position has the necessary authority and responsibility for verifying quality achievement; identifying quality problems, recommending solutions and verifying implementation of the solutions; and escalating quality problems to higher management

levels. This position has the authority to suspend unsatisfactory work and control further processing or installation of non-conforming materials. The authority to stop work delegated to Nuclear Oversight personnel is delineated in procedures.

Nuclear Oversight is responsible for the evaluation of Suppliers' quality programs through a system of external audits, surveys, evaluations, and/or reviews of Supplier performance in accordance with quality assurance requirements. A list of approved Suppliers is maintained.

Nuclear Oversight is responsible for assuring Company compliance with this QAPD through administration of a comprehensive and systematic internal audit program.

Nuclear Oversight is responsible for developing and maintaining an appropriate quality verification inspection program where not provided for in the facility construction or operating organization functions. The Quality Control Inspection group plans and conducts inspections of operating facility maintenance and modification activities to ensure quality in accordance with the requirements of the QA program. The Quality Control Inspectors report through this functional organization while performing maintenance and modification inspections for the operating facilities. Where quality verification inspections at operating facilities are performed by the Maintenance group, to meet the independence requirements of NQA-1-1994, Part I, Supplement 10S-1, Section 3.1, the inspectors report to the Nuclear Oversight group while performing the inspection.

1.3 Succession of Responsibility for Overall Plant Operation

1.3.1 The succession of responsibility for overall plant instructions or special orders, in the event of absences, incapacitation of personnel, or other emergencies, is as follows for Millstone, North Anna, Surry, and V.C. Summer unless otherwise designated in writing:

- the executive management position responsible for facility operations
- the senior management position responsible for facility operations & maintenance
- the management position responsible for operations

1.4 Organization Charts

Organization charts depicting reporting relationships are contained in Appendix A to this QAPD.

1.5 Quality Standards Commitment

The Company is committed to establishing and maintaining an organization in accordance with the quality standards described in NQA-1-1994, Part I, Basic Requirement 1 and Supplement 1S-1.

Section 2 Quality Assurance Program

2.1 General Description

Dominion Energy has established a quality assurance program for the nuclear power stations and independent spent fuel storage installations that complies with 10 CFR 50, Appendix B, as amended. A description of the QA program is contained within this Topical Report, designated as DOM-QA-1, and entitled *Nuclear Facility Quality Assurance Program Description*. This quality assurance program is based on the requirements of the Regulatory Guides and Industry Standards (with approved alternatives) described in Appendix C to this QAPD. The total quality assurance program consists of 1) the Policy statement on quality assurance (included in DOM-QA-1), 2) this Quality Assurance Program Description (QAPD), plus the 3) administrative controls and interface documents, and 4) training and qualification programs developed in accordance with this QAPD.

The application of this program accomplishes two important objectives: 1) provide orderly, uniform administrative and managerial documents to assure safe and reliable operation of nuclear facilities, and 2) assure compliance with regulations promulgated by the U.S. Nuclear Regulatory Commission. Quality assurance activities include planned and periodic audits, reviews, inspections, and other forms of verification to ensure adequacy and completeness of work and the effectiveness of quality programs. Measures are implemented to ensure individuals performing quality assurance audit and inspection/test activities have the authority and organizational freedom (including independence from cost and schedules relative to safety considerations) to identify problems, to recommend solutions, and to verify implementation and effectiveness of corrective actions.

2.2 Applicability

This program applies to those activities that involve the safety-related functions of structures, systems, and components (SSCs) during design, construction, operation, and decommissioning of the Company's nuclear facilities, excluding the construction of new nuclear units. This QAPD also provides the elements for the corrective action process, confirmation process, and administrative controls of the renewed license aging management program (AMP) required for safety-related and nonsafety-related SSCs under a renewed license. The applicable provisions of this QAPD are put into place as early as practicable for the above phases of the facilities. Activities important to safety incorporate applicable portions of this program into their governing documents. Personnel participating in activities where this QA program is applicable are required to follow the established program requirements.

Suppliers may perform designated activities under their quality assurance program provided the supplier has been approved under the provisions of this QAPD. The Company implements measures to review and accept the Supplier's quality assurance program.

In addition to this QAPD, the following documents further describe application of portions of the QA program, where appropriate, for their associated nuclear facilities: The Safety Analysis Report

(SAR), renewed license aging management program (AMP), nuclear design control program, physical security plan, emergency plan, radiological protection plan including radioactive material transport and radioactive waste processing, fire protection plan, station blackout program, nuclear chemistry laboratory quality assurance program. As described in Appendix F of this QAPD, specific program controls are applied to certain nonsafety-related SSCs, for which 10 CFR 50, Appendix B, is not applicable, that are significant contributors to facility safety, have specific regulatory significance, or, when approved by license amendment, to safety-related SSCs categorized (see 2.2.1 below) as not significant contributors to facility safety. The specific program controls consistent with applicable sections of the QAPD are applied to those SSCs in a selected manner, targeted at those characteristics or critical attributes that render the SSC a significant contributor to facility safety.

2.2.1 Risk-Informed Categorization

A license amendment approving the process established for categorization of SSCs as Risk Informed Safety Class (RISC) 1, 2, 3 or 4, in accordance with 10 CFR 50.69, permits certain alternative treatment from that of the deterministic process. Treatment will be as follows:

- RISC-1 SSCs are safety-related SSCs that the risk-informed categorization process determines to be significant contributors to plant safety. Treatment must continue to ensure that RISC-1 SSCs perform their safety-related and safety-significant functions consistent with the categorization process, including those safety-significant functions that go beyond the functions defined as safety-related for which credit is taken in the categorization process. The safety-related requirements contained in this QAPD and the regulations identified in 10 CFR 50.69(b)(i-xi) continue to apply. Additionally, special treatment of functions beyond safety-related that are credited must be provided that ensure SSC performance consistent with the key assumptions in the categorization process.
- RISC-2 SSCs are those that are defined as nonsafety-related, although the risk-informed categorization process determines that they are significant contributors to plant safety on an individual basis. Some RISC-2 SSCs may not have existing special treatment requirements. As a result, the focus for RISC-2 SSCs is on the safety-significant functions for which credit is taken in the categorization process. At a minimum, the QA measures described in Appendix F of this QAPD will be used to ensure credited functions receive appropriate treatment.
- RISC-3 SSCs are those that are defined as safety-related, although the risk-informed categorization process determines that they are not significant contributors to plant safety. The safety-related requirements of this QAPD and the regulations identified in 10 CFR 50.69(b)(i-xi) are removed for RISC-3 SSCs and replaced with alternative treatment requirements intended to provide reasonable confidence that these SSCs remain capable

of performing their safety-related functions under design-basis conditions, including seismic conditions and environmental conditions and effects throughout their service life, albeit at a reduced level of assurance compared to the current special treatment requirements. RISC-3 SSCs are not permitted to lose their functional capability or be removed from the facility. At a minimum, treatment described in Appendix F of this QAPD will be used to ensure the capability of performance under design basis conditions. Periodic inspection and testing activities and corrective actions will be carried out in accordance with the established 10 CFR 50, Appendix B, program.

- RISC-4 SSCs are those that are defined as nonsafety-related, and that the risk-informed categorization process determines are not significant contributors to plant safety. Section 50.69 does not impose alternative treatment for these RISC-4 SSCs. However, as with the RISC-3 SSCs, changes to the design bases of RISC-4 SSCs must be made in accordance with current applicable design change control requirements (if any) and the requirements of 10 CFR 50.59.

2.3 Oversight of the Quality Program Implementation

In order to maintain an effective QA program, Nuclear Oversight performs periodic and systematic evaluations through internal and external audits of the program's implementation. The results of the evaluations and recommendations for improving the QA program are provided to the appropriate management responsible for implementation in the areas audited. Management provides oversight of quality program implementation and effectiveness by reviewing the results of audits in their area of responsibility and acting upon any deficiencies identified. In addition, management oversight of the quality program effectiveness is provided through the activities of review groups reporting to management. The composition and function of the review groups are described in Appendix B to this QAPD.

Quality Control inspection programs are established that provide for independent inspection of quality attributes. Craft personnel may perform these inspections, but the inspection program ensures individuals performing the inspections are not the same individuals or supervisors responsible for performing the activity being inspected. Individuals are assigned responsibility for the effective implementation of the quality inspection programs, to certify the qualification of inspection and test personnel, and to facilitate the raising of quality issues affecting nuclear safety to management. The authority to stop work delegated to personnel performing quality assurance roles is delineated in Company documents.

2.4 Identification of Structures, Systems, and Components (SSC)

Programs are established to identify those SSCs where the QA program applies. These programs are administratively controlled and are implemented by the groups responsible for design of the

facility. The SAR for the facility provides an overview of the SSCs that are safety-related or important to safety and require application of quality assurance measures of this program.

2.5 Selection, Training, and Qualification of Personnel

The Company has established and implements programs and processes to ensure that personnel are knowledgeable in the applicable quality requirements before performing the activities to which this QAPD is applied. Management is responsible to ensure they have a trained and qualified staff. The human resources group assists management by maintaining job descriptions, identifying potential candidates, and updating electronic organization charts that identify individuals filling responsible positions. The Nuclear Training group establishes and maintains training programs that meet the systematic approach to training of 10 CFR 50.120 and these programs are accredited by the National Nuclear Accrediting Board of the National Academy for Nuclear Training (NANT). Additional training is provided as needs are identified. The Company is committed to providing training (initial and continuing) that meets the standards, with alternatives, identified below for the applicable facility. These standards and alternatives are further addressed in Appendix C to this QAPD.

The retraining and replacement training programs for the NRC licensed facility staff meet or exceed the requirements of 10 CFR 55.59 and 55.31(a)(4) for the respective units and shall be maintained. In addition, for units being decommissioned, a NRC approved training and retraining program for CERTIFIED FUEL HANDLERS shall be maintained as required by the license.

2.5.1 Facility/Unit Operating Staff

Each member of the facility/unit staff shall meet or exceed the minimum qualifications of ANSI/ANS-3.1-2014 for comparable positions.

The following additional unit specific requirements will be maintained:

- Millstone Power Station Unit 1

  The operations manager or at least one operations middle manager shall be a CERTIFIED FUEL HANDLER in accordance with the facility Technical Specifications.

- Millstone Power Station Unit 2

  The operations manager or at least one operations middle manager shall hold a senior reactor operator license for Millstone Unit No. 2 in accordance with Millstone Unit 2 Technical Specification 6.3.2.

- Millstone Power Station Unit 3

  The operations manager or at least one operations middle manager shall hold a senior reactor operator license for Millstone Unit No. 3 in accordance with Millstone Unit 3 Technical Specification 6.3.2.

- North Anna Power Station

  The individual filling the role of operations manager and the individual filling the role of operations middle manager (supervisor shift operations) will meet the license requirements of North Anna Units 1 and 2 Technical Specification 5.2.2.e.

- Surry Power Station

  The individual filling the role of operations manager and the individual filling the role of operations middle manager (supervisor shift operations) will meet the license requirements of Surry Units 1 and 2 Technical Specification 6.1.2.2.d.

2.5.2 Quality Assurance Verification Personnel

Personnel performing the following quality verification activities meet the qualification requirements of ANSI/ANS-3.1-2014.

2.5.2.1 Management Position Responsible for Quality Assurance or Quality Control

The person(s) filling the management position responsible for quality assurance or quality verification (audits, inspections and tests, surveillances of Company or Supplier activities, and NDE) will meet the requirements of Section 4.2.6.

2.5.2.2 Supervisor/Coordinator Responsible for Quality Assurance or Quality Control

The person(s) filling the supervisor or coordinator position responsible for quality assurance or quality verification (audits, inspections and tests, surveillances of Company or Supplier activities, and NDE) will meet the requirements of Section 4.4.11. This position includes responsibility for verifying that personnel performing the quality assurance or quality verification activities are qualified for their assigned tasks. The quality assurance and quality verification programs identify the management position responsible for certifying that personnel meet the qualification requirements. For visual examinations to meet the ASME code, the training group may be delegated responsibility for the certification.

2.5.3 Quality Assurance Audits

Personnel performing audits are trained and qualified in accordance with a program that meets the applicable requirements of NQA-1-1994, Part I, Basic Requirement 2 and Supplement 2S-3.

2.5.4 Quality Control Verification

Personnel performing quality control verification through inspection and test, or surveillance activities (inspectors) are trained and qualified in accordance with a program that meets the applicable requirements of NQA-1-1994, Part I, Basic Requirement 2, Supplement 2S-1,

and Appendix 2A-1. The following alternatives may be applied to the qualification requirements:

1. In lieu of being certified as Level I, II, or III in accordance with NQA-1-1994, personnel performing operations phase independent quality verification inspections, examinations, measurements, or tests of material, products, or activities will be required to possess qualifications equal to or better than those required for performing the task being verified; and the verification is within the skills of these personnel and/or is addressed by procedures. These individuals will not be responsible for the planning of quality verification inspections and tests (i.e., establishing hold points and acceptance criteria in procedures, and determining who will be responsible for performing the inspections), evaluating inspection training programs, nor certifying inspection personnel.

2. A qualified engineer may be used to plan inspections, evaluate the capabilities of an inspector, or evaluate the training program for inspectors. For the purposes of these functions, a qualified engineer is one who has a baccalaureate in engineering in a discipline related to the inspection activity (such as, electrical, mechanical, civil) and has a minimum of five years engineering work experience with at least two years of this experience related to nuclear facilities.

2.5.5 Non-Destructive Examination Technicians

Personnel performing NDE are trained and qualified in accordance with a program that meets the applicable requirements of NQA-1-1994, Part I, Basic Requirement 2 and Supplement 2S-2. Except that the reference to SNT-TC-1A, June 1980 is changed to the qualification standard as specified in the applicable facility's commitment to the ASME code or other applicable code governing the activity.

2.5.6 ASME Code Visual Examinations

Personnel performing visual examinations (VT) required by the ASME code are qualified and certified according to the Code requirements for the applicable facility.

2.6 Control of Activities

The Company has established administrative controls over activities for the nuclear facilities in accordance with the quality assurance program. These ensure that the applicable elements of 10 CFR 50, Appendix B are addressed during the performance of the activities. These programs include the appropriate use of qualified personnel, procedures, and methods when performing the activities. They also address special controls necessary such as environmental conditions, cleanliness, housekeeping, use of special or calibrated equipment, and specific operating modes or conditions. Where appropriate, the controls include specifying acceptance criteria that assure

suitable performance of the SSCs. These controls are further addressed throughout this QAPD and within the standards committed to by this QAPD.

2.7 Quality Standards Commitment

The Company is committed to implementing a quality assurance program in accordance with the quality standards described in NQA-1-1994, Part I, Basic Requirement 2, its associated Supplements, Part II, Subparts 2.1 and 2.3, and Part III, Subpart 3.1, Appendix 2A-1, and Subpart 3.2, Appendix 2.1 (VCS only), including alternatives identified herein and in Appendix C. The Company also commits to implementing the other standards with alternatives described within Section 2 and those delineated in Appendix C to this QAPD. Alternatives, exceptions, and/or clarifications to the standards for selection, training, and qualification of personnel are specifically addressed within the subsections discussing those commitments for each facility. The following alternatives are applicable to the NQA-1-1994 standards identified in this subsection:

2.7.1 NQA-1-1994, Part II, Subpart 2.1

Subsections 3.1 and 3.2 establish criteria for classifying items into cleanness classes and requirements for each class. Instead of using the cleanness level system of Subpart 2.1, the Company may establish cleanness requirements on a case-by-case basis, consistent with the other provisions of Subpart 2.1. The Company establishes appropriate cleanliness controls for work on safety-related equipment to minimize introduction of foreign material and maintain system/component cleanliness throughout maintenance or modification activities, including documented verification of absence of foreign material prior to system closure.

2.7.2 NQA-1-1994, Part II, Subpart 2.3

The Company may choose to not utilize the five-level zone designations required by Subsection 2.3, but will utilize work practices, as described in administrative controls, that provide an equivalent level of cleanliness control required by the subpart. This will include as a minimum documented cleanliness inspections which will be performed prior to system closure. As necessary, (e.g., the size of the opening would permit entry of the tools being used) control of personnel, tools, equipment, and supplies will be established when major portions of the reactor system are opened for inspection, maintenance, or repair. Factors considered in developing the administrative controls include cleanness requirements, personnel safety, fire prevention and protection, radiation control, and security. The controls make use of standard janitorial and work practices to the extent possible.

Section 3 Design Control

3.1 General Description

The Company has established and implements administrative controls to assure quality is achieved in establishing and changing the design for the nuclear facilities in accordance with industry standards and regulatory requirements. These provisions address control of design inputs, processes, outputs, changes, interfaces, records, and organizational interfaces. The administrative controls designate the design organization that has approval authority for the design, including design changes and modifications.

3.2 Design Control Program

The design control program ensures design inputs are correctly translated into specifications, drawings, procedures, and instructions in sufficient detail to permit verification. The design process controls the selection and independent verification of items and activities consistent with their importance to safety, to ensure that they are suitable for their intended application. The design process includes provisions for performing appropriate reviews by nuclear management, operating and corporate safety review committees, and for required regulatory evaluations. Errors and deficiencies in design, including the design process, which could adversely affect quality structures, systems, and components, are documented and corrective action is taken in accordance with Section 15 and Section 16 of this QAPD.

3.2.1 Design Change Control

Procedures and instructions govern identifying the need to change the design and a documented method to control these changes. Design and specification changes (including temporary changes, e.g., temporary bypass lines, electrical jumpers and lifted wires, and temporary setpoints) are subject to design control measures commensurate with those applied during the original design as amended by applicable design or licensing basis changes. The design change process includes notifications of changes to responsible plant personnel prior to implementation in accordance with applicable procedures.

3.2.2 Design Interface Control

Procedures and instructions establish interface controls between functional groups and with principal Suppliers. The interface controls include processes for the resolution of design questions related to the nuclear facilities.

3.2.3 Design Verification

The design control program establishes and implements design verification procedures and instructions to ensure that an appropriate verification method (including, but not limited to, design reviews, alternate calculations, and qualification testing) is used, the appropriate

design parameters are chosen, the acceptance criteria are identified, the verification is satisfactorily accomplished, and the results are properly recorded. Measures are included that assure the independence of individuals performing design verification. The verifier shall not have taken part in the selection of design inputs, the selection of design considerations, or the selection of a singular design approach, as applicable. If the verification is performed by the originator's supervisor, the justification of the need is documented and approved in advance by management. The Company is responsible for assuring that the design documents generated by Suppliers for the Company's nuclear facilities are technically correct, approved, and maintained.

3.2.4 Computer Application and Digital Equipment Software Design and Control

The Company has established programs and procedures to ensure that computer application or digital equipment software is appropriately procured or designed and verified suitable for the intended application. Measures are also taken to control the use and maintenance of computer application or digital equipment software. The computer application or digital equipment software is assigned a quality classification and quality requirements are applied consistent with that classification.

