Xcel Energy®

414 Nicollet Mall
Minneapolis, MN 55401

July 21, 2023

L-XE-23-009
10 CFR 50.54
10 CFR 71.106

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

Prairie Island Nuclear Generating Plant,
Units 1 and 2
Docket 50-282 and 50-306
Renewed Facility Operating License Nos.
DPR-42 and DPR-60

Monticello Nuclear Generating Plant
Docket 50-263
Renewed Facility Operating License
No. DPR-22

Prairie Island Independent Spent Fuel
Storage Installation
Docket 72-10
Renewed Materials License No. SNM-2506

Submittal of Quality Assurance Topical Report (NSPM-1)

Pursuant to 10 CFR 50.54 and 10 CFR 71.106, attached is the annual update of the Northern States Power Company, a Minnesota Corporation (NSPM), doing business as Xcel Energy, Quality Assurance Topical Report (QATR), NSPM-1, Revision 16. This letter satisfies the 10 CFR 50.54(a)(3) and 10 CFR 71.106(b) requirements to provide the NRC with an update of changes to the quality assurance program description that did not reduce commitments in the program description, and, therefore, did not require NRC approval prior to implementation. These changes have been incorporated into Revision 16 and are summarized in Enclosure 1 to this letter. Enclosure 2 to this letter provides a copy of Revision 16 of the QATR in its entirety.

Summary of Commitments

This letter makes no new commitments and no revisions to existing commitments.

Sara L. Scott
Director, Nuclear Licensing and Regulatory Services
Northern States Power Company – Minnesota

Cc: Administrator, Region III, USNRC
Director, Division of Fuel Management, USNRC
Project Manager, Monticello and Prairie Island, USNRC
Resident Inspectors, Monticello and Prairie Island, USNRC

ENCLOSURE 1
Summary of Changes to NSPM-1

NSPM-1, Revision / Section / Change	Reason for Change	Basis for Meeting 10CFR50 Appendix B
Revision 16, September 16, 2022 Section B.4 – Revising implementing requirements for NQA-1-1994 4S-1, section 2.3 QA Program.	Section B.4 revised the language to remove specificity and allow procurement documents to require that a supplier meets the requirements of 10 CFR 50, Appendix B. The selected verbiage was taken from NRC Safety Evaluation ML071510506	10CFR50.54(a)(3)(ii) The use of a quality assurance alternative or exception approved by an NRC safety evaluation: SER ML071510506
Revision 16, September 16, 2022 Section B.5 – Revising to remove reference to ISO17025-2005	Section B.5 removed reference to ISO17025-2005 as NSPM allows acceptance of commercial grade calibration or testing services based solely on laboratory accreditation if the supplier has an ISO17025-2017 program; the 2005 version of this program is no longer applicable.	10CFR50.54(a)(3) changes involving administrative improvements and clarifications, spelling corrections, punctuation, or editorial items: Clarification

ENCLOSURE 2

NSPM-1
Quality Assurance Topical Report

Revision 16

46 pages follow

Northern States Power Company - Minnesota
Minneapolis, Minnesota

Quality Assurance Topical Report

NSPM-1

Revision 16
September 16, 2022

Northern States Power Company Minnesota – Policy

Policy Statement

Northern States Power Company, a Minnesota corporation (NSPM), d/b/a Xcel Energy, hereinafter NSPM shall maintain and operate nuclear plants in a manner that will ensure the health and safety of the public and workers; NSPM retains ownership of the facilities. Facilities shall be operated in compliance with the requirements of the Code of Federal Regulations (CFR), the applicable Nuclear Regulatory Commission (NRC) Facility Operating Licenses, and applicable laws and regulations of the state and local governments.

The NSPM Quality Assurance Program (QAP) described herein and associated implementing documents provide for control of NSPM activities that affect the quality of safety related nuclear plant structures, systems, and components. Reference throughout this document to NSPM refers to the nuclear organization(s) under the direction of the Senior Vice President/Chief Nuclear Officer. The QAP is also applied to certain equipment and activities that are not safety related, but support safe plant operations, or where other non-CFR NRC guidance establishes program requirements.

The Quality Assurance Topical Report (QATR) is the top-level policy document that establishes the manner in which quality is to be achieved and presents NSPM's overall philosophy regarding achievement and assurance of quality. Implementing documents assign more detailed responsibilities and requirements and define the organizational interfaces involved in conducting activities within the scope of the QATR. Compliance with the QATR and implementing documents is mandatory for personnel directly or indirectly associated with implementation of the NSPM QAP.

Peter Gardner

Signed _____

(per PCR 602000027127 approval)
Senior Vice President, Chief Nuclear Officer
NSPM

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Northern States Power Company – Minnesota

Quality Assurance Topical Report

NSPM-1

Revision 16

Approved by:

Peter Gardner approval in SAP

Peter Gardner Date
Senior Vice President, Chief Nuclear Officer

Aaron Chladil approval in SAP

Aaron Chladil Date
NOS Fleet Oversight Manager

PCR 602000027127

NRC Approvals:
Revision 0 – Not Required
Revision 1 – Not Required
Revision 2 – Not Required
Revision 3 – NRC Evaluation dated 07/09/2010
Revision 4 – Not Required
Revision 5 – Not Required
Revision 6 – Not Required
Revision 7 – Not Required
Revision 8 – NRC Evaluation dated 02/20/2015
Revision 9 – Not Required
Revision 10 – NRC Evaluation dated 11/28/2016
Revision 11 – Not Required
Revision 12 – Not Required
Revision 13 - Not Required
Revision 14 – Not Required
Revision 15 – Not Required
Revision 16 – Not Required

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Introduction

The NSPM Quality Assurance Topical Report describes the methods and establishes quality assurance program and administrative control requirements that meet 10 CFR 50, Appendix B and apply during the operational phase of plant life. However, this Quality Assurance Topical Report (QATR) is organized and formatted to respond to NRC Standard Review Plan (NUREG 0800) Section 17.3 (Revision 0 – August 1990). NSPM has chosen this approach because it best represents the NSPM commitment to the philosophy that each individual, properly trained and motivated, achieves the highest quality of performance of which they are capable.

A. Management

A.1 Methodology

The Quality Assurance Topical Report (QATR) is the top-level policy document that establishes the quality policy and assigns major functional responsibilities for plants operated by NSPM. The following requirements apply to all organizations and positions under the direction of the Senior Vice President/Chief Nuclear Officer that manage and perform activities within NSPM's scope. The NSPM organization is committed to implementing these requirements. NSPM personnel engaged in supporting nuclear generation shall comply with the requirements of the Quality Assurance Program (QAP) described in this QATR. Contractors, or other organizations supporting NSPM, are required to comply with the QAP established by this QATR, or with their own programs having appropriate scope and controls in accordance with A.2. All facilities shall be operated in compliance with the applicable Code of Federal Regulations, NRC Operating Licenses, and the applicable laws and regulations of the state and local governments in which the facility is located.

The NSPM QAP comprises those planned and systematic actions necessary to provide confidence that structures, systems, and components will perform their intended safety functions. The QAP consists of the NRC approved regulatory document that describes the quality assurance program elements (the QATR) along with the associated headquarter, fleet, and site implementing documents. Corporate Directives establish high level responsibilities and authority for carrying out important functions. Fleet Procedures establish common practices for certain activities such that the activity is controlled and carried out in a manner that meets QAP requirements. Site and department procedures establish detailed implementation requirements and methods and may be used to implement Corporate Directives and Fleet Procedures or be unique to particular functions or work activities. In addition, to provide a clear understanding of NSPM operating philosophy, NSPM establishes rules of practice pertaining to personnel conduct and control, including consideration of job related factors which can influence the effectiveness of operating and maintenance personnel, including such factors as number of hours at duty station, availability on-call of professional and supervisory personnel, method of conducting operations, and preparing and retaining plant documents. Such rules are contained within appropriate implementing documents.