3.2.5 Setpoint Control

Instrument and equipment setpoints that could affect nuclear safety shall be controlled in accordance with written instructions. As a minimum, these written instructions shall:

- Identify responsibilities and processes for reviewing, approving, and revising setpoints and setpoint changes originally supplied by the A/E for the facility and the station's technical staff;
- Ensure setpoints and setpoint changes are consistent with design and accident analysis requirements and assumptions;
- Provide for documentation of setpoints, including those determined operationally; and,
- Provide for access to necessary setpoint information for personnel who write or revise facility procedures, operate or maintain facility equipment, develop or revise design documents, or develop or revise accident analyses.

3.3 Quality Standards Commitment

The Company commits to meeting the standards for design control of NQA-1-1994, Part I, Basic Requirement 3 and Supplement 3S-1, and the standards for computer software contained in Part II, Subpart 2.7.

Section 4 Procurement Document Control

4.1 General Description

The Company has established and implements administrative controls and processes to assure that applicable regulatory, technical, and QA program requirements are included or referenced in procurement documents. These measures ensure procurement documents identify applicable regulatory, technical, administrative, and reporting requirements (such as specifications, codes, standards, tests, inspections, special processes, and 10 CFR Part 21); drawings; specifications; codes and industrial standards; test and inspection requirements; and special process instructions that must be complied with by Suppliers. Procedures further define when procurement documents require Suppliers and subtier Suppliers to provide acceptable quality assurance programs, or for services the Supplier works under the Dominion Energy QA program.

4.2 Preparation, Review, and Approval of Procurement Documents

Established procedures and instructions describe organizational responsibilities that include: procurement planning; the preparation, review, approval, and control of procurement documents; Supplier selection; bid evaluations and review and concurrence of Supplier QA programs prior to initiation of activities affected by the program. Where original technical or quality assurance requirements cannot be determined, an engineering evaluation is conducted and documented by qualified staff to establish appropriate requirements and controls to assure that interfaces, interchangeability, safety, fit, and function, as applicable, are not adversely affected or contrary to applicable regulatory requirements. Procedures ensure procurement documents are reviewed to verify that quality requirements are: 1) correctly stated, inspectable, and controllable; 2) have adequate acceptance and rejection criteria; and 3) are prepared, reviewed, and approved in accordance with this QAPD. These procedures also identify those personnel authorized to perform the reviews and their qualification requirements including training in QA practices and concepts. The Company performs applicable internal and external audits, assessments, and inspections to ensure compliance with quality assurance program requirements for the control of procurement documents.

4.3 Quality Standards Commitment

The Company commits to meeting the quality assurance standards for procurement document control of NQA-1-1994, Part I, Basic Requirement 4 and Supplement 4S-1 with the following clarification:

4.3.1 Supplement 4S-1, subsection 2.3 requires that the Supplier have a documented quality assurance program. The procurement documents may allow Suppliers of services to work under the Dominion Energy QA program, including implementing procedures, in lieu of the supplier having its own QA Program.

Section 5 Instructions, Procedures, and Drawings

5.1 General Description

The Company has established and implements administrative controls to assure that activities affecting quality are prescribed by and performed in accordance with documented instructions, procedures, and drawings. Provisions include the preparation, review, approval, control and distribution of procedures, instructions and drawings for activities affecting quality structures, systems, and components of Company nuclear facilities. These documents are controlled in accordance with Section 6 of this QAPD.

Instructions, procedures, and drawings are prepared and approved prior to implementation. These documents are sufficiently detailed to allow a qualified individual to perform the required function without direct supervision, and assure consistent and acceptable results in accordance with regulatory guidance and industry quality standards. Management responsible for each functional group has responsibility for assuring that their activities affecting quality are 1) prescribed by documented instructions, procedures, and drawings and 2) accomplished through implementation of these documents.

5.2 Procedure Adherence

The Company policy is that procedures are followed, and the requirements for use of procedures have been established in administrative procedures. Where procedures cannot be followed as written, provisions are established for making changes in accordance with Section 6 of this QAPD. Requirements are established to identify the manner in which procedures are to be implemented, including identification of those tasks that require 1) the written procedure to be present and followed step-by-step while the task is being performed, 2) the user to have committed the procedure steps to memory, 3) verification of completion of significant steps, by initials or signatures or use of check-off lists. Procedures that are required to be present and referred to directly are those developed for extensive or complex jobs where reliance on memory cannot be trusted, tasks that are infrequently performed, and tasks where steps must be performed in a specified sequence.

In cases of emergency, personnel are authorized to depart from approved procedures when necessary to prevent injury to personnel or damage to the plant. Such departures are recorded describing the prevailing conditions and reasons for the action taken.

5.3 Procedure Content

This QAPD does not establish any specific format or style for procedures, this information will be contained in the administrative controls applicable to the facility. The format of procedures may vary based on the applicable facility or the tasks being performed. Where appropriate, checklists (check-off lists) are used with the procedures to ensure accurate completion. Procedures include the

applicable elements described in NQA-1-1994, Part II, Introduction, Section 4.2, (a)-(p), and the following additional elements, where appropriate:

- **Title.** Each procedure contains a title descriptive of the work or system or unit to which it applies, a revision number or date, and an approval status.
- **Statement of Applicability/Purpose.** When the procedure's purpose is not clear from the title, a separate statement of applicability is provided.
- **Limitations and Actions.** Limitations on the parameters being controlled and appropriate corrective measures to return the parameter to the normal control band are specified. Limitations and setpoints may be identified in a separate section. Where appropriate, quantitative control guides are provided.

5.4 Types of Procedures and Instructions

The types of procedures and instructions to be developed and used will vary according to the phase that a facility is in as well as the type of facility and activities conducted. This subsection is intended to provide an overview of these types, but is not intended to specify any particular name or format for these documents and some types may be combined. Certain types of procedures and instructions are common to all facilities, but individual facility terminology may vary. The Company programs ensure the procedures identified in the facility's technical specifications and the applicable types of procedures described in Regulatory Guide 1.33, Rev. 2, Appendix A, are developed, maintained, and implemented for the nuclear facilities in the operational or decommissioning phase.

5.4.1 Administrative Controls

These include administrative procedures, directives, policies, standards, and similar documents that control the programmatic aspects of facility activities. These administrative documents ensure that the requirements of regulatory and license commitments are implemented. Several levels of administrative controls are applied ranging from those affecting the entire Company down to those prepared at the implementing group level. These documents establish responsibilities, interfaces, and standard methods (rules of practice) for implementing programs. In addition to the administrative controls described throughout this QAPD, instructions governing the following activities are provided:

- **Operating Orders/Procedures.** Instructions of general and continuing applicability to the conduct of business to the plant staff are provided. Examples where these are applied include, but are not limited to, job turnover and relief, designation of confines of control room, definition of duties of operators and others, transmittal of operating data to management, filing of charts, limitations on access to certain areas and equipment, shipping and receiving instructions. Provisions are made for periodic review and updating of these documents, where appropriate.

- **Special Orders.** Management instructions, which have short-term applicability and require dissemination, are issued to encompass special operations, housekeeping, data taking, publications and their distribution, plotting process parameters, personnel actions, or other similar matters. Provisions are made for periodic review, updating, and cancellation of these documents, where appropriate.
- **Plant Security and Visitor Control.** Procedures or instructions are developed to supplement features and physical barriers designed to control access to the plant and, as appropriate, to vital areas within the plant. Information concerning specific design features and administrative provisions of the plant security program is confidential and thus accorded limited distribution. The security and visitor control procedures consider, for example, physical provisions, such as: fences and lighting; lock controls for doors, gates and compartments containing sensitive equipment; and provisions for traffic and access control. Administrative provisions, such as: visitor sign-in and sign-out procedures; escorts and badges for visitors; emphasis on inspection, observation and challenging of strangers by operating crews; and a program of pre-employment screening for potential employees are also considered.
- **Temporary Procedures.** Temporary procedures may be used to direct operations during testing, refueling, maintenance, and modifications to provide guidance in unusual situations not within the scope of the normal procedures. These procedures ensure orderly and uniform operations for short periods when the plant, a system, or a component of a system is performing in a manner not covered by existing detailed procedures or has been modified or extended in such a manner that portions of existing procedures do not apply. Temporary Procedures include designation of the period of time during which they may be used and are subject to the procedure review process as applicable.

5.4.2 Engineering Procedures

These documents provide instructions for the preparation of engineering documents and implementation of engineering programs. This includes activities such as preliminary and final designs; calculations; fabrication, purchasing, construction, and installation specifications; drawings; analysis and topical reports; and testing plans or procedures. They include appropriate reference to industry codes and standards, design inputs, and technical requirements.

5.4.3 Installation Procedures

These documents provide instructions for the installation of components generally related to new construction and certain modification activities. They include appropriate reference to industry standards, installation specifications, design drawings, and Supplier and technical

manuals for the performance of activities. These documents include provisions, such as hold or witness points, for conducting and recording results of required inspections or tests. These documents may include applicable inspection and test instructions subject to the requirements for test and inspection procedures below.

5.4.4 System Procedures

These documents contain instructions for energizing, filling, venting, draining, starting up, shutting down, changing modes of operation, and other instructions appropriate for operations of systems related to the safety of the plant. Separate procedures may be developed for correcting off-normal conditions for those events where system complexity may lead to operator uncertainty.

5.4.5 Start-up Procedures

These documents contain instructions for starting the reactor from cold or hot conditions and establishing power operation. This includes documented determination that prerequisites have been met, including confirmation that necessary instruments are operable and properly set; valves are properly aligned, necessary system procedures, tests and calibrations have been completed; and required approvals have been obtained.

5.4.6 Shutdown Procedures

These documents contain guidance for operations during controlled shutdown and following reactor trips, including instructions for establishing or maintaining hot shutdown/standby or cold shutdown conditions, as applicable. The major steps involved in shutting down the plant are specified, including instructions for such actions as monitoring and controlling reactivity, load reduction and cooldown rates, sequence for activating or deactivating equipment, requirements for prompt analysis for causes of reactor trips or abnormal conditions requiring unplanned controlled shutdowns, and provisions for decay heat removal.

5.4.7 Power Operation and Load Changing Procedures

These documents contain instructions for steady-state power operation and load changing. These type documents include, as examples, provisions for use of control rods, chemical shim, coolant flow control, or any other system available for short- or long-term control of reactivity, making deliberate load changes, responding to unanticipated load changes, and adjusting operating parameters.

5.4.8 Process Monitoring Procedures

These documents contain instructions for monitoring performance of plant systems to assure that core thermal margins and coolant quality are maintained in acceptable status at

all times, that integrity of fission product barriers is maintained, and that engineered safety features and emergency equipment are in a state of readiness to keep the plant in a safe condition if needed. Maximum and minimum limits for process parameters are appropriately identified. Operating procedures address the appropriate nature and frequency of this monitoring.

5.4.9 Fuel Handling Procedures

These documents contain instructions for core alterations, accountability of fuel and partial or complete refueling operations that include, for example, continuous monitoring of neutron flux throughout core loading, periodic data recording, audible annunciation of abnormal flux increases, and evaluation of core neutron multiplication to verify safety of loading increments. Procedures are also provided for receipt and inspection of new fuel, and for fuel movements in the spent fuel storage areas. Fuel handling procedures include prerequisites to verify the status of systems required for fuel handling and movement; inspection of replacement fuel and control rods; designation of proper tools, proper conditions for spent fuel movement, proper conditions for fuel cask loading and movement; and status of interlocks, reactor trip circuits and mode switches. These procedures provide requirements for refueling, including proper sequence, orientation and seating of fuel and components, rules for minimum operable instrumentation, actions for response to fuel damage, verification of shutdown margin, communications between the control room and the fuel handling station, independent verification of fuel and component locations, criteria for stopping fuel movements, and documentation of final fuel and component serial numbers (or other unique identifiers) and locations.

5.4.10 Maintenance Procedures

These documents contain instructions in sufficient detail to permit maintenance work to be performed correctly and safely, and include provisions, such as hold or witness points, for conducting and recording results of required inspections or tests. These documents may include applicable inspection or test instructions subject to the requirements for test and inspection procedures below. Appropriate referencing to other procedures, standards, specifications, or Supplier manuals is provided. When not provided through other documents, instructions for equipment removal and return to service, and applicable radiation protection measures (such as protective clothing and radiation monitoring) will be included. Additional maintenance procedure requirements are addressed in NQA-1-1994, Part I, Subpart 2.18, Section 2.2, Procedures.

5.4.11 Radiation Control Procedures

These documents contain instructions for implementation of the radiation control program requirements necessary to meet regulatory commitments, including acquisition of data and use of equipment to perform necessary radiation surveys, measurements and evaluations for the assessment and control of radiation hazards. These procedures provide requirements for monitoring both external and internal exposures of employees, utilizing accepted techniques; routine radiation surveys of work areas; environmental monitoring in the vicinity of the plant; radiation monitoring of maintenance and special work activities, and for maintaining records demonstrating the adequacy of measures taken to control radiation exposures to employees and others.

5.4.12 Calibration and Test Procedures

These documents contain instructions for periodic calibration and testing of instrumentation and control systems and for periodic calibration of measuring and test equipment used in activities affecting the quality of these systems. These documents provide for meeting surveillance requirements and for assuring measurement accuracy adequate to keep safety-related parameters within operational and safety limits.

5.4.13 Chemical and Radiochemical Control Procedures

These documents contain instructions for chemical and radiochemical control activities and include: the nature and frequency of sampling and analyses; instructions for maintaining coolant quality within prescribed limits; and limitations on concentrations of agents that could cause corrosive attack, foul heat transfer surfaces, or become sources of radiation hazards due to activation. These documents also provide for the control, treatment and management of radioactive wastes, and control of radioactive calibration sources.

5.4.14 Emergency Operating Procedures

These documents contain instructions for response to potential emergencies so that a trained operator will know in advance the expected course of events that will identify an emergency and the immediate actions that should be taken in response. Format and content of emergency procedures are based on regulatory and Owner's Group(s) guidance that identify potential emergency conditions and generally require such procedures to include a title, symptoms to aid in identification of the nature of the emergency, automatic actions to be expected from protective systems, immediate operator actions for operation of controls or confirmation of automatic actions, and subsequent operator actions to return the reactor to a normal condition or provide for a safe extended shutdown period under abnormal or emergency conditions.

5.4.15 Emergency Plan Implementing Procedures

These documents contain instructions for activating the Emergency Response Organization and facilities, protective action levels, organizing emergency response actions, establishing necessary communications with local, state and federal agencies, and for periodically testing the procedures, communications and alarm systems to assure they function properly. Format and content of such procedures are such that requirements of each facility's NRC approved Emergency Plan are met.

5.4.16 Test and Inspection Procedures

These documents provide the necessary measures to assure quality is achieved and maintained for the nuclear facilities. The instructions for tests and inspections may be included within other procedures, such as installation and maintenance procedures, but will contain the objectives, acceptance criteria, prerequisites for performing the test or inspection, limiting conditions, and appropriate instructions for performing the test or inspection, as applicable. These procedures also specify any special equipment or calibrations required to conduct the test or inspection and provide appropriate documentation and evaluation by responsible authority to assure test or inspection requirements have been satisfied. Where necessary, hold or witness points are identified within the procedures and require appropriate approval for the work to continue beyond the designated point. These procedures provide for recording the date, identification of those performing the test or inspection, as-found condition, corrective actions performed (if any), and as-left condition, as appropriate for the subject test or inspection.

5.5 Quality Standards Commitment

The Company commits to meeting the standards for instructions, procedures, and drawings of NQA-1-1994, Part I, Basic Requirement 5. Additional requirements regarding the content of procedures for specific activities delineated in NQA-1-1994, Part II, will also be implemented as appropriate to the activity.

Section 6 Document Control

6.1 General Description

The Company has established and implements administrative controls to assure the preparation, review, approval, and issuance of controlled documents and changes thereto. These controls assure technical adequacy and inclusion of appropriate quality requirements prior to implementation. Measures are provided to assure that documents, including revisions or changes, are reviewed for adequacy by knowledgeable personnel other than those who originated or prepared the document, approved for release by authorized personnel, and distributed in accordance with current approved methods. In order to ensure that the documents in current use provide the best possible instructions for performance of the work involved, reviews and/or feedback of information based on use is provided for within the implementing programs. During construction and modification activities, drawings and related documentation are updated in a timely manner to accurately reflect the actual facility design.

6.2 Applicability

The provisions for controlling documents include, but are not limited to, the following types of documents:

- Engineering calculations and analyses, design and as-built drawings, design and installation specifications, computer codes
- Purchase orders and related documents, Supplier provided documents
- Instructions, procedures, and drawings used for activities such as siting, designing, procuring, fabricating, handling, shipping, receiving, storing, cleaning, erecting, installing, inspecting, testing, operating, maintaining, calibrating, repairing, refueling, responding to emergencies, modifying, and decommissioning (including those documents describing organizational interfaces)
- Topical reports, quality assurance and quality control manuals and procedures
- Technical Specifications
- Reports of nonconformance resolution and corrective actions

6.3 Document Review and Approval

Administrative procedures provide measures to control and coordinate the approval and issuance of documents, including changes thereto that prescribe all activities affecting quality. Procedures describe the review process and establish who is to perform document reviews and any applicable qualification requirements.

Each procedure (including those that are programmatic in nature) is reviewed and approved prior to initial use. The frequency of subsequent reviews varies depending on the frequency of use, type

and complexity of the activity involved. Applicable procedures are reviewed following an unusual incident, such as an accident, an unexpected transient, significant operator error, or equipment malfunction, and following any modification to a system.

Installation, maintenance, modification, and inspection procedures may include inspection requirements, methods, and acceptance criteria according to the established QA inspection program. When a change is made to any of these inspections, it is reviewed by personnel knowledgeable in QA requirements.

Documents, including procedures, programs and changes thereto are approved by responsible management or the facility safety review committee, as applicable. Where common procedures or programs are used for multiple facilities, responsible management or the facility safety review committee for each applicable facility must review the procedures or programs.

6.4 Additional Operations and Decommissioning Phase Review Requirements

Procedures and programs, including subsequent changes, for operations and decommissioning phase activities are screened to determine if further regulatory evaluation is required to meet 10 CFR Sections 50.59 or 72.48. Procedures and programs that are determined to require further regulatory evaluation are reviewed by the facility safety review committee as described in Appendix B, of this QAPD. The facility safety review committee may require any procedure, program, or changes thereto to be brought before the committee for review.

Administrative controls ensure periodic reviews are performed for procedures that have specific regulatory review requirements. Additional administrative and programmatic controls ensure procedures are maintained current. These controls include pre-job preparation practices and the procedural adherence policy (as discussed in Section 5). In addition, plant procedures are audited or reviewed as part of routine Nuclear Oversight processes providing assurance that existing administrative controls for procedure verification, review, and revision are effective in maintaining the quality of plant procedures.