The QAP applies to activities affecting the performance of safety-related structures, systems and components, including, but not limited to, design; procurement; fabrication; installation; modification; maintenance; repair; refueling; operation; training, inspection; and tests.* A list, or other means of identification, of safety related Systems, Structures, and Components (SSC) under the control of the QAP is established and maintained for each operating plant. The technical aspects of the items are considered when determining program applicability, including, as applicable, the item's design safety function, results of probabilistic safety analysis, the ASME Code and the other references cited in section A.7.3 of this QATR. The QAP is also applied to certain activities where regulations other than 10 CFR 50 establish QA program requirements for activities within their scope. Thus, this QATR is applied to the "important to safety" activities of radioactive waste shipping and independent spent fuel storage, as defined in those NRC regulations, as allowed by 10 CFR 71.101.f and 10 CFR 72.140.d.

NSPM applies alternative treatments allowed through the implementation of 10 CFR 50.69, Risk-Informed Categorization and Treatment of Structures, Systems and Components for Nuclear Power Reactors. Implementation of 10 CFR 50.69 allows treatment of safety related components in an alternative manner for specifically identified special treatment programs identified in 10 CFR 50.69(b). Some of these special treatment requirements are listed in Section A.7 of this QATR. Implementation also requires that non-safety related components that are identified as safety significant must also be verified to be capable of providing their safety significant function in a reliable manner.

It is NSPM's policy to assure a high degree of availability and reliability of its nuclear plants while ensuring the health and safety of the public and its workers. To this end, selected elements of the Quality Assurance Program are also applied to certain equipment and activities that are not safety related, but support safe and reliable plant operations, or where other non-CFR NRC guidance establishes program requirements. These include, but may not be limited to, emergency preparedness, security, radiation protection and fire protection.* Implementing documents establish program element applicability.

Activities affecting quality are prescribed by and performed according to documents (such as instructions, procedures or drawings) of a type appropriate to the circumstances and which, where applicable, include quantitative or qualitative acceptance criteria. Such documents are prepared and controlled according to section B.14. In addition, means are provided for dissemination to plant staff of instructions of both general and continuing applicability (e.g., dealing with job turnover and relief, designation of confines of the control room, limitations on access to certain areas), as well as those of short-term applicability (e.g., dealing with short-term operating conditions, publications, personnel actions). Provisions are included for review, updating, and cancellation of such instructions.

In establishing, implementing and maintaining the QATR, NSPM commits to compliance with ASME NQA-1, 1994, Basic Requirement 2. QATR revisions are reviewed by NSPM Senior Management and approved by the NSPM Senior Vice President, Chief Nuclear Officer. Changes to this QATR will be governed by and made in compliance with 10 CFR 50.54(a).

In establishing procedural controls, NSPM commits to compliance with NQA-1, 1994, Basic Requirement 5. In addition, as stated in position C.1 of Regulatory Guide 1.33, Revision 2, NSPM commits to use Appendix A of Regulatory Guide 1.33 as guidance for establishing the types of procedures that are necessary to control and support plant operation. Requirements specific to procedures are also provided in Appendix B of this QATR.

*As NSPM retains ownership of the operating nuclear power plants and is not actively decommissioning, this QATR does not address “decommissioning” as an activity within its scope. Should NSPM become involved in plant decommissioning, this QATR will be revised, or a separate QATR developed, to assure appropriate programmatic controls are applied to that activity.

A.2 Organization

This section describes the NSPM organizational structure, functional responsibilities, levels of authority and interfaces for establishing, executing, and verifying QAP implementation. The organizational structure includes headquarter functions and onsite functions at each plant. Implementing documents assign more specific responsibilities and duties, and define the organizational interfaces involved in conducting activities and duties within the scope of this QATR.

The NSPM Senior Vice President, Chief Nuclear Officer has overall responsibility for establishing quality policy and implementation of the quality program. The authority to accomplish quality assurance functions is delegated to the staff as necessary to fulfill the identified responsibilities.

Personnel executing performance activities and those performing verification activities are functionally independent to the degree commensurate with the activity's relative importance to safety. The method and extent of verification is commensurate with importance of the activity to plant safety and reliability. The organization executing independent audit activities maintains independence from the organization(s) performing the activity being audited. Management positions are established for carrying out the independent audit function. Individuals filling these positions:

- Have sufficient authority and organizational freedom to implement their assigned responsibilities, including authority to obtain access to records and personnel as needed to perform audits.
- Report to a sufficiently high management level to ensure that cost and schedule considerations do not unduly influence decision making.
- Have effective lines of communication with persons in other senior management positions.
- Have no unrelated duties or responsibilities that would preclude full attention to assigned responsibilities.

Responsible individuals or organizations may delegate any or all of their responsibility. When work is delegated to personnel or organizations outside of NSPM, the responsibility for the program effectiveness and the work is retained by NSPM, and the delegation shall be identified and described such that:

- The organizational elements responsible for the work are identified.
- Management controls and lines of communication are established.
- Responsibility for an appropriate QAP and extent of NSPM management oversight is established.
- Performance of delegated work is formally evaluated by NSPM.

In establishing its organizational structure, NSPM commits to compliance with NQA-1, 1994, Basic Requirement 1 and Supplement 1S-1. Management gives careful consideration to the timing, extent and effects of organizational structure changes.

A.2.1 Headquarter Organization

The following positions have the described headquarter functional responsibilities for assuring that an appropriate QAP has been established and verifying that actions affecting quality have been correctly performed (detailed headquarter organizational structure is controlled by corporate directives). Specific functional responsibilities may be delegated to others as established in this document. Some titles and reporting relationships may vary, but in all cases there is a designated position to carry out the defined responsibilities:

A.2.1.1 Senior Vice President, Chief Nuclear Officer (Sr. VP/CNO)

This position has overall responsibilities for establishing quality policy and implementation of the quality program, and safe and reliable operation of nuclear stations operated by NSPM. These responsibilities include setting and implementing policies, objectives, and priorities to ensure activities are performed in accordance with QAP and other headquarter requirements. The Sr. VP/CNO is designated as the Company Officer responsible for assuring that defects and non-compliances are reported to the NRC as required by 10 CFR 21.

A.2.1.1.a Senior Manager, Nuclear Oversight

A senior management position, independent of cost and scheduling concerns is responsible for establishing, maintaining, and interpreting NSPM quality assurance policies and procedures; establishing the requirements for auditor and inspector certification; managing the overall independent audit process; establishing quality control practices and policies for quality verification activities; and controlling and maintaining the QATR. Functional responsibilities include conducting independent audits of line and support activities; monitoring and assessing day-to-day station activities; stop work authority; periodic reporting on the status and adequacy of the quality program; and providing quality verification and inspections. Additionally, this position provides for supplier evaluation; the conduct of supplier audits or surveys (including their sub-tier suppliers); and verification that supplier quality assurance programs comply with NSPM requirements.

A.2.2 Site Organization

The following site NSPM management positions describe the typical site QAP functional responsibilities for assuring that an appropriate QAP has been established and verifying that actions affecting quality have been correctly performed. Functional responsibilities may be delegated to others as established within the QAP. Some titles and reporting relationships may vary at some sites, but in all cases there is a designated position to carry out the defined responsibilities. The on-site operating organization includes one or more individuals knowledgeable in the following fields: nuclear power plant operation; nuclear power plant mechanical, electrical and electronic systems; nuclear engineering; chemistry and radiochemistry; radiation protection; and quality assurance. Procedures provide detailed organizational descriptions.

A.2.2.1 Site Vice President (SVP)

This position is responsible for overall plant nuclear safety and the implementation of the QAP. This position is also responsible for station compliance with NRC operating license, governmental regulations, ASME Code requirements (if applicable), maintenance and production planning, and provides day-to-day direction and management of plant operations activities.