If a temporary procedure change is required, it will be reviewed and approved in accordance with

1) the applicable facility technical specification requirements, or 2) the provisions of this QAPD when not addressed in the technical specifications, or 3) for VCS, changes that clearly do not change the intent of the approved procedure may be implemented provided the changes are approved by two members of the facility management staff, at least one of whom holds a Senior Reactor Operator's License. Such changes are documented and, if appropriate, incorporated in the next revision of the affected procedure.

6.5 Distribution of Controlled Documents

Provisions ensure current documents are available prior to commencing work. Computerized processes may be used to make controlled documents available to users. Where computerized

distribution is made, administrative controls ensure the record file for the document contains the appropriate review and approval documentation.

Administrative controls are established to assure the timely removal and replacement of obsolete or superseded documents in work areas with applicable revisions. The Company maintains a record of all holders of controlled documents and drawings. An index or file of all controlled documents that lists the current revision or date is maintained so personnel can readily identify the current revision.

6.6 Quality Standards Commitment

The Company commits to meeting the quality assurance standards for document control of NQA-1-1994, Part I, Basic Requirement 6 and Supplement 6S-1.

Section 7 Control of Purchased Material, Equipment, and Services

7.1 General Description

The Company has established and implements programs, procedures, and processes for the control of purchased items and services, selection of Suppliers, and assessing the acceptability of quality. The Company procedures define the organizational responsibilities for the control of purchased items and services including interfaces between design, procurement, and quality verification organizations.

7.2 Selection of Suppliers

Procedures describe the Supplier selection process, including measures to ensure continued acceptable quality from Suppliers. Prospective Suppliers are evaluated based on the items and services they provide and the degree of quality required. The evaluation process ensures only qualified Suppliers are selected. Industry programs, such as those applied by ASME, Nuclear Procurement Issues Corporation (NUPIC), or other established utility groups, are used as input or the basis for supplier qualification whenever appropriate. The Suppliers are periodically evaluated to ensure they continue to provide acceptable products and services. A controlled list of qualified Suppliers is maintained by Nuclear Oversight and made available to the organizations responsible for procuring items and services. Audits, surveillances, inspections, and NRC correspondence used in the evaluation of Suppliers are specifically identified in the evaluation documentation to allow retrieval of the information.

7.3 Conformance of Items and Services

Procurement documents identify to the Supplier applicable technical, regulatory, administrative, and reporting requirements. These requirements include specifications, codes, standards, tests, inspections, special processes, reporting in accordance with 10 CFR 21, documentation that identifies the purchased item and the specific procurement requirements met by the item, documentation identifying any procurement requirements that have not been met, and a description of those nonconformances from the procurement requirements dispositioned accept as-is or repair. The procurement documents identify the technical and quality requirements based on the intended service and the requirements of the current Company QAPD in effect at the time of procurement. These requirements also apply to the procurement of spare and replacement parts such that the specifying of technical requirements is equal to or better than the original requirements to preclude repetition of defects. For commercial grade (off-the-shelf) items, special quality verification requirements are established and described in Company documents to provide the necessary assurance an item will perform satisfactorily in service. The Company documents address determining the critical characteristics that ensure an item is suitable for its intended use, technical evaluation of the item, receipt requirements, and quality evaluation of the item. The purchase of

commercial grade calibration services from a calibration laboratory may be made in accordance with the alternative to NQA-1-1994, Part I, Supplement 7S-1 requirements described in Section 7.5 below.

7.4 Quality Verification

Nuclear Oversight, Nuclear Analysis and Fuel, and Supply Chain Management use a systematic approach through audits, independent inspections, surveillances, or tests to verify Supplier quality including, as necessary, verification of activities of suppliers below the first tier. Personnel from these groups verify Suppliers' activities during fabrication, inspection, testing, and shipment of items. Suppliers' certificates of conformance are periodically evaluated to assure they are valid. Additional quality verifications are performed to assure conformance with purchase requirements during receipt inspection, or through pre-installation or post-installation tests. Prior to items being placed in service or used at Company nuclear facilities, responsible inspection personnel verify that required Supplier documentary evidence that the items conform to purchase requirements is available on site. These verification activities are planned, performed, and documented in accordance with written Company documents. The Company documents identify: 1) the characteristics or processes to be witnessed, inspected, verified, evaluated, and accepted; 2) the method of verification; 3) at what interval in the fabrication or manufacture to perform verification; 4) the extent of documentation required; and 5) those responsible for implementing these verification activities.

7.5 Quality Standards Commitment

The Company commits to meeting the quality assurance standards for control of purchased material, equipment, and services contained in NQA-1-1994, Part I, Basic Requirement 7, and Supplement 7S-1, with the following alternatives and exceptions:

7.5.1 NQA-1-1994, Part I, Supplement 7S-1 - Exception

- Dominion Energy considers that other 10 CFR 50 licensees, Authorized Nuclear Inspection Agencies, National Institute of Standards and Technology, or other State and Federal agencies which may provide items or services to the Company facilities are not required to be evaluated or audited.

7.5.2 NQA-1-1994, Part I, Supplement 7S-1 - Alternative

- Commercial-grade calibration and/or testing services may be procured from commercial laboratories based on the laboratory's accreditation to 17025:2017 by an Accreditation Body (AB) which is a signatory to the International Laboratory Accreditation and Cooperation (ILAC) Mutual Recognition Arrangement (MRA) provided all of the following are met:

1. A documented review of the supplier's accreditation is performed and includes a verification of the following:

    a. The calibration or test laboratory holds accreditation by an accrediting body recognized by the ILAC MRA. The accreditation encompasses ISO/IEC 17025:2017, “General Requirements for the Competence of Testing and Calibration Laboratories.”

    b. For procurement of calibration services, the published scope of accreditation for the calibration laboratory covers the needed measurement parameters, ranges, and uncertainties.

    c. For procurement of testing services, the published scope of accreditation for the test laboratory covers the needed testing services including test methodology and tolerances/uncertainty.

    d. The laboratory has achieved accreditation based on an on-site accreditation assessment by the selected AB within the past 48 months. The laboratory's accreditation cannot be based on two consecutive remote accreditation assessments.

2. The purchase documents require that:

    a. The service must be provided in accordance with their accredited ISO/IEC 17025:2017 program and scope of accreditation.

    b. For calibration services, as-found calibration data must be reported in the certificate of calibration when calibrated items are found to be out-of-tolerance.

    c. For calibration services, the equipment/standards used to perform the calibration must be identified in the certificate of calibration.

    d. Dominion Energy must be notified of any condition that adversely impacts the laboratory's ability to maintain the scope of accreditation.

    e. The laboratory performing the calibration and/or testing service shall not subcontract the service to any other supplier.

    f. Performance of the services listed on this purchase order is contingent on the laboratory’s accreditation having been achieved through an on-site accreditation assessment by the Accreditation Body (AB) within the past 48 months.

    g. Any additional technical and quality requirements, as necessary, based upon a review of the procured scope of services, which may include, but are not necessarily limited to, tolerances, accuracies, ranges, and industry standards.

3. It is validated, at receipt inspection, that the laboratory's documentation certifies that:

    a. The contracted calibration or test service has been performed in accordance with their ISO/IEC 17025:2017 program and has been performed within their scope of accreditation, and

    b. The purchase order's requirements are met.

NOTE: The ILAC accreditation process cannot be used as part of the commercial-grade dedication process of nondestructive examination (NDE) or nondestructive testing (NDT) services in lieu of performing a commercial-grade survey. This is applicable to both American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code and non-ASME B&PV Code safety-related applications.

7.5.3 NQA-1-1994, Part I, Supplement 7S-1, Section 10, “Commercial Grade Items” - Alternative

Controls for commercial grade items are established in Company documents using the guidance of:

- NRC Regulatory Guide 1.164, Rev. 0, June 2017, “Dedication of Commercial-Grade Items for Use in Nuclear Power Plants,” with the identified exceptions and clarifications to the use of EPRI 3002002982.
- EPRI 3002002982, September 2014, “Plant Engineering: Guideline for the Acceptance of Commercial-Grade Items in Nuclear Safety-Related Applications, Revision 1 to EPRI NP-5652 and TR-102260.”

7.5.4 NQA-1-1994, Part 1, Supplement 7S-1, Section 8 and 10 - Alternative

Remote source verification (vendor surveillance, inspection, and audit) using live audio/video technology is allowed as an alternate method to source verification activities supporting commercial grade dedication or other acceptance process when exigent conditions such as a pandemic or similar state of emergency declarations exist that restricts access or travel to and/or from vendor locations affected by the declaration. The use of remote vendor surveillance shall be in accordance with EPRI 3002019436-A, October 2020, “Remote Source Inspection During a Pandemic or Similar State of Emergency: Screen Criteria and Process Guidance,” Final Report with NRC Safety Evaluation, to screen eligibility, plan verification activities, establish suitable display media, and document verification activities for quality record purposes.

Section 8 Identification and Control of Materials, Parts, and Components

8.1 General Description

The Company has established and implements administrative controls and processes for the identification and control of items such as materials (including consumables), parts, components, and partially fabricated subassemblies. Implementing procedures establish the responsibilities and requirements for the identification and control of items throughout fabrication, receipt, handling, storage, and installation to assure that incorrect or defective items are not used. Such requirements include instruction on the use of markings, tags, labels, or record keeping for identification so that the items are not adversely affected by the method of identification.

The methods used for identification of items assure traceability of the items to the appropriate documentation such as drawings, specifications, purchase orders, manufacturing and inspection documents, problem reports, and physical and chemical mill test reports. Procedures include responsibilities and methods for verification and documentation of the correct identification of items prior to release for fabrication, assembling, shipping, and installation.

8.2 Quality Standards Commitment

The Company commits to meeting the quality assurance standards for identification and control of items contained in NQA-1-1994, Part I, Basic Requirement 8 and Supplement 8S-1.

Section 9 Control of Special Processes

9.1 General Description

The Company has established and implements programs, procedures, and processes to assure the acceptability of special processes through the use of procedures, technique sheets, travelers and inspection verification reports, and personnel qualified in accordance with the applicable codes, specifications, and standards for the specific work. Special processes are those where interim process controls are necessary to ensure a final acceptable product and where reliance on a final inspection or test is insufficient to determine quality. Special processes include, but are not limited to, those involving: welding; heat treating; cadwelding; non-destructive examination and testing; painting and coatings; concrete and grout; soils and earthwork; and removal of undesirable substances during shop and site cleaning, degreasing, and flushing. In instances where Suppliers are assigned such work at Company facilities, the Supplier must submit their procedures and personnel qualifications to the Company for approval prior to the start of work.

9.2 Qualification of Special Processes Personnel, Procedures, and Equipment

Company documents assure that procedures, equipment, and personnel associated with special processes are qualified and are in conformance with applicable codes, standards, QA procedures, and specifications. In addition, Company documents establish the method for recording evidence of the acceptable accomplishment for special processes. The Company conducts inspections and/or audits of work involving special processes to assure that procedures and personnel are properly qualified and their workmanship is in compliance with applicable specifications, codes, standards, and QA procedures.

Qualification records of procedures, equipment, and personnel associated with special processes are established, filed, and kept current in accordance with the provisions of this QAPD.

9.3 Quality Standards Commitment

The Company commits to meeting the standards for control of special processes from NQA-1-1994, Part, I, Basic Requirement 9 and Supplement 9S-1.

Section 10 Inspection

10.1 General Description

The Company has established and implements administrative controls and processes to inspect activities for the nuclear facilities that affect quality to verify conformance with the approved documents for accomplishing the activities including specifications and quality standards. The programs govern establishment of inspection hold points beyond which work is not to continue until a satisfactory inspection is achieved. The inspections are performed by trained and qualified individuals, in accordance with controlled documents, and to established acceptance criteria. The inspection program maintains reporting independence of inspectors by ensuring individuals performing the inspections are not the same individuals or supervisors responsible for performing the activity being inspected. Where quality verification inspections at operating facilities are performed by the Maintenance group, to meet the independence requirements of NQA-1-1994, Part I, Supplement 10S-1, Section 3.1, the inspectors report to the Nuclear Oversight group while performing the inspection. Management review and audit of inspection results is established to ensure effectiveness of the inspection program.

10.2 Inspection Program

The inspection program establishes inspections (including surveillance of processes), as applicable: 1) at the source of supplied items or services, 2) in-process during fabrication at a Supplier's facility or at a Company facility, 3) for final acceptance of fabricated and/or installed items during construction, 4) upon receipt of items for a facility, as well as 5) during maintenance, modification, inservice, operating and decommissioning activities. The post-maintenance testing program ensures that a functional test can be performed as additional assurance demonstrating the quality of work where inspections for breach of a pressure boundary are performed by an individual within the same functional group (e.g., Maintenance).

The inspection program establishes requirements for planning inspections, such as the group or discipline responsible for performing the inspection, where inspection hold points are to be applied, determining applicable acceptance criteria, the frequency of inspection to be applied, and identification of special tools needed to perform the inspection. Inspection planning is performed by personnel qualified in the discipline related to the inspection and include qualified inspectors or engineers. Inspection plans are based on, as a minimum, the importance of the item to the safety of the facility, the complexity of the item, technical requirements to be met, and design specifications. Where significant changes in inspection activities for the facilities are to occur, management responsible for the inspection programs evaluate the resource and planning requirements to ensure effective implementation of the inspection program.

Inspection program documents establish requirements for performing the planned inspections, and documenting required inspection information such as: reject, acceptance, and re-inspection results; and the person(s) performing the inspection.

10.3 Inspector Qualification

The Company has established qualification programs for personnel performing quality verification inspections. The qualification program requirements are described in Section 2 of this QAPD. These qualification programs are applied to individuals performing quality verification inspections regardless of the functional group where they are assigned. Where inspections are to be performed by individuals within the same functional group, an independent audit of the qualification criteria for inspection personnel will be performed prior to implementing such an inspection program.

10.4 Quality Standards Commitment

The Company commits to meeting the programmatic standards for Inspection of NQA-1-1994, Part I, Basic Requirement 10, and Supplement 10S-1 with the alternative regarding independence of Maintenance group inspectors stated above. The inspection programs will also incorporate the appropriate inspection requirements described in Part II, “Quality Assurance Requirements for Nuclear Facility Applications,” of NQA-1-1994. Regarding Subpart 2.4 (ANSI/IEEE Std. 336-1985) and Subpart 2.18 invoked by NQA-1-1994, Part II, any and all references to ANSI/ASME NQA-1, ANSI/ASME NQA-2, and ANSI/ANS-3.2 are changed to mean the appropriate requirements of NQA-1-1994 and this QAPD.

Section 11 Test Control

11.1 General Description

The Company has established and implements programs, procedures, and processes to control tests that assure the nuclear facility structures, systems, and components (items) function satisfactorily in service. The test control programs identify 1) the items to be tested, 2) methods of testing, 3) documentation, and 4) evaluation of test results. The tests are systematic and include, as necessary, proof tests prior to installation, construction tests, preoperational tests, production tests, operational tests, surveillance and inservice tests, and tests following repairs, rework, replacement, preventive maintenance, or modification.

Tests during the preoperational period are conducted to demonstrate that performance of facility systems is in accordance with design intent and that the coordinated operation of the facility as a whole is satisfactory, to the extent feasible. Tests during the initial operational phase are conducted to demonstrate the performance of systems that could not be tested prior to operation and to confirm those physical parameters, hydraulic or mechanical characteristics that need to be known, but which could not be predicted with the required accuracy, and to confirm that behavior conforms to design criteria. The preoperational testing program will demonstrate, as nearly as can be practicably simulated, the overall integrated operation of the plant systems at rated conditions, including simultaneous operation of auxiliary systems. It may be necessary to defer portions of these tests until nuclear heat is available.

The initial start-up test program is planned and scheduled to permit safe fuel loading and start-up; to increase power in safe increments; and to perform major testing at specified power levels. If tests require the variation of operating parameters outside of their normal range, the limits within which such variation is permitted will be prescribed. The scope of the testing demonstrates, insofar as practicable, that the plant is capable of withstanding the design transients and accidents. For new facility construction, the suitability of facility operating procedures is checked to the maximum extent possible during the preoperational and initial start-up test programs.

The tests are performed and results documented in accordance with applicable technical and regulatory requirements including those described in the nuclear facility Technical Specifications and SAR. The test programs ensure appropriate retention of test data in accordance with the records requirements of this QAPD. The personnel performing or evaluating tests are qualified in accordance with the requirements established in Section 2 of this QAPD.

11.2 Test Procedures

Tests are conducted in accordance with approved written procedures or instructions that are based on the applicable design requirements for the structures, systems, and components being tested. Section 5 of this QAPD describes the requirements for test procedures. The procedures include prerequisites and instructions for performing the test that ensure the item is ready for testing,

appropriate test equipment with suitable accuracy is used, and any necessary controlled environmental conditions are established and maintained. The prerequisites are completed prior to commencement of the test or portion of the test where they are applicable. Test procedures also identify acceptance criteria, any required inspection hold or witness points, and provisions for documenting test performance data and review of test results by appropriate management. When acceptance criteria are not met, provisions are made for retest of corrected areas.

11.3 Evaluation of Test Results

The test control programs contain measures for a qualified individual or group to evaluate test results against predetermined acceptance criteria. The acceptance status of the test is documented. Any deficiencies identified by the tests are documented and dispositioned in accordance with procedures.

11.4 Scheduling

Scheduling or similar measures are used to ensure that appropriate tests are performed and evaluated on a timely basis so that the safety of the plant is never dependent on the performance of an untested system. Preoperational tests, including start-up tests following fuel loading, are generally performed sequentially to demonstrate functional adequacy and are scheduled to be performed at the time when plant conditions are appropriate for the test. Surveillance testing and inspections for operating facilities (and required operating items of facilities being decommissioned) are scheduled at prescribed intervals to ensure that items important to safety will continue to operate, keeping parameters within normal bounds, or will act to put the plant in a safe condition if they exceed normal bounds. These intervals are established in facility technical documents.

11.5 Quality Standards Commitment

The Company commits to meeting the programmatic standards for Test Control of NQA-1-1994, Part I, Basic Requirement 11, Supplement 11S-1, and Supplement 11S-2, along with the surveillance and testing requirements described in Part II, “Quality Assurance Requirements for Nuclear Facility Applications,” of NQA-1-1994. Regarding Subpart 2.4 (ANSI/IEEE Std. 336-1985) invoked by NQA-1-1994, Part II, any and all references to ANSI/ASME NQA-1, ANSI/ASME NQA-2, and ANSI/ANS-3.2 are changed to mean the appropriate requirements of NQA-1-1994 and this QAPD.

Section 12 Control of Measuring and Test Equipment

12.1 General Description

The Company has established and implements administrative controls and processes for the calibration, maintenance, and use of measuring and test equipment (including instruments, tools, gauges, fixtures, reference and transfer standards, and non-destructive test equipment). These controls are applicable to those items used in the measurement, inspection, maintenance, and monitoring of structures, systems, and components important to safety. The measuring and test equipment (M&TE) does not include: measuring equipment used for preliminary checks or utility troubleshooting where accuracy is not required, nor rulers, tape measures, levels, and other basic tools where normal commercial practices provide adequate accuracy. Controls for M&TE include selection of equipment; establishing and implementing calibration requirements; documentation and/or markings to trace equipment usage, calibration, and calibration status; handling and storage to maintain accuracy; and measures to address nonconforming or deviating conditions including evaluation, disposition, and retest where indicated. The suppliers of commercial grade calibration services are controlled as described in Section 7.3.

12.2 Installed Instrument and Control Devices

For the operations phase of the facilities, the Company has established and implements procedures for the calibration and adjustment of instrument and control devices installed in the facility. The calibration and adjustment of these devices is accomplished through the facility maintenance programs to ensure the facility is operated within design and technical requirements. Appropriate documentation will be maintained for these devices to indicate the control status, when the next calibration is due, and identify any limitations on use of the device.

12.3 Quality Standards Commitment

The Company commits to meeting the standards for Control of Measuring and Test Equipment of NQA-1-1994, Part I, Basic Requirement 12, Supplement 12S-1, and Part II, and Subpart 2.16 with the following alternatives and clarification:

12.3.1 All references to ANSI/ASME NQA-1, ANSI/ASME NQA-2, and ANSI/ANS-3.2 are changed to indicate the appropriate Sections of ANSI/ASME NQA-1-1994 and this QAPD.

12.3.2 Instrumentation and control devices installed in operating facilities are not required to be labeled as described in Subpart 2.16, subsection 5.5 (ANSI/IEEE Std. 498-1985), provided the information is maintained in suitable documentation traceable to the device. This alternative also applies to the calibration labeling requirement of Subpart 2.4, subsection 7.2.1 (ANSI/IEEE Std. 336-1985).

12.3.3 The out-of-calibration conditions described in paragraph 3.2 of Supplement 12S-1 refers to when the M&TE is found out of the required accuracy limits (i.e. out of tolerance) during calibration.

Section 13 Handling, Storage, and Shipping

13.1 General Description

The Company has established and implements programs, procedures, and processes to control handling, storage, shipping, cleaning, packaging, and preservation of items. The programs delineate controls to prevent damage, loss, and deterioration by environmental conditions (such as temperature or humidity) of material and equipment received for the nuclear facility. The programs also describe the measures taken, including control of shelf life, for the storage of chemicals, reagents, lubricants, and other consumable materials. Suitable procedures, instructions, and procurement documents are used to define the requirements, training, and responsibilities for implementing the programs. The established requirements are consistent with the regulatory positions of the NRC regulatory guides and their related standards listed in Appendix C, or specifications and/or Supplier technical manuals, including special tool utilization and use, operator experience and training, and appropriate marking and labeling.

13.2 Special Handling, Storage, Shipping, Cleaning and Preservation Requirements

Special or additional handling, storage, shipping, cleaning and preservation requirements are identified and implemented as specified in procurement documents and applicable procedures. Where special requirements are specified, the items and containers (where used) are suitably marked.

13.3 Quality Standards Commitment

The Company commits to meeting the standards for handling, storage, and shipping of NQA-1-1994, Part I, Basic Requirement 13, Supplement 13S-1, and Part II, Subpart 2.2, and Subpart 2.15 with the following alternatives:

13.3.1 Regarding Subpart 2.2

13.3.1.1 For items in storage, as determined by facility management the packaging requirements described under Section 3, “Packaging,” may include alternate methods of affording the required protection such as maintaining a storage atmosphere free from harmful contaminants in concentrations that could produce damage to the stored items, or utilizing storage practices that obviate the need for capping all openings.

13.3.1.2 For items in storage at Company facilities, the items and the outside of containers (when present) need to meet the appropriate criteria of subsection 3.9, “Marking,” necessary to ensure the identity of the item, and proper instructions for preservation during storage and future handling are retained.

13.3.1.3 Regarding maintenance of items in storage in accordance with subsection 6.4.2, “Care of Items”: the requirement of item (f) will not apply to rotating electrical equipment less than 50 HP, the requirement of item (g) will not apply to rotating equipment weighing less than 50 pounds, the requirements of (e), (f), and (g) may be exempted for specific items on a case-by-case basis provided that a documented engineering evaluation determines that such care is not required.

13.3.1.4 Subsection 6.6, “Storage Records,” requires written records be prepared containing information on personnel access. As an alternative to this requirement, Company documents establish controls for storage areas that describe those authorized to access areas and the requirements for recording access of personnel. However, these records of access are not considered quality records and will be retained in accordance with the administrative controls for the facility.

13.3.2 Regarding Subpart 2.15

13.3.2.1 The Company may choose to not use the specific classification of Categories A, B, and C, but ensures items to be handled are evaluated and the appropriate range of controls and requirements for the activity are applied consistent with this Subpart.

Section 14 Inspection, Test, and Operating Status

14.1 General Description

The Company has established and implements administrative controls and processes to indicate and document the inspection, test, and operating status of structures, systems, and components to prevent their inadvertent use or the bypassing of inspections and tests. The requirements for identification of status also apply to nonconforming, inoperative, or malfunctioning structures, systems, and components. Company administrative procedures delineate the requirements, methods, and responsibilities for status identification through the use of stickers, tags and tagging systems, test and inspection records, checklists, or logs. The procedures identify 1) those who are authorized to apply and remove the various status tags, stickers, and other indicators and 2) the authority to operate the item and/or equipment. The operating status is also controlled through the normal nuclear facility operating procedures.

The administrative procedures also describe the measures taken to control altering the sequence of required tests, inspections, and other operations. The review and approval for these actions is subject to the same control as taken during the original review and approval of tests, inspections, and other operations.

14.2 Control of Systems and Equipment for Operating Facilities

Permission to release systems and equipment for maintenance or modification is controlled by designated operating personnel and documented. Measures, such as installation of tags or locks and releasing stored energy, are used to ensure personnel and equipment safety. When entry into a closed system is required, the Company has established control measures to prevent entry of extraneous material and to assure that foreign material is removed before the system is re-closed.

Administrative procedures require the designated operating personnel to verify that the system or equipment can be released and determine the length of time it may be out of service. In making this determination, attention is given to the potentially degraded degree of protection where one subsystem of a redundant safety system is not available for service. Conditions to be considered in preparing equipment for maintenance include, for example: shutdown margin; method of emergency core cooling; establishment of a path for decay heat removal; temperature and pressure of the system; valves between work and hazardous material; venting, draining and flushing; entry into closed vessels; hazardous atmospheres; handling hazardous materials; and electrical hazards.

Where temporary modifications, such as temporary bypass lines, electrical jumpers, lifted electrical leads, and temporary trip point settings, are necessary, they are controlled in accordance with approved documents that include requirements for independent verification. A log, or similar documentation, is maintained of the current status of such temporary modifications.

When systems or equipment are ready to be returned to service, designated operating personnel control placing the items in service and document its functional acceptability. Attention is given to restoration of normal conditions, such as removal of jumpers or signals used in maintenance or testing, or actions such as returning valves, breakers or switches to proper start-up or operating positions from “test” or “manual” positions. Where necessary, the equipment placed into service receives additional surveillance during the run-in period.

Independent verifications, where appropriate, are used to ensure that the necessary measures have been implemented correctly. The minimum requirements and standards for using independent verification are established in Company documents.

14.3 Quality Standards Commitment

The Company is committed to implementing a status control program in accordance with the quality standards described in NQA-1-1994, Part I, Basic Requirement 14.

Section 15 Nonconforming Materials, Parts, or Components

15.1 General Description

The Company has established and implements administrative controls and processes that assure control of nonconforming items (materials, parts, components), and services (including computer codes) to prevent their inadvertent use or installation in Company nuclear facilities. Documents describe the methods for identification, documentation, segregation, review, disposition, and notification to affected organizations of nonconforming items or services when the disposition is other than to scrap the items or services. Instructions require that the individual discovering a nonconformance identify, describe, and document the nonconformance. Procedures identify authorized individuals to review, disposition, and closeout nonconformances. Nonconformances are corrected or resolved prior to the initiation of the preoperational test of the item. The Company has appropriate interfaces between the QAP for identification and control of nonconforming materials, parts, or components and the non-QA Reporting Program to satisfy the requirements of 10 CFR 21 during operations.

15.2 Nonconformance Responsibilities

Nonconformances are evaluated for impact on operability of quality structures, systems, and components in accordance with Company procedures to assure that the final condition does not adversely affect safety, operation, or maintenance of the item or service. Nonconforming item reports dispositioned as use-as-is or repair that involve deviation from design requirements are forwarded to the appropriate engineering organization for review and approval of the disposition. Company documents address the controls established to conditionally release nonconforming items for use on a risk basis prior to resolution and disposition of the nonconformance, including maintaining identification of the item and documenting the basis for such release. Conditional release of nonconforming items for installation requires appropriate senior management approval for the facility or construction project. Resolution of nonconformances for purchased services are also controlled by Company documents.

15.3 Nonconformance Documentation

Company procedures assure that documentation identifies the nonconforming item and describes the nonconformance, the disposition of the nonconformance, and applicable inspection requirements. The documentation requires approval of the disposition by an authorized individual. Reworked, repaired, and replacement items are inspected and tested in accordance with the original inspection and test requirements or approved alternatives.

Company processes verify that nonconformance dispositions are adequate, analyze for quality trends, and report results to upper management in accordance with applicable Company

procedures. Any significant trends are reported to upper management in accordance with Company documents, regulatory requirements, and industry standards.

15.4 Quality Standards Commitment

The Company commits to meeting the standards for control of nonconforming items of NQA-1-1994, Part I, Basic Requirement 15 and Supplement 15S-1.

Section 16 Corrective Action

16.1 General Description

The Company has established and implements corrective action programs, procedures, and processes to assure that conditions adverse to quality at Company nuclear facilities are promptly identified and corrected. Company management at all levels fosters a no-fault attitude toward the identification of problems. Verification of the proper implementation of corrective action measures and close-out of corrective action documentation is assured through the monitoring effort of facility personnel and Nuclear Oversight processes. Reports of conditions adverse to quality are analyzed to identify trends. The Company has appropriate interfaces between the QAP for identification and control of nonconforming materials, parts, or components and the non-QA Reporting Program to satisfy the requirements of 10 CFR 21 during operations.

16.2 Corrective Action Documentation

Company procedures assure that corrective action is documented and initiated following the determination of a condition adverse to quality (such as a nonconformance, failure, malfunction, deficiency, deviation, adverse trend, and defective material and equipment) in accordance with regulatory guidance and industry quality standards. When complex issues arise where it cannot be readily determined if a condition adverse to quality exists, Company documents establish the requirements for documentation and timely evaluation of the issue.

In the case of significant conditions adverse to quality, the cause of the condition is determined and corrective action taken to preclude repetition. For these significant conditions, the cause of the conditions, and the corrective action taken to preclude repetition are documented and reported to immediate management and upper levels of responsible management for review and assessment.

16.3 Follow-up

Company corrective action procedures describe the methods for follow-up action to verify proper implementation of corrective action and ensure that the corrective actions are closed out in a timely manner, and include follow-up through Nuclear Oversight processes. Independent review of corrective action is conducted in accordance with the requirements of Appendix B of this QAPD.

16.4 Quality Standards Commitment

The Company commits to meeting the standards for corrective action of NQA-1-1994, Part I, Basic Requirement 16.

Section 17 Quality Assurance Records

17.1 General Description

The Company has established and implements administrative controls and processes to ensure sufficient records of items and activities for the nuclear facilities that reflect completed work are generated, identified, retained, maintained, and retrievable. Company programs and procedures identify specific records, their retention periods, and storage methods.

17.2 Records of Activities

Company documents ensure records of activities for design, engineering, procurement, manufacturing, construction, inspection and test, installation, pre-operation, startup, operations, maintenance, modification, decommissioning, and audits include the appropriate content requirements of NQA-1-1994, Parts I and II. The records and their retention times are based on Regulatory Position C.2, Table 1, of NRC Regulatory Guide 1.28, Revision 3 that is incorporated into Appendix E of this QAPD with the exception that the security plan, procedures, and activities and emergency plan, procedures, and activities are not considered QA records and their retention is controlled under their applicable regulations. The Regulatory Guide table, as amended by approved exceptions, as included in Appendix E to this QAPD, addresses design, construction and initial start-up records and will be applied to operating and decommissioning phase records that are similar in nature to the construction records. Additional operations phase records and their retention periods are also identified in Appendix E to this QAPD. Where State, local or other agencies have more restrictive requirements, those requirements will be met.

17.3 Record Storage

Implementing procedures assure that identification and retrievability of records is facilitated through proper indices and an established basic filing system. Records are stored in a manner to preclude deterioration of the item. The Company's records storage facilities are constructed, located, and secured to provide access control and fire protection measures.

Records stored electronically will follow the guidance given in the Nuclear Information and Records Management Association (NIRMA) technical guidelines: TG-11-2011, Authentication of Records and Media; TG-15-2011, Management of Electronic Records; TG-16-2011, Software Quality Assurance Documentation and Records; and TG-21-2011, Required Records Protection, Disaster Recovery and Business Continuation. Electronic media may include optical disk, magnetic tape, network drive array, etc. Information Technology will determine appropriate media based upon data format and level of access required. Records originally created in hard-copy form will be retained in hard copy until such time as electronic versions of these records are created, copied, and verified as legible on two (2) independent copies of an appropriate electronic storage media. File legibility verifications will be completed on all records stored on electronic storage media by either visually

verifying the file legibility or by electronically verifying exact binary file transfer. Periodic documented media inspections to monitor image degradation will be conducted in accordance with approved procedures that incorporate NIRMA guidelines or the applicable media manufacturer's recommendations. Records stored on electronic media will be refreshed or copied onto new media and subsequently verified if the projected lifetime of that media does not exceed the retention period of the records stored on that media.

Records originally created in electronic form may be retained in electronic form. Backup copies of electronic records will be maintained in multiple physically independent electronic locations until such time as images of these records are created, copied, and verified on two (2) copies of an appropriate electronic storage media. The two copies of electronic storage media will then be stored in separate physical locations.

17.4 Quality Standards Commitment

The Company is committed to implementing a quality assurance records program in accordance with the quality standards described in NQA-1-1994, Part I, Basic Requirement 17 and Supplement 17S-1 with the alternative that where subsection 4.2(b) of Supplement 17S-1 requires records to be firmly attached in binders or placed in folders or envelopes for storage, the hard-copy records may use methods other than binders, folders, or envelopes to organize the records for storage.

The Company will meet the NRC Regulatory Position C.2 of Regulatory Guide 1.28, Revision 3, August 1985 except that: (1) the reference to ASME NQA-1 will be to the 1994 edition; and (2) Security plan, procedures, and activities records, and emergency plan, procedures, and activity records (Table 1, Section 4.6 General) will be retained in accordance the applicable security or emergency planning regulations and orders of the NRC. The Company will also meet the NIRMA Guidelines identified in subsection 17.3.

Section 18 Quality Assurance Audits

18.1 General Description

The Company has established and implements administrative controls and processes for audits to systematically verify compliance with and determine the effectiveness of all aspects of the QA program for the Company's nuclear facilities. Nuclear Oversight conducts, participates on, or has performed for them, audits to ensure comprehensive independent verification and evaluation of Suppliers, activities, and documents. The audits are performed in accordance with written procedures or checklists and are conducted by appropriately trained personnel having no direct responsibilities in the areas being audited.

An audit schedule is prepared to identify the planned and periodic audits to be performed, their frequencies, and dates for performance. Audits are scheduled based upon the status and safety importance of the activities being performed and are initiated early enough to assure effective QA during design, construction, operation, and decommissioning. When necessary, the scheduled audits are supplemented with audits of specific subjects to ensure adequate coverage or re-audit of deficient areas.

18.2 Audit Scope

The audits include an objective evaluation of quality-related practices, procedures, instructions, activities, and items; and review of documents and records. Audits are performed in all areas where the requirements of this QAPD are applicable including activities associated with indoctrination and training programs; interface control between the Company and principal Suppliers; corrective action, calibration, and nonconformance control systems; facility SAR commitments; and activities associated with computer codes. For facilities under construction, the audits will also include, as applicable, the determination of site features which affect plant safety (e.g., core sampling, site and foundation preparation, and methodology) and the preparation, review, approval, and control of early procurements.

18.3 Audit Responsibilities and Procedures

Audit data is analyzed by the audit team. The results of the analysis are reviewed by Nuclear Oversight management. Audit reports indicate any quality problems identified, the effectiveness of the QA program elements assessed, and identify the deficiencies that require follow-up of corrective actions. The reports are distributed to affected management for review. Management with responsibility for the area audited review, investigate, and correct (with a view toward preventing recurrence) conditions adverse to quality that involve QA program deficiencies. Follow-up of audit findings involving program deficiencies is performed by Nuclear Oversight as necessary to verify appropriate actions have been taken to resolve audit findings.

Items not effectively resolved by assigned management are submitted to the senior management position responsible for Nuclear Oversight for resolution with successively higher levels of Company or Supplier executive management, as applicable.

18.4 Supplier Quality Assurance

Company documents ensure that 1) triennial external audits, 2) annual Supplier QA program evaluations, 3) reviews of audits conducted by external organizations (e.g., other utilities and NUPIC), and 4) maintenance of the approved Suppliers list are performed to assure Suppliers' quality programs meet applicable requirements and that only qualified Suppliers are used.If a subsequent contract or a contract modification significantly enlarges the scope of, or changes the methods or controls for activities performed by the same supplier, an audit of the modified requirements is conducted, thus starting a new triennial audit period. The results of audits and annual evaluations that are performed for qualified suppliers are promptly considered for effect on a supplier's continued qualification and adjustments are made as necessary (including corrective actions, adjustments of supplier audit plans, and input to third party auditing entities, as warranted). In addition, results are reviewed periodically to determine if, as a whole, they constitute a significant condition adverse to quality requiring additional action.

18.5 Internal Audits

During the design, construction, and decommissioning phases of a facility, internal audits are performed of selected activities at appropriate times commensurate with scheduled activities to assure timely and effective implementation of QA requirements. During the operations phase and periods of prolonged lay-up for facilities awaiting final decommissioning, audits are performed at a frequency commensurate with the safety significance of the activities and in such a manner to assure audits of all applicable QA program elements are completed within a period of three years. Audit schedules shall be based on the month in which the audit starts. An interval extension grace period of up to 25% may be used for the scheduled commencement date when conditions, such as plant operational considerations or to accommodate performance-based observations of activities related to the audit area make meeting the specified schedule date impractical. When an audit interval extension greater than one month is used, the next audit for that area will be scheduled from the original anniversary month rather than from the month of the extended audit. An evaluation is performed once per calendar year to determine the need for additional audit activities based on internal and external data, and the impact of any functional area changes in responsibility, resources, and management. Functional area audits and evaluations are to be scheduled and separated into three cycles covering a period of 36 months. Each cycle includes a set of audits and an evaluation. Results of audits and evaluations will determine if additional audit activities will be performed prior to the next scheduled audit. These audits will include, as a minimum, activities in the following areas:

1. The conformance of facility operation to provisions contained within the Technical Specifications and applicable license conditions including administrative controls.