A.2.2.1.a Plant Manager

This position is responsible for plant operations. This position assures the safe, reliable, and efficient operation of the plant within the constraints of applicable regulatory requirements, operating license, and the QAP. Functional areas of responsibility also include chemistry activities, environmental services, fuel handling (receipt, movement, and storage), health physics/radiological protection, operations and support, and related procedures and programs. The Plant Operating Review Committee reports to the Plant Manager and provides review of plant safety and performance (see Appendix A).

A.3 Responsibility

NSPM retains and exercises the responsibility for the scope and implementation of an effective QAP. Positions identified in A.2 may delegate all or part of the activities of planning, establishing, and implementing the program for which they are responsible to others, but retain the responsibility for the program's effectiveness. Decisions affecting safety are made at the level appropriate for its nature and effect, and with any necessary technical advice or review.

Senior management is regularly apprised of audit results evaluating the adequacy of implementation of the QAP.

NSPM ensures that the QAP is properly documented, approved and implemented before an activity within the scope of the program is undertaken. Management is responsible to assure that processes and procedures comply with QATR and other applicable requirements, and that employees comply with them. Management provides for regular self-assessment of the adequacy of that part of the program for which they are responsible and assures its effective implementation. Individual managers ensure that personnel working under their management cognizance are provided the necessary training and resources to accomplish their assigned tasks. Managers and supervisors are responsible for timely and continuing monitoring of performance to verify that day-to-day activities are conducted safely and in accordance with applicable requirements.

As described in Section C, Nuclear Oversight is responsible to verify that processes and procedures comply with QATR and other applicable requirements, that such processes or procedures are implemented, and that management appropriately ensures compliance.

Documents that implement the quality program are approved by responsible management; distributed; and revised in accordance with procedures. Work within the scope of the QAP is accomplished in accordance with these documents.

In addition, operating personnel responsibilities include:

- The reactor operator's authority and responsibility for shutting down the reactor when it is determined that the safety of the reactor is in jeopardy or when operating parameters exceed any of the reactor protection system set-points and automatic shutdown does not occur.
- The responsibility to determine the circumstances, analyze the cause, and determine that operations can proceed safely before the reactor is returned to power after a trip or an unexplained or unscheduled power reduction.
- The senior reactor operator's responsibility to be present at the plant and to provide direction for returning the reactor to power following a trip or an unscheduled or unexplained power reduction.
- The responsibility to believe and respond conservatively to instrument indications unless they are proved to be incorrect.
- The responsibility to adhere to the plant's Technical Specifications.
- The responsibility to review routine operating data to assure safe operation.
- The responsibility to take action to minimize personnel injury or damage to the facility and to protect the health and safety of the public in the event of an emergency not covered by approved procedures.

In establishing QAP responsibilities, NSPM commits to compliance with NQA-1, 1994, Basic Requirement 1 and Supplement 1S-1.

A.4 Authority

When NSPM delegates responsibility for planning, establishing, or implementing any part of the overall QAP, sufficient authority to accomplish the assigned responsibilities is delegated. Regardless of delegation, NSPM retains overall responsibility.

Responsibility and authority to stop unsatisfactory work, as delineated in section A.2, includes authority to control further processing, delivery, installation, operation or use of nonconforming items. This assures that cost and schedule considerations do not override safety considerations.

In establishing QAP authorities, NSPM commits to compliance with NQA-1, 1994, Basic Requirement 1 and Supplement 1S-1.

A.5 Personnel Training and Qualification

Personnel assigned to implement elements of the QAP must be capable of performing their assigned tasks. To this end NSPM establishes and maintains formal indoctrination and training programs for personnel performing, verifying or managing activities within the scope of the QAP to assure that suitable proficiency is achieved and maintained. Generating site and support staff minimum qualification requirements are as delineated in each site's Technical Specifications. Other qualification requirements may be established but will not reduce those required by Technical Specifications. Sufficient managerial depth is provided to cover absences of incumbents. When required by code, regulation, or standard, specific qualification and selection of personnel is conducted in accordance with those requirements as established in the applicable NSPM procedures. Indoctrination includes the administrative and technical objectives, requirements of the applicable codes and standards, and the QAP elements to be employed. Training for positions identified in 10 CFR 50.120 is accomplished according to programs accredited by the National Nuclear Accrediting Board of the National Academy of Nuclear Training that implement a systematic approach to training. Records of personnel training and qualification are maintained.