2. The performance, training, and qualifications of the facility staff.

3. The performance of activities required by the QAPD to meet the criteria of 10 CFR 50, Appendix B (includes activities performed under the Appendix B QA program to meet 10 CFR Part 71, Subpart H, and 10 CFR Part 72, Subpart G).

4. The Fire Protection Program and implementing procedures. A fire protection equipment and program implementation inspection and audit utilizing either a qualified offsite licensed fire protection engineer or an outside qualified fire protection consultant.

5. Other activities and documents considered appropriate by the Management Safety Review Committee (MSRC) or the CNO.

Audits may also be used to meet the periodic review requirements of the code for the Security, Emergency Preparedness, Fitness for Duty (10 CFR Part 26) and Radiological Protection programs within the provisions of the applicable code.

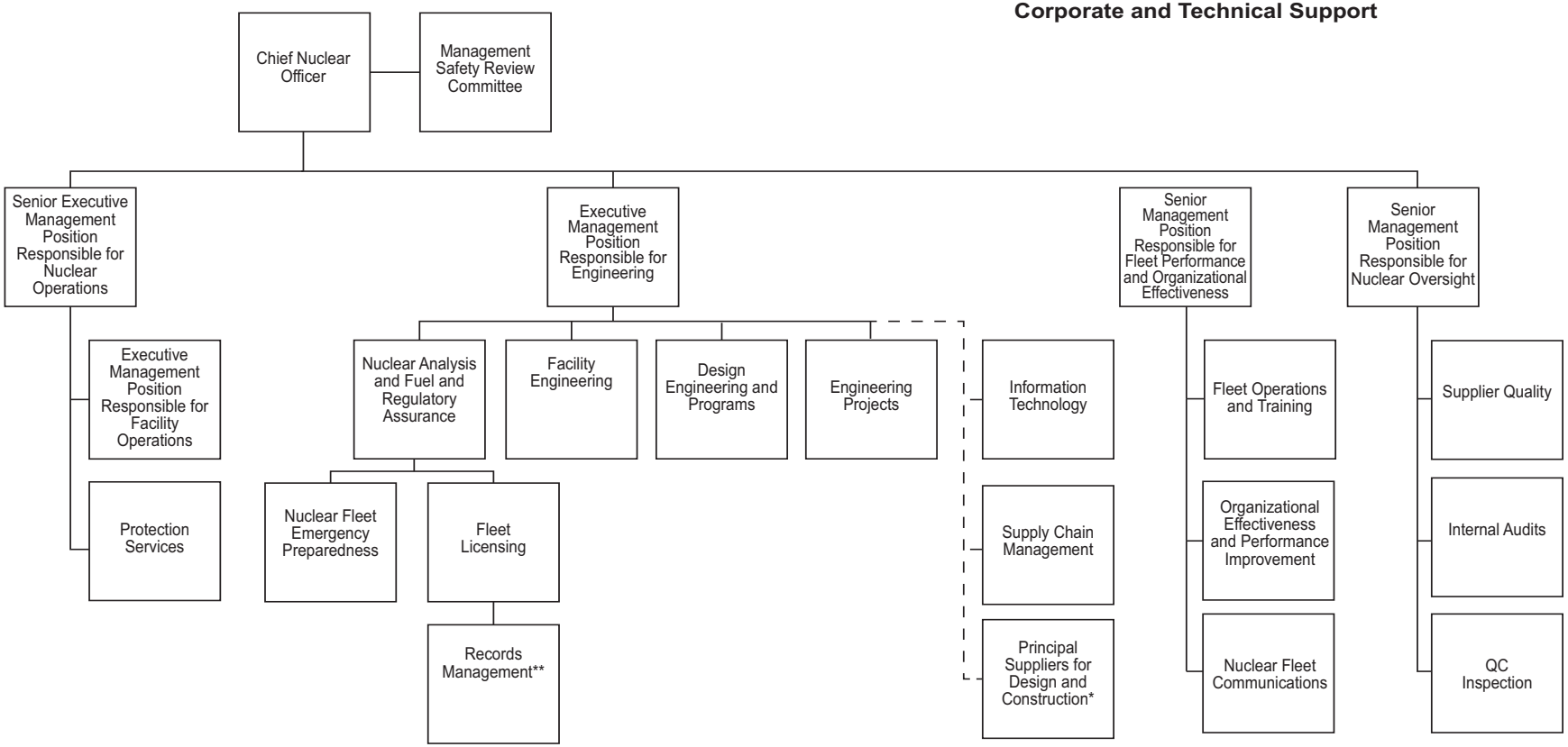
Internal audits include verification of compliance and effectiveness of the administrative controls established for implementing the requirements of this QAPD; regulations and license provisions; provisions for training, retraining, qualification, and performance of personnel performing activities covered by this QAPD; corrective actions taken following abnormal occurrences; and, observation of the performance of construction, fabrication, operating, refueling, maintenance, modification, and decommissioning activities.

18.6 Quality Standards Commitment

The Company is committed to implementing an audit program in accordance with the quality standards described in NQA-1-1994, Part I, Basic Requirement 18 and Supplement 18S-1.

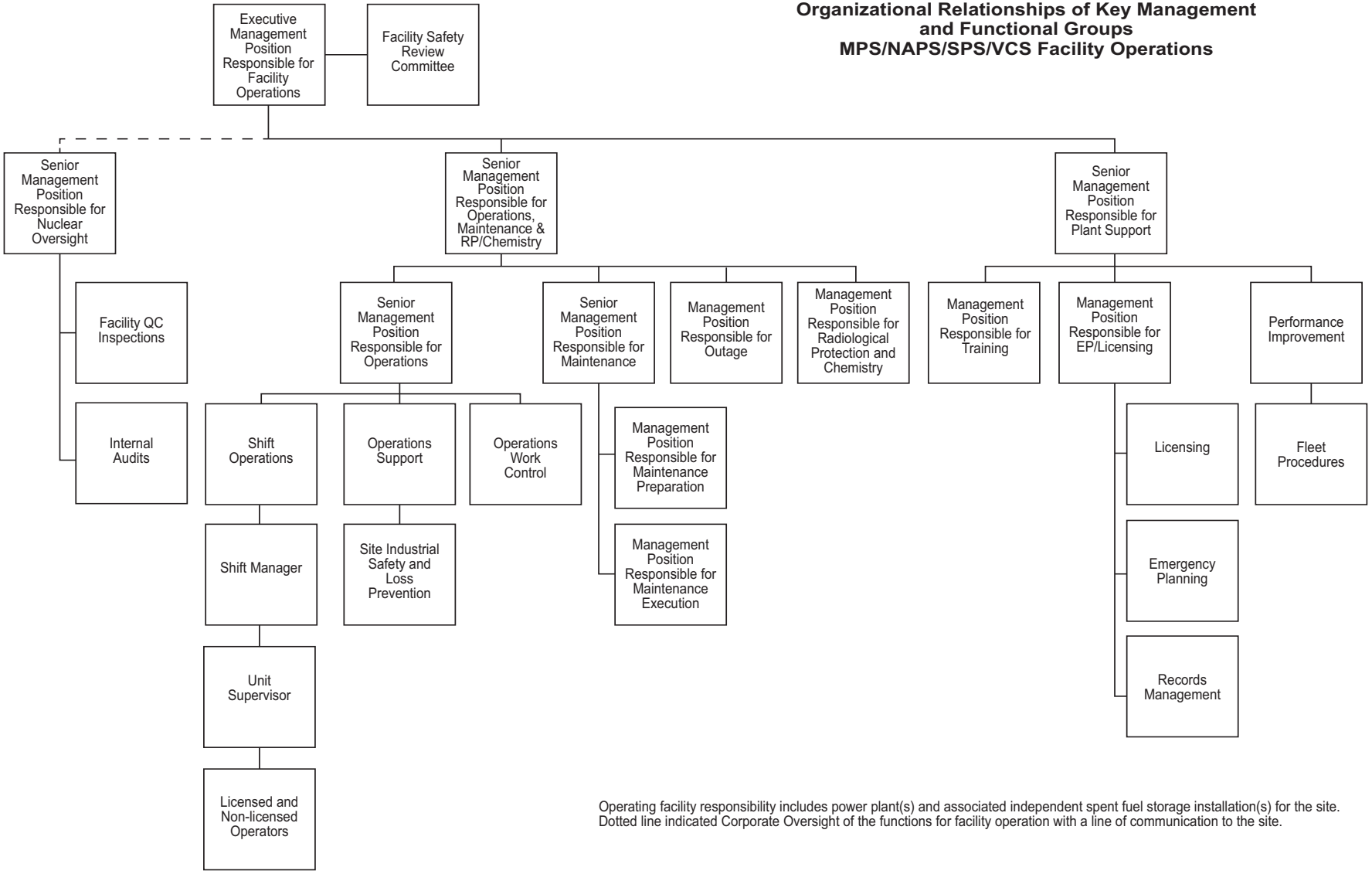
Appendix A Organizational Relationships of Key Management and Functional Groups

Appendix A
Organizational Relationships of Key Management and Functional Groups
Corporate and Technical Support



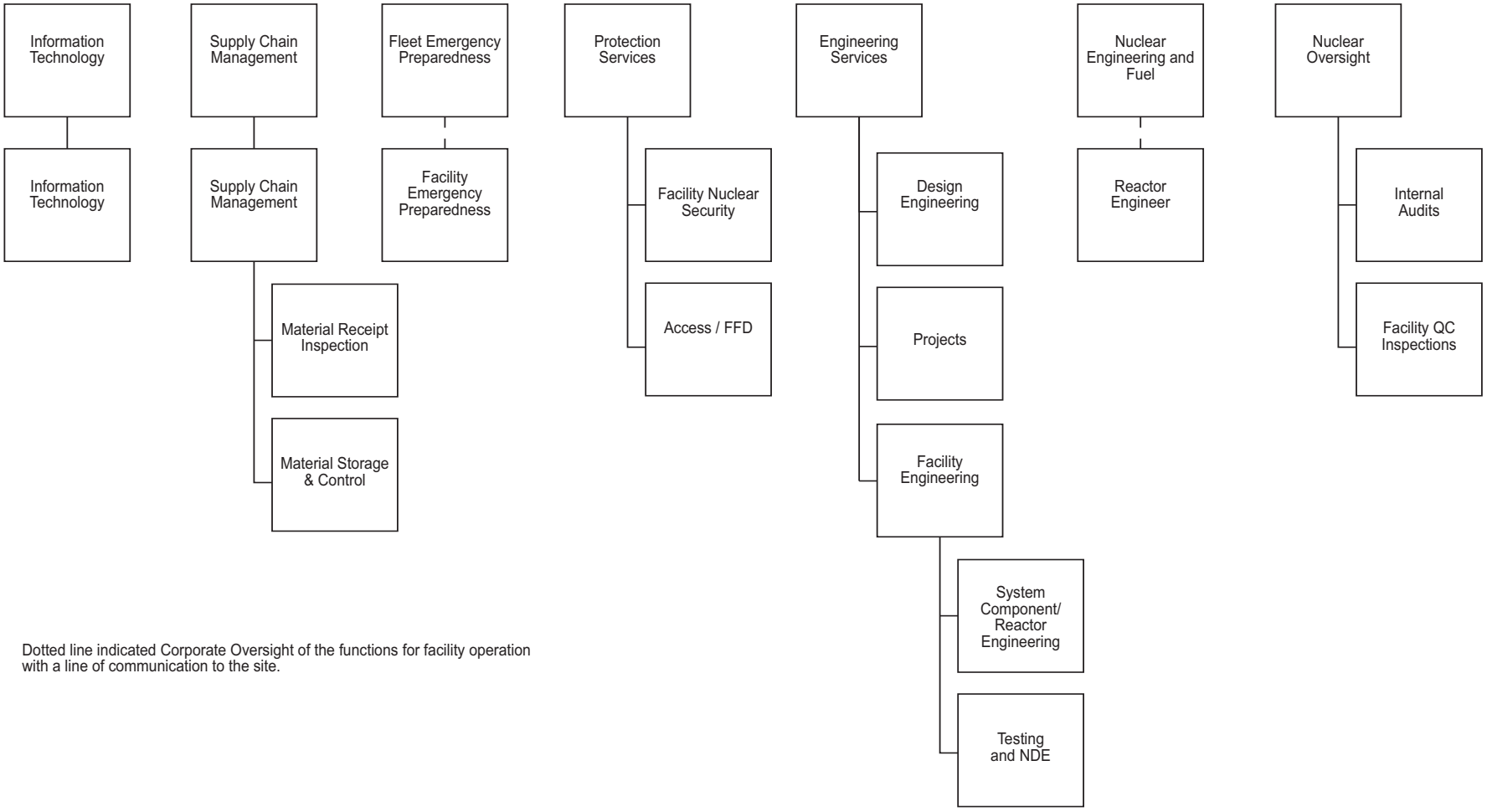
* When Principal Suppliers are used.
** Includes Document Control and records management functions.
Dotted lines represent matrixed relationships from outside Dominion Energy's Nuclear group.

Appendix A
Organizational Relationships of Key Management and Functional Groups
MPS/NAPS/SPS/VCS Facility Operations



Operating facility responsibility includes power plant(s) and associated independent spent fuel storage installation(s) for the site.
Dotted line indicated Corporate Oversight of the functions for facility operation with a line of communication to the site.

Appendix A
Organizational Relationships of Key Management and Functional Groups
Facility Operating Staff Reporting to Support Groups



Dotted line indicated Corporate Oversight of the functions for facility operation with a line of communication to the site.

Appendix B Management and Independent Review Activities

Management and Independent Review Activities

1. General

The Company ensures operational phase and decommissioning phase activities of the facilities are independently reviewed on a periodic basis. The purpose of these reviews is to: 1) verify that operational phase activities are performed in accordance with this QAPD and Company administrative controls, procedures, and license provisions; 2) review significant proposed plant changes, tests, and procedures; 3) verify that events that are reportable to the NRC are promptly investigated and corrected so as to reduce the probability of recurrence; and 4) detect trends that may not be apparent to a day-to-day observer.

These review functions are performed through a combination of safety review committees, a safety review group, integrated review activities, and internal audits, as applicable. This Appendix describes the review program implemented by the committees, the integrated review activities, and a safety review group, as applicable. The internal audit program is addressed in Section 18 of this QAPD. The review programs of this appendix ensure that the personnel performing this review collectively have the experience and competence necessary to review problems in the following areas:

1. Nuclear power plant operations
2. Nuclear engineering
3. Chemistry and radiochemistry
4. Metallurgy
5. Nondestructive testing
6. Radiological safety
7. Mechanical engineering
8. Electrical engineering
9. Instrumentation and control
10. Administrative controls and quality assurance practices
11. Training
12. Emergency plans and related procedures and equipment

An individual may possess competence in more than one specialty area. The established administrative controls contain provisions to assure the appropriate expertise is applied to the independent reviews, including the use of consultants when necessary.

2. Qualifications

Personnel performing the independent review functions meet the qualification requirements of ANSI/ANS-3.1-2014, subsection 4.7, and this QAPD. Independent review personnel shall also complete the required qualification training for the function they are performing.

3. Management Safety Review Committee (MSRC)

The MSRC shall ensure periodic independent reviews and audits of activities are conducted by qualified individuals free from the pressures of plant operations. For new nuclear power plant construction, the MSRC shall be functional at least one year prior to initial core loading. The MSRC serves in an advisory capacity to the CNO.

3.1 Review Responsibilities

The MSRC shall ensure periodic independent reviews and audits of activities as stated in this QAPD are performed. Review of events shall include the results of any investigations made and the recommendations resulting from such investigations to prevent or reduce the probability of recurrence of the event. Additional review activities by the MSRC should be performed to verify adequate organizational response to adverse performance trends.

The MSRC should monitor the results of audits, evaluations, and assessment activities to ensure that items that could affect plant safety are reviewed. The MSRC may delegate review functions to subcommittees, that may include MSRC members, provided that the subcommittees report the results of their reviews to the MSRC.

3.2 Composition

The MSRC shall be composed of the Chairperson and a minimum of four members, of whom no more than a minority are members of the plant operating organization. The CNO shall appoint, in writing, a Chairperson. The Chairperson shall appoint, in writing, a minimum of four members to the MSRC and shall designate from this membership, in writing, a Vice Chairperson. Consultants should be utilized as determined by the MSRC Chairperson to provide expert advice to the MSRC.

3.3 Alternates

Alternates shall be designated in advance, but their use shall be restricted to legitimate absences of principals.

3.4 Meeting Frequency

The MSRC shall meet at least once per six months. During initial operation of a newly constructed power plant the meeting frequency shall be at least once per calendar quarter.

3.5 Quorum

The quorum of the MSRC shall consist of a majority of regular members including the Chairperson or Vice Chairperson. No more than a minority of the quorum shall have line responsibility for operation of a Company nuclear facility.

3.6 Records

Minutes of all MSRC meetings shall be prepared and retained. All documents reviewed should be identified. Decisions and recommendations made by the MSRC shall be documented. Minutes of each MSRC meeting shall be disseminated promptly to appropriate members of management having responsibility in the area reviewed. Records of meeting minutes shall be retained in accordance with Section 17 of this QAPD.

4. Facility Safety Review Committee

The facility safety review committee serves in an advisory capacity to the executive management position responsible for facility operations on all matters related to nuclear safety for their assigned Company facilities.

4.1 Composition

The facility safety review committee shall be composed of a minimum of five members. The executive management position responsible for facility operations shall appoint, in writing, the members of facility safety review committee, including the facility safety review committee Chairperson and the Vice Chairperson drawn from the committee members.

4.2 Alternates

Alternate members shall be appointed in writing by the facility safety review committee Chairperson to serve on a temporary basis. Each alternate shall meet the minimum qualifications described above for facility safety review committee members, and shall have the same area of expertise as the member being replaced.

4.3 Meeting Frequency

The facility safety review committee shall meet at least once per calendar month and as convened by the facility safety review committee Chairperson.

4.4 Quorum

A quorum of the facility safety review committee shall consist of the Chairperson or Vice Chairperson and two members or designated alternates. However, a maximum of one third of the voting membership may be designated alternates.

For any facility safety review committee decision affecting site-wide issues, the Chairperson shall ensure appropriate representation.

4.5 Responsibilities

The facility safety review committee shall be responsible for:

1. Review of 1) all procedures and programs required by facility Technical Specifications administrative controls and changes thereto that require a regulatory evaluation under the facility's 10 CFR 50.59 and 10 CFR 72.48 screening program, 2) changes to the quality program determined to be reductions in the commitment to quality under the provisions of 10 CFR 50.54(a), 3) any other proposed procedures, programs, or changes thereto affecting facility nuclear safety as determined by the executive management position responsible for facility operations.
2. Review of all proposed changes to nuclear facility Technical Specifications.
3. Review of all proposed tests and experiments not described in the FSAR that affect nuclear safety.
4. Review of all proposed changes or modifications to systems or equipment that affect nuclear safety.
5. Rendering determinations in writing or meeting minutes if any item considered under 1. through 4. above, as appropriate and as provided by 10 CFR 50.59, 10 CFR 50.92, or 10 CFR 72.48 requires a license amendment or requires a significant hazards consideration determination.
6. Performance of special reviews and investigations and reports as requested by the Chairperson of the facility safety review committee or the executive management position responsible for facility operations.
7. Investigations of all violations of Technical Specifications, including the preparation and forwarding of reports covering evaluation and recommendations to prevent recurrence, to the executive management position responsible for facility operations, the CNO, and to the Chairperson of the MSRC.
8. Review of all nuclear facility reportable events.
9. Review of facility operations to detect potential safety hazards.

10. Review of Millstone Unit 3 Turbine Overspeed Protection Maintenance and Testing Program and revisions thereto, where applicable. (MPS committee only, based on regulatory commitment.)

4.6 Authority

The facility safety review committee shall:

1. Recommend to the executive management position responsible for facility operations written approval or disapproval in meeting minutes of items considered under Responsibilities 1. through 10. above. The executive management position responsible for facility operations will report any issues that require higher level of authority to the CNO.
2. Provide written notification within 24 hours to the CNO, and the Chairperson of the MSRC of disagreement between the facility safety review committee and the executive management position responsible for facility operations. The CNO shall have responsibility for resolution of such disagreement.

4.7 Records

The facility safety review committee shall maintain written minutes of each meeting and copies shall be provided to the executive management position responsible for facility operations, the CNO and the facility safety review committee. Records of the minutes shall be maintained in accordance with this QAPD, Section 17.

5. Independent Nuclear Safety Review

5.1 Independent nuclear safety review functions[1] are performed for Company nuclear facilities through integrated review activities that support safe operations. The functions of examining unit operating characteristics, NRC issuances, industry advisories, Licensee Event Reports, and other sources that may indicate areas for improving unit safety are accomplished by groups designated to perform the reviews. These groups shall maintain independence from the groups directly responsible for operating the power stations. Personnel selected to perform these functions shall have appropriate training and qualification for the tasks they will perform.

The following integrated activities are acceptable to meet the independent nuclear safety review requirements:

1. These groups perform the reviews to meet the guidelines of NUREG-0737, Section I.B.1.2 for the Independent Safety Engineering Group for MPS, NAPS, and VCS.

1. Corrective Action and Operating Experience Programs – Managed by the Plant Support group to ensure review of NRC and industry issuances, significant events and other operating experience.
2. Performance monitoring of key structures, systems, and components – Performed through engineering services groups using the programs that implement the Maintenance Rule of 10 CFR 50.65, as well as system and component health reports.
3. Technical reviews – Performed through engineering services groups using appropriate procedures to address technical operability functions, and changes that affect the station design basis.

Reports and recommendations developed through the above activities shall be made available to appropriate levels of management responsible for the facility's operation.

Appendix C Regulatory Guides and Quality Standards Commitments

Regulatory Guides and Quality Standards Commitments

Through this QAPD, the Company commits to compliance with the regulatory guidance and industry standards governing quality assurance as described below along with any exceptions, alternatives, or clarifications described within this QAPD. Commitment to a particular Regulatory Guide or industry standard does not constitute commitment to Regulatory Guides or other standards that may be referenced therein; unless otherwise stated within this QAPD, those referenced documents are considered as guidance. When applicable, for Class 1, 2, and 3 items covered by Section III of the ASME Boiler and Pressure Vessel Code, the code Quality Assurance requirements are supplemented by the guidance of applicable regulatory guides and this QAPD.

1. Regulatory Guide 1.8, Revision 4

Qualification and Training of Personnel for Nuclear Power Plants

This Regulatory Guide endorses ANSI/ANS-3.1-2014, *Selection, Qualification, and Training of Personnel for Nuclear Power Plants*. Where this edition of the Regulatory Guide and ANSI standard are invoked by this QAPD, the Company will implement the requirements and guidance of the standard and Regulatory Guide subject to the following alternatives:

1. ANSI/ANS-3.1-2014 Subsection 4.2.2 for Operations (manager) Special Requirements states that if the operations manager does not hold a senior operator's license, then the operations middle manager (sec.4.3.6) shall hold a senior operator's license. The following alternative to this requirement will be applied to North Anna, Surry, and Millstone as noted below:

   The individual filling the role of operations manager and the individual filling the role of operations middle manager (supervisor shift operations) will meet the license requirements of North Anna Units 1 and 2 Technical Specification 5.2.2.e, Surry Units 1 and 2 Technical Specification 6.1.2.2.d, Millstone Unit 2 Technical Specification 6.3.2, and Millstone Unit 3 Technical Specification 6.3.2, as applicable.

2. ANSI/ANS-3.1-2014 addresses endorsement of ANSI/ASME NQA-1-2008 and NQA-1a-2009[2] for education, experience, and special requirements for qualification of Quality Control (4.5.5) and Quality Assurance (4.5.6) personnel. The following alternative standard will be used for the qualification of these personnel:

   References to ANSI/ASME NQA-1-2008 and NQA-1a 2009[2] associated Supplements and Appendices are replaced with references to ANSI/ASME NQA-1-1994 and its associated Supplements and Appendices.

2. Regulatory Guide 1.26, Revision 3, February 1976

Quality Group Classifications and Standards for Water-, Steam-, and Radioactive Waste-Containing Components of Nuclear Power Plants

The commitment to this Guide (including revision/date) is site specific as described in the approved SAR or License for each Company nuclear facility. Where items do not conform to the requirements of the Guide they are addressed in the applicable facility's SAR. The quality group classification systems used for the facilities conforms with the requirements of this Regulatory Guide with the following alternative:

The Company does not use the specific A, B, C, and D quality groups set forth in this guide. However, the Company met the intent of this guide in developing the list of SSCs and the corresponding association to quality standards. The specific items the QA program applies to are described in detail in the lists maintained by the Nuclear Engineering group.

3. Regulatory Guide 1.28, Revision 3, August 1985

Quality Assurance Program Requirements (Design and Construction)

This Regulatory Guide addresses requirements for assuring quality during the design and construction phases of nuclear power plants. The Company will implement the requirements and guidance of the standard and Regulatory Guide during the design and construction phases of the facilities subject to the following alternatives:

1. Part C, Regulatory Position of this Regulatory Guide endorses the basic and supplementary requirements of ANSI/ASME NQA-1-1983 and the ANSI/ASME NQA-1a-1983 Addenda for the establishment and execution of quality assurance programs during the design and construction phases of nuclear power plants.

   In place of the specific edition and addenda of NQA-1 addressed in the Regulatory Guide, the Company commits to implement the requirements of the 1994 Edition. The Company's commitment to these requirements and any alternatives to the requirements are addressed below.

2. Regulatory Position 3.2 establishes external auditing requirements that are acceptable to the NRC during the design and construction phases.

   The guidance provided regarding external audits will also be implemented during the operational phase.

3. Table 1 of the Regulatory Guide identifies record types and their retention periods for construction, pre-operational, and startup activities. During the operations phase, records similar to those identified in this Table will also be retained as designated in the Table. An alternative is applied where, in place of Table 1, Section 4.6 requirements for (1) security

plans, procedures, and activities records, and (2) emergency plans, procedures, and activities records being retained as lifetime QA records, the records will be retained as required by the applicable regulations. A further alternative is applied for the records of tests and experiments and/or changes to procedures along with their associated reviews pursuant to 10 CFR 50.59/72.48 such that they are retained as required by the applicable regulation. Note that the Regulatory Guide table is copied into Appendix E of this QAPD and modified consistent with these exceptions.

4. Regulatory Guide 1.28, Revision 4, June 2010

Quality Assurance Program Criteria (Design and Construction)

The Company's V. C. Summer facility commits to Revision 4, June 2010, of this Regulatory Guide for the design and fabrication of the Replacement Reactor Vessel Closure Head. The Replacement Reactor Vessel Closure Head design and fabrication was performed in accordance with Design Specifications prepared and maintained by Westinghouse.

5. ANSI/ASME NQA-1-1994

Quality Assurance Requirements for Nuclear Facility Applications

The Company's quality assurance program will implement the basic and supplementary requirements of Part I and the requirements of Part II to the 1994 edition of NQA-1 subject to the alternatives, exceptions, and clarifications addressed below:

1. The Introduction to Part I of NQA-1, Section 4, and certain Subparts to Part II of NQA-1, define terms to be used with the quality assurance requirements.

Additional definitions applicable to implementation of the Company's Quality Assurance Program are contained in Appendix D to this QAPD.

2. Supplement 2S-1, *Supplementary Requirements for the Qualification of Inspection and Test Personnel* will include use of the guidance provided in Appendix 2A-1 the same as if it were a part of the Supplement. The following two alternatives may be applied to the implementation of the requirements of this Supplement and Appendix:

   (1) In lieu of being certified as Level I, II, or III in accordance with NQA-1-1994, personnel performing operations phase independent quality verification inspections, examinations, measurements, or tests of material, products, or activities will be required to possess qualifications equal to or better than those required for performing the task being verified; and the verification is within the skills of these personnel and/or is addressed by procedures. These individuals will not be responsible for the planning of quality verification inspections and tests (i.e., establishing hold points and

acceptance criteria in procedures, and determining who will be responsible for performing the inspections), evaluating inspection training programs, nor certifying inspection personnel.

(2) A qualified engineer may be used to plan inspections, evaluate the capabilities of an inspector, or evaluate the training program for inspectors. For the purposes of these functions, a qualified engineer is one who has a baccalaureate in engineering in a discipline related to the inspection activity (such as, electrical, mechanical, civil) and has a minimum of five years engineering work experience with at least two years of this experience related to nuclear facilities.

3. Supplement 2S-2, *Supplementary Requirements for the Qualification of Nondestructive Examination Personnel*, Subsection 2.1 requires application of Recommended Practice SNT-TC-1A, June 1980 Edition to NDE personnel.

   The Company will implement the qualification program required by this supplement in accordance with the applicable standard for the facility's commitment to the ASME code or other applicable code governing the activity.

4. Supplement 4S-1, *Supplementary Requirements for Procurement Document Control*, subsection 2.3 requires that the Supplier have a documented quality assurance program. This statement is clarified in that procurement documents may allow the Supplier to work under the Dominion Energy QA program.

5. Supplement 7S-1, *Supplementary Requirements for Control of Purchased Items and Services,* requirements will be incorporated into the Company program subject to the following exception and alternatives:

   Exception

   Dominion Energy considers that other 10 CFR 50 licensees, Authorized Nuclear Inspection Agencies, National Institute of Standards and Technology, or other State and Federal agencies which may provide items or services to the Company facilities are not required to be evaluated or audited.

   Alternative

   Commercial-grade calibration and/or testing services may be procured from commercial laboratories based on the laboratory's accreditation to ISO/IEC-17025 by an Accreditation Body (AB) which is a signatory to the International Laboratory Accreditation and Cooperation (ILAC) Mutual Recognition Arrangement (MRA) provided all of the following are met:

(1) A documented review of the supplier's accreditation is performed and includes a verification of the following:

a. The calibration or test laboratory holds accreditation by an accrediting body recognized by the ILAC MRA. The accreditation encompasses ISO/IEC-17025:2017, “General Requirements for the Competence of Testing and Calibration Laboratories.”

b. For procurement of calibration services, the published scope of accreditation for the calibration laboratory covers the needed measurement parameters, ranges, and uncertainties.

c. For procurement of testing services, the published scope of accreditation for the test laboratory covers the needed testing services including test methodology and tolerances/uncertainty.

d. The laboratory has achieved accreditation based on an on-site accreditation assessment by the selected AB within the past 48 months. The laboratory's accreditation cannot be based on two consecutive remote accreditation assessments.

(2) The purchase documents require that:

a. The service must be provided in accordance with their accredited ISO/IEC-17025:2017 program and scope of accreditation.

b. For calibration services, as-found calibration data must be reported in the certificate of calibration when calibrated items are found to be out-of-tolerance.

c. For calibration services, the equipment/standards used to perform the calibration must be identified in the certificate of calibration.

d. The customer must be notified of any condition that adversely impacts the laboratory's ability to maintain the scope of accreditation.

e. The laboratory performing the calibration and/or testing services shall not subcontract the service to any other supplier.

f. Performance of the services listed on this purchase order is contingent on the laboratory’s accreditation having been achieved through an on-site accreditation assessment by the Accreditation Body (AB) within the past 48 months.

g. Any additional technical and quality requirements, as necessary, based upon a review of the procured scope of services, which may include, but are not necessarily limited to, tolerances, accuracies, ranges, and industry standards.

(3) It is validated, at receipt inspection, that the laboratory's documentation certifies that:

a. The contracted calibration or test service has been performed in accordance with their ISO/IEC-17025:2017 program and has been performed within their scope of accreditation, and

b. The purchase order's requirements are met.

NOTE: The ILAC accreditation process cannot be used as part of the commercial-grade dedication process of nondestructive examination (NDE) or nondestructive testing (NDT) services in lieu of performing a commercial-grade survey. This is applicable to both American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code and non-ASME B&PV Code safety-related applications.

Alternative - Section 10, “Commercial Grade Items”

Controls for commercial grade items are established in Company documents using the guidance of:

- “NRC Regulatory Guide 1.164, Rev. 0, June 2017, “Dedication of Commercial-Grade Items for Use in Nuclear Power Plants,” with the identified exceptions and clarifications to the use of EPRI 3002002982.
- “EPRI 3002002982, September 2014, “Plant Engineering: Guideline for the Acceptance of Commercial-Grade Items in Nuclear Safety-Related Applications, Revision 1 to EPRI NP-5652 and TR-102260.”

Alternative - Section 8, “Acceptance of Item or Service,” and Section 10, “Commercial Grade Items”

Remote source verification (vendor surveillance, inspection, and audit) using live audio/video technology is used as an alternate method to source verification activities supporting commercial grade dedication or other acceptance process when exigent conditions such as a pandemic or similar state of emergency declarations exist that restricts access or travel to and/or from vendor locations affected by the declaration. Controls are established in Company documents using the guidance of:

- EPRI 3002019436-A, “Remote Source Inspection During a Pandemic or Similar State of Emergency: Screen Criteria and Process Guidance,” Final Report with Safety Evaluation.

6. Supplement 10S-1, *Supplementary Requirements for Inspection*, Subsection 3.1 addresses reporting independence and requires that inspection personnel shall not report directly to the immediate supervisors who are responsible for performing the work being inspected.

   Where quality verification inspections at operating facilities are performed by the Maintenance group, to meet the independence requirements of NQA-1, Supplement 10S-1, Section 3.1, the inspectors report to the Facility Safety and Licensing management (VA) or the Nuclear Oversight management (MPS and VCS) while performing the inspection.

7. Supplement 12S-1, *Supplementary Requirements for Control of Measuring and Test Equipment*, is incorporated into the Company QA program subject to the following clarification and alternative:

   Subsection 3.2, addresses requirements for out-of-calibration devices. The out-of-calibration condition is clarified to refer to when the M&TE is found out of the required accuracy limits (i.e., out of tolerance) during calibration.

   Section 5 requires equipment to be suitably marked to indicate calibration status. As an alternative, M&TE are not required to be marked with the calibration status where it is impossible or impractical due to equipment size or configuration (such as the label will interfere with operation of the device) provided the required information is maintained in suitable documentation traceable to the device.

8. Supplement 17S-1, *Supplementary Requirements for Quality Assurance Records*, subsection 4.2(b) requires records to be firmly attached in binders or placed in folders or envelopes for storage. The hard-copy records may use methods other than binders, folders, or envelopes to organize the records for storage.

9. Subpart 2.1, *Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components for Nuclear Power Plants*, is applied to the Company's facilities subject to the following alternatives (see also the commitment to Regulatory Guide 1.37, Revision 1, March 2007 for VCS):

   Subsections 3.1 and 3.2 establish criteria for classifying items into cleanness classes and requirements for each class. Instead of using the cleanness level system of Subpart 2.1, the Company may establish cleanness requirements on a case-by-case basis, consistent with the other provisions of Subpart 2.1. The Company establishes

appropriate cleanliness controls for work on safety-related equipment to minimize introduction of foreign material and maintain system/component cleanliness throughout maintenance or modification activities, including documented verification of absence of foreign material prior to system closure.

10. Subpart 2.2, *Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage, and Handling of Items for Nuclear Power Plants*, requirements will be incorporated into the Company program subject to the following alternatives:

    (1) For items in storage, as determined by facility management, the packaging requirements described under Section 3, "Packaging," may include alternate methods of affording the required protection such as maintaining a storage atmosphere free from harmful contaminants in concentrations that could produce damage to the stored items, or utilizing storage practices that obviate the need for capping all openings.

    (2) For items in storage at Company facilities, the items and the outside of containers (when present) need to meet the appropriate criteria of Subsection 3.9, "Marking," necessary to ensure the identity of the item, and proper instructions for preservation during storage and future handling are retained.

    (3) Regarding maintenance of items in storage in accordance with Subsection 6.4.2, "Care of Items," the requirement of item (f) will not apply to rotating electrical equipment less than 50 HP, the requirement of item (g) will not apply to rotating equipment weighing less than 50 pounds, the requirements of (e), (f), and (g) may be exempted for specific items on a case-by-case basis provided that a documented engineering evaluation determines that such care is not required.

    (4) Subsection 6.6, "Storage Records," requires written records be prepared containing information on personnel access. As an alternative to this requirement, Company documents establish controls for storage areas that describe those authorized to access areas and the requirements for recording access of personnel. However, these records of access are not considered quality records and will be retained in accordance with the administrative controls for the facility.

11. Subpart 2.3, *Quality Assurance Requirements for Housekeeping for Nuclear Power Plants*, will be implemented with the following alternative that will be applied during the operational phase:

    The Company may choose to not utilize the five-level zone designations required by subsection 2.3, but will utilize work practices, as described in administrative controls, that provide an equivalent level of cleanliness control required by the subpart. This will include as a minimum documented cleanliness inspections which will be performed prior

to system closure. As necessary, (e.g., the size of the opening would permit entry of the tools being used) control of personnel, tools, equipment, and supplies will be established when major portions of the reactor system are opened for inspection, maintenance, or repair. Factors considered in developing the administrative controls include cleanness requirements, personnel safety, fire prevention and protection, radiation control, and security. The controls make use of standard janitorial and work practices to the extent possible.

12. Subpart 2.4, *Installation, Inspection, and Testing Requirements for Power, Instrumentation, and Control Equipment at Nuclear Facilities (ANSI/IEEE Std. 336-1985)*, will be implemented with the following alternatives:

    (1) All references to ANSI/ASME NQA-1, ANSI/ASME NQA-2, and ANSI/ANS-3.2 are changed to refer to the appropriate sections of ANSI/ASME NQA-1-1994 and this QAPD.