In establishing qualification and training programs, NSPM commits to compliance with NQA-1, Basic Requirement 2 and Supplements 2S-1, 2S-2, 2S-3 and 2S-4, with the following clarifications and exceptions:

- For Supplement 2S-1: Inspections, examinations or tests may be performed by individuals in the same organization as that which performed the work, provided that (a) the qualifications of the inspector for an activity are equal to or better than the minimum qualifications for persons performing the activity, (b) the work is within the skills of personnel and/or is addressed by procedures, and (c) if work involves breaching a pressure-retaining item, the quality of the work can be demonstrated through a functional test (Note: pressure-retaining items are components that comprise the pressure boundary of any ASME section Xl code class component or the pressure boundary of any safety-related component. The term "pressure retaining" is not applied to non-pressure boundary components such as shafts, stems, trim, spray nozzles, bearings, bushings, springs, wear plates, seals, packing, gaskets, valve seats and threaded joints).[1] When a, b and c are not met, inspections, examinations or tests are carried out by individuals certified in accordance with Supplement 2S-1. Individuals performing visual inspections required by the ASME Boiler and Pressure Vessel Code are qualified and certified according to Code requirements. (Note: Quality of work relates to restoring the breach in the pressure boundary. If functional testing can demonstrate adequacy of pressure boundary restoration, then inspection by certified individuals would not be required. Quality of the work may, however, be defined to include critical characteristics beyond simply passing a pressure test, such as correct materials, absence of foreign material or correct fastener torque. These characteristics might be important for continued pressure boundary integrity or compliance with design specifications. If these are relevant considerations, then inspection by certified individuals would be necessary to demonstrate the quality of the work. The application of peer vs. certified inspections for pressure-retaining items is a case by case planning/engineering decision).[1]

[1] Ref. QATR Interpretation 11-01, Rev 1.

- In lieu of Non-mandatory Appendix 2A-1, NSPM does not establish levels of qualification/ certification for inspection personnel. Instead, NSPM establishes initial qualification requirements and determines individual qualification through evaluation of education, training and experience, and through demonstration of capability in performing the type of inspections expected on the job.
- In lieu of Supplement 2S-2, for qualification of nondestructive examination personnel, NSPM will follow the applicable standard cited in the version(s) of Section XI of the ASME Boiler and Pressure Vessel Code approved by the NRC for use at NSPM sites.
- For Supplement 2S-3: The requirement that prospective Lead Auditors have participated in a minimum of five (5) audits in the previous three (3) years is replaced by the following, "The prospective lead auditor shall demonstrate his/her ability to properly implement the independent audit process, as implemented by NSPM according to section C.2 of this QATR, to effectively lead an audit team, and to effectively organize and report results, including participation in at least one audit within the year preceding the date of qualification."

A.6 Corrective Action

NSPM management, at all levels, fosters a non-punitive ("no-fault") attitude toward the identification of conditions adverse to quality. This includes failures, malfunctions, deficiencies, deviations, defective material and equipment, abnormal occurrences, nonconformances, and out-of-control processes, including the failure to follow procedures.

NSPM implements a corrective action program to promptly identify, control, document, classify, and correct conditions adverse to quality. In addition, for significant conditions adverse to quality, the program provides for cause evaluation and corrective actions to prevent recurrence. Provisions are also made to ensure that corrective actions for significant conditions adverse to quality are completed as intended and are not inadvertently nullified by subsequent actions. Results of evaluations of conditions adverse to quality are analyzed to identify trends. Significant conditions adverse to quality and significant adverse trends are documented and reported to responsible management.

Prior to installation, nonconforming items, services or activities are reviewed and accepted, rejected, repaired, or reworked, and are identified and controlled to prevent their inadvertent test, installation or use.

In establishing requirements for corrective action, NSPM commits to compliance with NQA-1, 1994, Basic Requirements 15 and 16, and Supplement 15S-1.

A.7 Regulatory Commitments

A.7.1

Through this QATR, NSPM commits to compliance with the following:

- 10 CFR 50, Appendix B, Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants
- 10 CFR Part 71, Subpart H, Quality Assurance for Packaging and Transportation of Radioactive Material
- 10 CFR Part 72, Subpart G, Quality Assurance for Licensing Requirements for the Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste

- 10 CFR Part 21, Reporting of Defects and Non-Compliance
- General Design Criterion 1, of Appendix A to 10 CFR Part 50
- 10 CFR 50.55a, Codes and standards

A.7.2

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 (see A.7.3).

A.7.3

NSPM also is committed to carrying out the provisions of certain nuclear quality assurance industry standards, other than ASME NQA-1. The extent of the NSPM commitment to each of the Regulatory Positions of related NRC Regulatory Guides and Generic Letters is specifically described below. Commitment to a particular Regulatory Guide does not constitute commitment to Regulatory Guides or other standards that may be referenced therein, unless otherwise noted.

- Regulatory Guide 1.8, Qualification and Training of Personnel for Nuclear Power Plants – NSPM commitments regarding qualification and training of personnel are described in Section A.5 of this QATR, which states that staff qualification requirements are as delineated in each site's Technical Specifications, and that training for positions identified in 10 CFR 50.120 is accomplished according to programs accredited by the National Nuclear Accrediting Board of the National Academy for Nuclear Training.

- Safety/Regulatory Guide 1.26, Revision (site specific) Quality Group Classifications and Standards for Water-, Steam-, and Radioactive Waste-Containing Components of Nuclear Power Plants – Commitment to Safety/Regulatory Guide 1.26 is site specific, as required by the approved UFSAR/License at each NSPM site. Sites not committed to RG 1.26 may use this guidance to assist in establishing the lists of equipment to which this QAP applies, or for other purposes.

- Regulatory Guide 1.28, Revision 3, August 1985, Quality Assurance Program Requirements (Design and Construction) (ASME NQA-1, 1983a) – NSPM does not commit to compliance with position C.1 of this Regulatory Guide; instead of establishing three levels of qualification provided in Non-mandatory Appendix 2A-1, NSPM establishes initial qualification requirements and determines individual qualification through evaluation of education, training and experience, and through demonstration of capability in performing the type of inspections expected on the job. NSPM complies with position C.2 for record retention times, and position C.3.2 for external audits, with the exception that for position C.3.2.1 NSPM will conduct or arrange for the conduct of triennial supplier audits with a maximum extension not to exceed 25% of the audit interval, except that a total combined interval for any three consecutive audits will not exceed 3.25 times the specified frequency, and for position C.3.2.2, NSPM will review the information described therein as it becomes available through its ongoing receipt inspection, operating experience, and supplier evaluation programs, in lieu of performing a specific evaluation on an annual basis. The results of the reviews are promptly considered for effect on a supplier's continued qualification and adjustments made as necessary (including corrective actions, adjustments of supplier audit plans, and input to third party auditing entities, as warranted). Additionally, results are reviewed periodically

to determine if, as a whole, they constitute a significant condition adverse to quality requiring additional action. In lieu of compliance with Regulatory Position C.3.1, NSPM establishes independent audit frequencies as described in section C of this QATR. In lieu of NQA-1 1983a, NSPM uses NQA-1 1994.