    (2) With regard to Subsection 3.3, “Procedures and Instructions,” as an alternative to the requirement to utilize a checklist and mark as required or not appropriate the listed items during preparation of procedures or instructions, the Company utilizes administrative controls to ensure the appropriateness and correctness of procedures and instructions including reviews against standards that may not require a checklist to be marked.

    (3) Instrumentation and control devices installed in operating facilities are not required to be labeled as described in Subsection 7.2.1, provided the information is maintained in suitable documentation traceable to the device. Also, M&TE devices are not required to be marked with the calibration status where it is impossible or impractical due to equipment size or configuration (such as the label will interfere with operation of the device) provided the required information is maintained in suitable documentation traceable to the device.

13. Subpart 2.5, *Quality Assurance Requirements for Installation, Inspection, and Testing of Structural Concrete, Structural Steel, Soils, and Foundations for Nuclear Power Plants*, will be implemented with the following alternative:

    (1) Where important to safety structures other than concrete reactor vessels and containments are constructed or modified, other appropriate industry codes and standards may be invoked in place of ACI 359 as specified by the responsible design organization so long as they meet any current license commitments.

    (2) With regard to Subsection 7.7, “Curing,” ASTM C 1315 is added to the first paragraph as another applicable standard for test methods for curing compounds.

14. Subpart 2.15, *Quality Assurance Requirements for Hoisting, Rigging, and Transporting of Items for Nuclear Power Plants*, will be implemented with the following alternative:

    The Company may choose to not use the specific classification of Categories A, B, and C, but ensures items to be handled are evaluated and the appropriate range of controls and requirements for the activity are applied consistent with this Subpart.

15. Subpart 2.16, *Requirements for the Calibration and Control of Measuring and Test Equipment Used in Nuclear Facilities* (ANSI/IEEE Std. 498-1985) will be implemented with the following alternatives:

    (1) All references to ANSI/ASME NQA-1, ANSI/ASME NQA-2, and ANSI/ANS-3.2 are changed to refer to the appropriate sections of ANSI/ASME NQA-1-1994 and this QAPD.

    (2) Instrumentation and control devices installed in operating facilities are not required to be labeled as described in Subpart 2.16, Subsection 5.5, provided the information is maintained in suitable documentation traceable to the device.

16. Subpart 2.18, *Quality Assurance Requirements for Maintenance of Nuclear Facilities*, will be implemented with the following alternative:

    (1) Where this subpart references the requirements of ANS-3.2, it shall be interpreted to mean the applicable standards and requirements established within this QAPD.

    (2) Regarding subsection 2.5, “Work Authorization,” paragraph (d), the requirement that the description of work reference the applicable maintenance procedures will be treated as guidance. Personnel responsible for performance of the work are required to ensure that they are using the appropriate maintenance procedure.

17. Subpart 3.2, Appendix 2.1, *Nonmandatory Guidance on Cleaning of Fluid Systems and Associated Components for Nuclear Power Plants*

    The commitment to this subpart is specific to the VCS facility. Only Section 3, Cleaning Recommendations and Precautions, are being committed to as described in NRC Regulatory Guide 1.37, Revision 1, March 2007. In addition, a suitable chloride stress-cracking inhibitor should be added to the fresh water used to flush systems containing austenitic stainless steels.

6. Regulatory Guide 1.29, Revision 2: For Comment, February 1976

Seismic Design Classification

The commitment to this guide is specific to the VCS facility as described in the updated FSAR.

7. Regulatory Guide 1.29, Revision 3, September 1978

Seismic Design Classification

The commitment to this guide is site specific as described in the approved SAR or License for each Company nuclear facility. The specific design criteria and seismic designations are reflected in each plant's SAR, and in other docketed analysis.

8. Regulatory Guide 1.29, Revision 4, March 2007

Seismic Design Classification

The commitment to this guide is specific to the VCS facility for the replacement of the reactor vessel closure head as described in the updated FSAR.

9. Regulatory Guide 1.33, Revision 2, February 1978

Quality Assurance Program Requirements (Operation)

This Regulatory Guide endorses ANSI N18.7-1976/ANS-3.2 as providing overall acceptable quality assurance program requirements for the operations phase of nuclear power facilities. The Company commits to implementing administrative controls and quality assurance measures during the operations phase for its facilities that are equivalent in nature to those contained in the endorsed standard subject to the following alternatives:

1. The operational phase quality assurance program requirements will be established through the Company's commitment to ANSI/ASME NQA-1-1994 as described within this QAPD. This edition of NQA-1 contains overall quality assurance requirements equivalent to those of ANSI N18.7-1976, and the Company has included within this QAPD the required administrative controls from ANSI N18.7-1976. Therefore, the Company does not commit to compliance with the requirements of ANSI N18.7-1976/ANS-3.2.

2. As recommended by Regulatory Position C.1, the Company uses Appendix A of Regulatory Guide 1.33 as guidance in establishing the types of procedures required for plant operation and support.

3. The Company's commitment to the applicable Regulatory Guides and associated standards listed in Regulatory Position C.2 is addressed within this QAPD. A number of these Regulatory Positions and Standards have been incorporated into NQA-1-1994.

4. The Company complies with Regulatory Position C.3, as described in Appendix B of this QAPD. Appendix B of this QAPD describes the Company's independent review programs.

5. The Company complies with Regulatory Position C.4 as described within Section 18 of this QAPD, subject to the following alternatives that are comparable to those approved under the previous operational quality assurance programs:

    a. The results of actions taken to correct deficiencies affecting nuclear safety that occur in the facility SSCs or methods of operation are evaluated as a part of each audit performed as related to that audited area. An audit of the effectiveness of the corrective action program is performed at a frequency not to exceed three years.

    b. Audits of conformance of facility operation to provisions of the Technical Specifications and applicable license conditions are performed at a frequency not to exceed three years.

    c. Audits of the performance, training, and qualifications of the facility staff are performed at a frequency not to exceed three years.

    d. Internal audits are performed at a frequency commensurate with the safety significance of the activities and in such a manner to assure audits of all applicable QA program elements are completed within a period of three years. Audit schedules shall be based on the month in which the audit starts. An interval extension grace period of up to 25% may be used for the scheduled commencement date when conditions, such as plant operational considerations or to accommodate performance-based observations of activities related to the audit area make meeting the specified schedule date impractical. When an audit interval extension greater than one month is used, the next audit for that area will be scheduled from the original anniversary month rather than from the month of the extended audit. An evaluation is performed once per calendar year to determine the need for additional audit activities based on internal and external data, and the impact of any functional area changes in responsibility, resources, and management. Functional area audits and evaluations are to be scheduled and separated into three cycles covering a

period of 36 months. Each cycle includes a set of audits and an evaluation. Results of audits and evaluations will determine if additional audit activities will be performed prior to the next scheduled audit.

6. In lieu of compliance with Regulatory Position C.5, the Company has established appropriate equivalent requirements within this QAPD.

10. Regulatory Guide 1.36, Revision 0, February 1973

Nonmetallic Thermal Insulation for Austenitic Stainless Steel

The commitment to this Regulatory Guide during construction and operations is site specific as listed in the approved SAR or License for each Company nuclear facility. This Regulatory Guide may be used for plant modifications on a case-by-case basis.

11. Regulatory Guide 1.37, Revision 1, March 2007

Quality Assurance Requirements For Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants

The commitment to this Regulatory Guide is specific to the VCS facility. It provides guidance on specifying water quality and precautions related to the use of alkaline cleaning solutions and chelating agents. Procurement orders apply cleaning requirements during fabrication and packaging of safety-related components so that equipment is delivered to the site in a properly cleaned condition. Site procedures for the operational phase meet the requirements of ASME NQA-1-1994, Part II, Subpart 2.1, and this guide.

12. Regulatory Guide 1.54, Revision 0, June 1973

Quality Assurance for Protective Coatings Applied to Nuclear Power Plants

This Regulatory Guide endorses ANSI N101.4-1972. The commitment to this Regulatory Guide during construction and earlier operations was site specific as listed in the approved SAR or License for each Company nuclear facility. The Company commits to the QA requirements of this Regulatory Guide and Standard for design and construction activities.

Applicability and implementation of this guide, including quality inspection requirements, for modifications will be determined as needed, by a qualified engineer.

13. Regulatory Guide 1.97

Instrumentation for Light-Water-Cooled Nuclear Power Plants To Assess Plant and Environs Conditions During and Following an Accident

The Company commitment to this Regulatory Guide is site specific as indicated in the SAR for the applicable facility and the facility's response to the NRC regarding this guidance.

14. Regulatory Guide 1.143, Revision 2, November 2001

Design Guidance for Radioactive Waste Management Systems, Structures and Components Installed in Light-water-cooled Nuclear Power Plants

The commitment to this Regulatory Guide (including specific revision) during construction and earlier operations was site specific as listed in the approved SAR or License for each Company nuclear facility. The Company commits to this Regulatory Guide for the construction of any new nuclear power plants. The applicable requirements of this Regulatory Guide will be used for plant modifications on a case-by-case basis.

15. Regulatory Guide 1.152, Revision 1, January 1996

Criteria for Digital Computers in Safety Systems of Nuclear Power Plants

This Regulatory Guide endorses IEEE/ANS-7-4.3.2-1993. The Company (excluding VCS) commits to using the guidance of this Standard within the provisions of the Regulatory Guide with the following alternative:

Where this Standard makes reference to ASME NQA-1 and ASME NQA-2, the reference will be interpreted to mean the applicable requirements of NQA-1-1994 and this QAPD.

16. Regulatory Guide 1.155, Revision 0, June 1988

Station Blackout

The Company commitment to this Regulatory Guide is site specific as indicated in the SAR for the applicable facility and the facility's response to the NRC regarding this guidance. The quality assurance measures applied to the nonsafety-related items and activities for SBO equipment are addressed in Appendix F of this QAPD.

17. Regulatory Guide 1.164, Revision 0, June 2017

Dedication of Commercial-Grade Items for Use in Nuclear Power Plants

This Regulatory Guide provisionally endorses technical report EPRI 3002002982, Plant Engineering: Guideline for the Acceptance of Commercial-Grade Items in Nuclear Safety-Related Applications (Revision 1 to EPRI NP-5652 and TR-102260), September 2014. The Company commits to implementing the evaluation and acceptance requirements for dedication of commercial-grade items and services of this guideline subject to the exceptions or clarifications identified in the NRC Regulatory Guide.

18. Regulatory Guide 1.189, Rev. 2, October 2009

Fire Protection for Nuclear Power Plants

This commitment applies to the V. C. Summer facility only. VCS implements quality assurance requirements for the Fire Protection System in accordance with Regulatory Position 1.7, “Quality Assurance,” in Regulatory Guide 1.189, Rev. 2, “Fire Protection for Operating Nuclear Power Plants,” as identified in FSAR Chapter 3, Appendix 3A.

19. Regulatory Guide 4.15, Revision 1, February 1979

Quality Assurance for Radiological Monitoring Programs (Normal Operations)

The Company programs for radiological environmental monitoring comply with the requirements of this Regulatory Guide.

20. Regulatory Guide 7.10, Revision 1, June 1986

Establishing Quality Assurance Programs for Packaging Used in the Transport of Radioactive Material

The Company programs for issuing radioactive material for transport complies with the QA requirements for procurement, use, and maintenance of packaging used in the transport of radioactive material as describe in this Regulatory Guide.

21. Generic Letters 89-02/91-05

Actions to Improve the Detection of Counterfeit and Fraudulently Marketed Products

Licensee Commercial-Grade Procurement and Dedication Programs

The Company meets the intent of these Generic Letters through the procurement activities defined in this QAPD and the commitment to Regulatory Guide 1.164 that endorses industry guidance regarding the selection and qualification of commercial grade Suppliers and for the dedication of commercial grade items.

22. Branch Technical Position APCSB/CMEB 9.5-1

Guidelines for Fire Protection for Nuclear Power Plants

This commitment applies to the Millstone, North Anna, and Surry facilities only. The Company commits to implementing the guidance of this Technical Position, however, application of the requirements is site specific as described in the applicable facility SAR and license documents. The Company QA program complies with the QA requirements described in APCSB 9.5-1, Position C or CMEB 9.5-1, Position C.4.

23. Generic Letter 85-06

Quality Assurance Guidance for ATWS Equipment That Is Not Safety-Related

The Company commitment to the guidance of this Generic Letter is site specific as indicated in the SAR for the applicable facility and the facility's response to the Generic Letter. The quality assurance measures applied to the nonsafety-related items and activities for ATWS equipment is addressed in Appendix F of this QAPD.

24. Managing Quality Assurance Records in Electronic Media

- NIRMA TG11-2011, Authentication of Records and Media
- NIRMA TG-15-2011, Management of Electronic Records
- NIRMA TG-16-2011, Software Quality Assurance Documentation and Records
- NIRMA TG-21-2011, Required Records Protection, Disaster Recovery and Business Continuation

The Company commits to using the 2011 guidance of the above four guidelines for storing QA records in electronic media for MPS, NAPS, SPS, and VCS.

Appendix D Terms and Definitions

Terms and Definitions

In addition to those terms defined in NQA-1-1994, the following definitions of terms are to be used in the context of this QAPD and activities governed by this QAPD.

Administrative Controls — Rules, orders, instructions, procedures, policies, practices and designations of authority and responsibility.

Augmented Quality — The application of selected quality assurance measures to structures, systems, components, or programs that are important to safe operation of the nuclear facilities but not classified as nuclear safety-related. Also known as non-safety-related with special quality/regulatory requirements (NSQ).

Experiment — Performance of those plant operations carried out under controlled conditions in order to establish characteristics or values not previously known.

Deleterious Corrosion — corrosion that cannot be subsequently removed and that adversely affects form, fit, or function.

Independent Review — Review completed by personnel not having direct responsibility for the work function under review regardless of whether they operate as a part of an organizational unit or as individual staff members.

ISFSI — An independent spent fuel storage installation (ISFSI) is a facility designed and constructed for the interim storage of spent nuclear fuel and other radioactive materials associated with the spent fuel (10 CFR 72.3). The term ISFSI refers to the facility authorized for storage of spent nuclear fuel pursuant to 10 CFR Part 72 and includes the storage pad, the storage containers, and any support facilities. However, if the ISFSI is located at a reactor site, it does not include any structures, facilities, or services that are part of the 10 CFR Part 50 license, unless they are identified as being jointly shared.

Lifetime (Records) — Lifetime in defining the retention period for records is until 1) termination of the applicable Facility Operating License, 2) termination of employment (training and qualification records), 3) transfer of ownership (i.e., fuel), 4) end of service life of the facility, system, or component, as applicable.

MPS — Millstone Power Station

NAPS — North Anna Power Station

Nuclear Power Plant — Any plant using a nuclear reactor to produce electric power, process steam or space heating.

Operating Activities — Work functions associated with normal operation and maintenance of the plant, and technical services routinely assigned to the facility operating organization.

Operational Phase — That period of time during which the principal activity is associated with

normal operation of the plant. This phase of plant life is considered to begin formally with commencement of initial fuel loading, and ends with plant decommissioning.

Organization, Facility Operating — Personnel concerned with operation, maintenance and certain technical services such as reactor engineering and performance of tests/inspections. This organization is also referred to in various standards as the onsite organization and comprises the facility staff.

Organization, Support — Personnel providing support functions to the operating organization regardless of their physical location. This organization is also referred to in various standards as the offsite organization.

Program Deficiency — Failure to develop, document or implement effectively any applicable element of the QA Program.

Quality Verification — The act of reviewing, inspecting, testing, checking, auditing, or otherwise determining and documenting whether items, processes, services, or documents conform to specified requirements integral to the QA Program.

Review — A deliberately critical examination, including: evaluation of assessment results, procedures, or certain contemplated actions; observation of plant operation; and, after-the-fact investigations of abnormal conditions.

Safety Analysis Report (SAR) — This term is used generically to refer to the SAR required by NRC regulations that is applicable for the particular nuclear facility for which the activity is being performed. This usage includes, but is not limited to preliminary, final, updated final, and decommissioning safety analysis reports.

Supervision — Direction of personnel activities or monitoring of plant functions by an individual responsible and accountable for the activities they direct or monitor.

SPS — Surry Power Station

Surveillance Testing — Periodic testing to verify that safety-related structures, systems and components continue to function or are in a state of readiness to perform their functions.

System — An integral part of a nuclear power plant comprising components which may be operated or used as a separate entity to perform a specific function.

Time Intervals — With the exception of time intervals from applicable Codes or the facility Technical Specifications, the following definitions shall be applied for other activities that recur on a regular frequency and may be extended by up to 25%:

Weekly: at least once per 7 days

Monthly: at least once per 31 days

Quarterly or every 3 months: at least once per 92 days

Semiannually or every 6 months: at least once per 184 days

Every 9 months: at least once per 276 days

Yearly or annually: at least once per 366 days

Biennial (2 years): at least once per 732 days

Triennial (3 years): at least once per 1098 days

VA — Virginia Power Stations, i.e., NAPS and SPS

VCS — Virgil C. Summer Nuclear Station

Appendix E QA Records Retention Requirements For Operating Facilities

QA Records Retention Requirements For Operating Facilities

The following Table lists the type of records and the required retention times and provides the requirements for those described in the Quality Standards Commitment discussed in Section 17 of this QAPD. The description of the records in this table is not intended to be the specific name of any particular document since these may vary by facility but are a general description of the types of records to be retained. The term “Lifetime” is defined in Appendix D of this QAPD.

Description of Records	Retention Periods
1. Design Records	
Applicable codes and standards used in design	Lifetime
Design drawings	Lifetime
Design calculations and record of checks (includes computer program or corresponding mathematical model)	Lifetime
Approved design change requests	Lifetime
Design deviations and nonconformances	Lifetime
Design reports	Lifetime
Design verification data	Lifetime
Design specifications and amendments	Lifetime
Safety analysis report	Lifetime
Certified stress reports for code items	Lifetime
System descriptions	Lifetime
System process and instrumentation diagrams	Lifetime
Technical analysis, evaluations, and reports	Lifetime
Master change record	Lifetime
Reliability analysis, evaluation, and reports	Lifetime
Equipment qualification documentation	Lifetime
Design review reports	10 years
Design procedures and manuals	3 years
Design control procedures	3 years
Reports of engineering surveillance of field activity	3 years
2. Procurement Records	
Procurement specification	Lifetime

Description of Records	Retention Periods
Purchase order (unpriced) including amendments	Lifetime
Procurement procedures	3 years
Purchaser's pre-award quality assurance survey	3 years
Receiving records	3 years
Supplier's quality assurance program manual	3 years
Source surveillance data plans, audit, and surveillance reports	3 years
3. Manufacturing Records	
Applicable code data reports	Lifetime
As-built drawings and records	Lifetime
Certificate of compliance	Lifetime
Eddy-current examination final results	Lifetime
Electrical control verification test results	Lifetime
Ferrite test results	Lifetime
Hat treatment records	Lifetime
Liquid penetrant examination final results	Lifetime
Location of weld filler material	Lifetime
Magnetic particle examination final results	Lifetime
Major defect repair records	Lifetime
Material properties records	Lifetime
Nonconformance reports	Lifetime
Performance test procedure and results records	Lifetime
Pipe and fitting location report	Lifetime
Pressure test results (hydrostatic or pneumatic)	Lifetime
Radiograph review records	Lifetime
Ultrasonic examination final results	Lifetime
Welding procedures	Lifetime
Radiographs not required by ASME Section XI	10 years
Certificate of inspection and test personnel qualification	3 years
Cleaning procedures	3 years
Eddy-current examination procedure	3 years

Description of Records	Retention Periods
Ferrite test procedure	3 years
Forming and bending procedure qualifications	3 years
Heat treatment procedures	3 years
Hot bending procedure	3 years
Inspection and test instrumentation and tooling calibration records (after last calibration)	3 years
Liquid penetrant examination procedure	3 years
Magnetic particle examination procedure	3 years
Packaging, receiving, storage procedures	3 years
Product equipment calibration procedure	3 years
QA manuals, procedures, and instructions	3 years
Radiographic procedures	3 years
Ultrasonic examination procedures	3 years
Welding materials control procedures	3 years
Welding procedure qualifications and data reports	3 years
Work processing and sequencing documents	3 years
Product equipment calibration records (after last calibration)	3 years
4. Installation, Construction, Maintenance, and Modification Records	
4.1 Receiving and Storage	
Nonconformance reports	Lifetime
Inspection reports for stored items	3 years
Receipt inspection reports on items	3 years
Receiving, storage, and inspection procedures	3 years
Storage inventory and issuance records	3 years
Vendor quality assurance releases	3 years
4.2 Civil	
Checkoff sheets for tendon installation	Lifetime
Concrete cylinder test reports and charts	Lifetime
Concrete design mix reports	Lifetime

Description of Records	Retention Periods
Concrete placement records	Lifetime
Inspection reports for channel pressure tests	Lifetime
Material property reports on containment liner and accessories	Lifetime
Material property reports on metal containment shell and accessories	Lifetime
Material property reports on reinforcing steel	Lifetime
Material property reports on reinforcing steel splice sleeve material	Lifetime
Material property reports on steel embedments in concrete	Lifetime
Material property reports on structural steel and bolting	Lifetime
Material property reports on tendon fabrication material	Lifetime
Pile drive log	Lifetime
Pile loading test reports	Lifetime
Procedure for containment vessel pressure proof test and leak-rate tests and results	Lifetime
Reports for periodic tendon inspection	Lifetime
Reports of high-strength bolt torque testing	Lifetime
Soil compaction test reports	Lifetime
Aggregate test reports	Lifetime
Batch plant operation reports	10 years
Cement grab sample reports	10 years
Material property reports on steel piling	10 years
Mix water chemical analysis	10 years
Releases to place concrete	10 years
Slump test results	10 years
User's tensile test reports on reinforcing steel	10 years
User's tensile test reports on reinforcing steel splices	10 years
4.3 Welding	
Ferrite test results	Lifetime
Heat treatment records	Lifetime
Liquid penetrant test final results	Lifetime
Material property records	Lifetime

Description of Records	Retention Periods
Magnetic particle test final results	Lifetime
Major weld repair procedure and results	Lifetime
Radiograph review records and final results	Lifetime
Ultrasonic test final results	Lifetime
Weld location diagrams	Lifetime
Weld procedures	Lifetime
Welding filler metal material reports	Lifetime
Ferrite test procedures	3 years
Heat treatment procedures	3 years
Liquid penetrant test procedures	3 years
Magnetic particle test procedures	3 years
Radiographic test procedures	3 years
Ultrasonic test procedures	3 years
Welding materials control procedures	3 years
Welding personnel qualifications	3 years
Weld fitup reports	10 years
Weld procedure qualifications and results	10 years
4.4 Mechanical	
Cleaning procedures and results	Lifetime
Installed lifting and handling equipment procedures, inspection, and test data	Lifetime
Lubrication procedures	Lifetime
Material properties records	Lifetime
Pipe and fitting location reports	Lifetime
Pipe hanger and restraint data	Lifetime
Safety valve response test procedures	Lifetime
Code data reports	Lifetime
Pressure test results (hydrostatic or pneumatic)	3 years
Chemical composition user's test (grab samples) for thermal insulation	10 years
Chemical tests of water used for mixing insulation cement	10 years

Description of Records	Retention Periods
Data sheets or logs on equipment installation, inspection, and alignment	10 years
Documentation of system checkoffs (logs or data sheets)	10 years
Material property test reports for thermal insulation	10 years
Safety valve response test results	10 years
Cleaning procedures	3 years
Construction lifting and handling equipment test procedures	3 years
Erection procedures for mechanical components	3 years
Hydrotest procedures	3 years
4.5 Electrical and Instrumentation and Control	
Cable pulling tension data	Lifetime
Cable separation data	Lifetime
Cable terminating/splicing procedures	Lifetime
Certified cable test reports	Lifetime
Relay test procedures and test results	Lifetime
Voltage breakdown test results on liquid insulation	Lifetime
Cable pulling procedures	3 years
Cable separation checklists	3 years
Instrument calibration results (after last calibration)	3 years
Documentation of testing performed after installation and prior to conditional acceptance of systems	10 years
Field workmanship checklist or equivalent logs	10 years
Reports of pre-installation tests	10 years
4.6 General	
As-built drawings and records	Lifetime
Final inspection reports and releases	Lifetime
Nonconformance reports	Lifetime
Specifications and drawings	Lifetime
Index system to record file	Lifetime
Quality assurance and quality control manuals (QAPD) - current revision - Superseded material	Lifetime plus 3 years 3 years after superseded

Description of Records	Retention Periods
Fire protection reports	Lifetime
Evaluation of results of reportable safety concerns as required by regulations	Lifetime
Calibration reports for measuring and test equipment and instruments (after last calibration)	3 years
Calibration procedures for measuring and test equipment and instruments	3 years
Certificate of inspection and test personnel qualification	3 years
Field audit reports	3 years
Field quality assurance manuals	3 years
Quality assurance system audit reports and related correspondence	3 years
Special tool calibration records (after last calibration)	3 years
5. Preoperational, Startup, and Operational Test Records	
Final system adjustment data	Lifetime
Pressure test results (hydrostatic or pneumatic) (VCS only)	Lifetime
Initial plant loading data	Lifetime
Plant load ramp change data	Lifetime
Plant load step change data	Lifetime
Preoperational test procedures and results	Lifetime
Reactor protection system tests and results	Lifetime
Startup test procedures and results	Lifetime
Inservice inspection reports	Lifetime
Records of reactor tests and experiments	5 years
Records and logs of maintenance activities, inspections, repair, and replacement of principal items of structures, systems, and components	Lifetime
Automatic emergency power source transfer procedures and results	10 years
Initial heatup, hot functional, and cooldown procedures and results	10 years
Initial reactor criticality test procedures and results	10 years
Instrument AC system and inverter test procedures and reports	10 years
Main and auxiliary power transformer test procedures and results	10 years
Offsite power source energizing procedures and test reports	10 years

Description of Records	Retention Periods
Onsite emergency power source energizing procedure and test reports	10 years
Primary and secondary auxiliary power test procedures and results	10 years
Startup logs	10 years
Station battery and DC power distribution test procedures and reports	10 years
Water chemistry report	10 years
Records of reviews performed for changes made to the facility or equipment pursuant to 10 CFR 50.59/72.48	Lifetime
Records of reviews performed for changes made to procedures or reviews of tests and experiments pursuant to 10 CFR 50.59/72.48	5 years
Startup problems and resolutions	10 years
Flushing results	10 years
Power transmission substation test procedures and results	3 years
Surveillance activities, inspections, and calibrations required by the technical specifications records	3 years
System lubricating oil flushing procedures	3 years
Flushing procedures	3 years
Pressure test procedures	3 years
Periodic checks, inspections, and calibrations performed to verify that surveillance requirements are being met	3 years
6. Additional Operating Phase Records	
Records and drawing changes reflecting plant design modifications made to systems and equipment described in the SAR	Lifetime
Records of new, irradiated, and spent fuel inventory, transfers of fuel, and assemblies history	Lifetime plus 5 years
Records of plant radiation and contamination surveys	Lifetime
Records of off-site environmental monitoring surveys	Lifetime
Records of radiation exposure of all individuals who enter radiation control areas	Lifetime
Records of radioactive levels of liquid and gaseous waste released to the environs	Lifetime
Records of reviews performed for changes made to the offsite dose calculation manual and the process control program	Lifetime
Records of meetings of the facility safety review committee/group and the Management Safety Review Committee	Lifetime

Description of Records	Retention Periods
Records of transient or operational cycles for those facility components designated to operate safely for a limited number of transients or operational cycles	Lifetime
Records of the service lives of all hydraulic and mechanical snubbers on safety-related systems, including the date at which the service life commences and associated installation and maintenance records (VA)	Lifetime
Records of the service lives of all hydraulic and mechanical snubbers defined in TS 3.7.7 including the date at which the service life commences and associated installation and maintenance records. (VCS)	Lifetime
Records of Environmental Qualification in accordance with 10 CFR 50.49	Lifetime
Records of secondary water sampling and water quality	Lifetime
Records of normal plant operation, including power levels and periods of operation at each power level	5 years
Records of principal maintenance activities, including inspection, repair, substitution or replacement of principal items of equipment important to nuclear safety	Lifetime
Records of reportable events	5 years
Records of radioactive material shipments	3 years
Records of activities for procurement, use, and maintenance of packaging used in the transport of radioactive material pursuant to 10 CFR Part 71 (ref. §71.135)	Lifetime plus 3 years superseded material 3 years after superseded
Records of sealed source leak test results and physical inventories of sealed source material	5 years
Records of current individual plant staff members qualifications, experience, training and retraining	Lifetime or as noted below
Radiological protection training records (e.g., general training provided to personnel with access to the facilities, Advanced Radiation Worker, Radiation Protection Technician, etc.)	Lifetime
Initial training and qualification records	Lifetime
Requalification records (except licensed individuals)	3 training cycles
Requalification records for licensed individuals	6 years after license renewal
Training materials - Revision 0 records	Lifetime
Licensed Operators training materials - superseded revisions	6 years
Non-licensed Facility staff training materials - superseded revisions	3 training cycles
Radiation Protection training materials - superseded revisions	Lifetime

Description of Records	Retention Periods
Retraining, specialized training, continuing training records (except licensed individuals and Radiological Protection technicians	3 training cycles
Contractor training (except general training for facility access, Advanced Radiation Worker, Radiation Protection Technician training and retraining, etc.)	3 training cycles
NANT Accreditation records - Initial accreditation - Superseded material	 Lifetime 4 years

Appendix F Augmented Quality Assurance Requirements For Selected SSCs and Programs

Augmented Quality Assurance Requirements For Selected SSCs and Programs

1. Nonsafety-Related SSCs - Significant Contributors to Plant Safety

Specific program controls (augmented quality assurance) are applied to nonsafety-related SSCs, for which 10 CFR 50, Appendix B is not applicable, that are significant contributors to plant safety or have special regulatory treatment applied to them. The specific program controls consistent with applicable sections of the QAPD are applied to those items in a selected manner, targeted at those characteristics or critical attributes that render the SSC a significant contributor to plant safety.

The following clarify the applicability of the QA Program to the selected nonsafety-related SSCs and related activities, including the identification of exceptions to the QA Program described in Sections 1 through 18 of this QAPD taken for nonsafety-related SSCs.

1.1 Organization

The verification activities described in this Part may be performed by the Dominion Energy line organization. The independent QA/QC groups described in Section 1 are not required to perform these functions. The organizational authorities and functions are described in the facility's programs and procedures.

1.2 QA Program

Dominion Energy QA requirements for nonsafety-related SSCs are established in Appendix F of the QAPD and appropriate procedures. Suppliers of these SSCs or related services describe the quality controls applied in appropriate procedures. A new or separate QA program is not required.

1.3 Design Control

Dominion Energy has established design control measures to ensure that the established design requirements are included in the design. These measures ensure that applicable design inputs are included or correctly translated into the design documents, and deviations from those requirements are controlled. Normal supervisory review of the designer’s work is an adequate control measure.

1.4 Procurement Document Control

Procurement documents for items and services obtained by or for Dominion Energy shall include or reference documents describing applicable design bases, design requirements, and other requirements necessary to ensure component performance. The procurement documents are controlled to address deviations from the specified requirements.

1.5 Instructions, Procedures, and Drawings

Dominion Energy provides documents such as, but not limited to, written instructions, plant procedures, drawings, vendor technical manuals, and special instructions in work orders, to direct the performance of activities affecting quality. The method of instruction employed provides an appropriate degree of guidance to the personnel performing the activity to achieve acceptable functional performance of the SSC.

1.6 Document Control

Dominion Energy controls the issuance and change of documents that specify quality requirements or prescribe activities affecting quality to ensure that correct documents are used. These controls include review and approval of documents, identification of the appropriate revision for use, and measures to preclude the use of superseded or obsolete documents.

1.7 Control of Purchased Items and Services

Dominion Energy employs measures, such as inspection of items or documents upon receipt or acceptance testing, to ensure that all purchased items and services conform to appropriate procurement documents.

1.8 Identification and Control of Purchased Items

Dominion Energy employs measures where necessary, to identify purchased items and preserve their functional performance capability. Storage controls take into account appropriate environmental, maintenance, or shelf life restrictions for the items.

1.9 Control of Special Processes

Dominion Energy employs process and procedure controls for special processes, including welding, heat treating, and nondestructive testing. These controls are based on applicable codes, standards, specifications, criteria, or other special requirements for the special process.

1.10 Inspection

Dominion Energy uses documented instructions to ensure necessary inspections are performed to verify conformance of an item or activity to specified requirements or to verify that activities are satisfactorily accomplished. These inspections may be performed by knowledgeable personnel in the line organization. Knowledgeable personnel are from the same discipline and have experience related to the work being inspected.

1.11 Test Control

Dominion Energy employs measures to identify required testing that demonstrates that equipment conforms to design requirements. These tests are performed in accordance with test instructions or procedures. The test results are recorded, and authorized individuals evaluate the results to ensure that test requirements are met.

1.12 Control of Measuring and Test Equipment (M&TE)

Dominion Energy employs measures to control M&TE use, including calibration and adjustment at specific intervals or prior to use.

1.13 Handling, Storage, and Shipping

Dominion Energy employs measures to control the handling, storage, cleaning, packaging, shipping, and preservation of items to prevent damage or loss and to minimize deterioration. These measures include appropriate marking or labels, and identification of any special storage or handling requirements.

1.14 Inspection, Test, and Operating Status

Dominion Energy employs measures to identify items that have satisfactorily passed required tests and inspections and to indicate the status of inspection, test, and operability as appropriate.

1.15 Control of Nonconforming Items

Dominion Energy employs measures to identify and control items that do not conform to specified requirements to prevent their inadvertent installation or use.

1.16 Corrective Action

Dominion Energy employs measures to ensure that failures, malfunctions, deficiencies, deviations, defective components, and non-conformances are properly identified, reported, and corrected.

1.17 Records

Dominion Energy employs measures to ensure records are prepared and maintained to furnish evidence that the above requirements for design, procurement, document control, inspection, and test activities have been met.

1.18 Audits

Dominion Energy employs measures for line management to periodically review and document the adequacy of the process, including taking any necessary corrective action. Audits independent of line management are not required. Line management is

responsible for determining whether reviews conducted by line management or audits conducted by any organization independent of line management are appropriate. If performed, audits are conducted and documented to verify compliance with design and procurement documents, instructions, procedures, drawings, and inspection and test activities. Where the measures of this Appendix are implemented by the same programs, processes, or procedures as the comparable activities of Sections 1 to 18 of the QAPD, the audits performed under the provisions of Section 18 may be used to satisfy the review requirements of this paragraph (1.18).

2. Nonsafety-Related SSCs Credited for Regulatory Events

The following criteria apply to fire protection (10 CFR 50.48), anticipated transients without scram (ATWS) (10 CFR 50.62), and station blackout (SBO) (10 CFR 50.63) SSCs that are not safety-related.

1. Dominion Energy implements quality assurance requirements for the Fire Protection System in accordance with each facility's Fire Protection Plan/Program that meets the specific Branch Technical Position (BTP) or Regulatory Guide identified in the applicable facility SAR.

2. Dominion Energy implements the quality assurance requirements for ATWS SSCs in accordance with Appendix F, Section 1.

3. Dominion Energy implements quality assurance requirements for SBO SSCs in accordance with Appendix F, Section 1 that meets Regulatory Guide 1.155, “Station Blackout.”

3. Alternative Treatment for RISC-2 and RISC-3 SSCs

Activities conducted for RISC-2 and RISC-3 SSCs under an approved license amendment to implement the voluntary regulations of 10 CFR 50.69 are subject to the applicable administrative controls in Section 1 to Appendix F of this QAPD as modified below. Such application is to provide reasonable confidence that: (1) the RISC-2 SSCs perform their safety-significant functions consistent with the categorization process assumptions; and, (2) the RISC-3 SSCs remain capable of performing their safety-related functions under design basis conditions, including seismic and environmental, throughout their service life. The following additional requirements for inspection, testing, and corrective action as they relate to the alternative treatment must be applied.

3.1 Inspection and Testing

Periodic inspection and testing activities shall be conducted as described in Sections 10, Inspection, and 11, Test Control, of this QAPD to determine that RISC-3 SSCs will remain capable of performing their safety-related functions under design basis conditions.

3.2 Corrective Action

Identification and correction of deficiencies for RISC-2 and RISC-3 SSCs shall be conducted as described in Section 16, Corrective Action, of this QAPD. Conditions that would prevent a RISC-3 SSC from performing its safety-related functions under design basis conditions must be corrected in a timely manner. For significant conditions adverse to quality, measures must be taken to provide reasonable confidence that the cause of the condition is determined and corrective action taken to preclude repetition.

4. Nonsafety-Related SSCs subject to Aging Management for Renewed Licenses

Activities conducted for aging management under a renewed license are subject to the applicable administrative controls in Appendix F of this QAPD, Section 1 with the following additional requirements, as they relate to the activities and procedures for the corrective action process and the confirmation process.

4.1 Document Control

The aging management and confirmation process is implemented through procedures that are subject to the document review and approval controls of Section 6, Document Control, of this QAPD.

4.2 Inspection and Testing

Periodic inspection and testing activities must be conducted in accordance with the requirements of Sections 10, Inspection, and 11, Test Control, of this QAPD to determine that SSCs in the aging management program remain capable of performing their important functions during the term of the renewed license.

4.3 Corrective Action

Identification and correction of deficiencies for nonsafety-related SSCs subject to aging management for renewed licenses shall be conducted as described in Section 16, Corrective Action, of this QAPD.