- Safety/Regulatory Guide 1.29, Revision (site specific) Seismic Design Classification – Current NSPM plants were designed, constructed and licensed based on criteria available prior to this Regulatory Guide being issued. The specific design criteria and seismic designations are reflected in each plant's UFSAR, and in other docketed analysis. Thus, the commitment to Safety/Regulatory Guide 1.29 is site specific, as required by the approved UFSAR/License at each NSPM site. Sites not committed to RG 1.29 may use this guidance to assist in establishing the lists of equipment to which this QAP applies, or for other purposes

- Regulatory Guide 1.30, August 1972, Quality Assurance Requirements for the Installation, Inspection and Testing of Instrumentation and Electric Equipment, (ANSI N45.2.4-1972/IEEE 336-1971) – NSPM substitutes NQA-1 1994, Subpart 2.4/IEEE 336-1985 for N45.2.4 in its commitment to Regulatory Guide 1.30. As noted in Regulatory Position C.1, Subpart 2.4 is being used in conjunction with NQA-1, Part 1, which replaced ANSI N45.2. As noted in Regulatory Position C.2, other industry standards may be referenced; the commitment in this QATR to NQA-1, Subpart 2.4 includes commitment to those standards to the extent necessary to implement Subpart 2.4 requirements. If NRC guidance applies to those referenced standards, it is followed. Regulatory Position C.3 indicates that the requirements of the endorsed standard should also be considered applicable during the operation phase of the nuclear power plant. This is addressed in sections B.12 and B.16 of this QATR, which also establish any necessary exceptions or alternatives to the provisions of Subpart 2.4.

- Regulatory Guide 1.33, Revision 2, February 1978, Quality Assurance Program Requirements (Operation) (N18.7) – NQA-1 contains quality assurance requirements equivalent to those of ANSI N18.7, and NSPM has included in this QATR the remaining "administrative controls" elements from N18.7 (1976). Therefore, NSPM does not commit to compliance with the requirements of ANSI N-18.7. As recommended by Regulatory Position C.1, NSPM uses Appendix A of RG 1.33 as guidance in establishing the types of procedures required for plant operation and support. Regulatory Position C.2 is no longer considered valid, as the referenced standards and guidance have now been incorporated into ASME NQA-1 1994, or are addressed specifically in this section. Regulatory Position C.3 does not apply since NSPM does not use independent/offsite review. In lieu of compliance with Regulatory Position C.4, NSPM establishes audit topics and frequencies as described in section C.2 of this QATR. In lieu of compliance with Regulatory Position C.5, NSPM has established appropriate equivalent requirements within this QATR.

- Regulatory Guide 1.36, Revision 0, February 1973, Nonmetallic Thermal Insulation for Austenitic Stainless Steel – None of the current NSPM plants were committed to this Regulatory Guidance during original construction. Regulatory Guide 1.36 may be used for plant modifications on a case by case basis, but this QATR makes no generic commitment thereto.

- Regulatory Guide 1.37, March 1973, Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants, (ANSI N45.2.1-1973) – NSPM substitutes NQA-1 1994, Subpart 2.1 for N45.2.1 in its commitment to Regulatory Guide 1.37. As noted in Regulatory Position C.1, other industry standards may be referenced; the commitment in this QATR to NQA-1, Subpart 2.1 includes commitment to those standards to the extent necessary to implement Subpart 2.1 requirements. If NRC guidance applies to those referenced standards, it is followed. Regulatory Positions C.3, C.4 and C.5 recommend alterations to certain provisions of N45.2.1. The provisions of NQA-1, Subpart 2.1 establish requirements that are consistent with those recommendations. Regulatory Position C.2 indicates that the requirements of the endorsed standard should be used during the operations phase "when applicable." This is addressed in sections B.7 and B.16 of this QATR, which also establish any necessary exceptions or alternatives to the provisions of Subpart 2.1.

- Regulatory Guide 1.38, Revision 2, May 1977, Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage, and Handling of Items for Water-Cooled Nuclear Power Plants, (ANSI N45.2.2-1972) – NSPM substitutes NQA-1 1994, Subpart 2.2 for N45.2.2 in its commitment to Regulatory Guide 1.38. As noted in Regulatory Position C.1.a, other industry standards may be referenced; the commitment in this QATR to NQA-1, Subpart 2.2 includes commitment to those standards to the extent necessary to implement Subpart 2.2 requirements. If NRC guidance applies to those referenced standards, it is followed. Regulatory Position C.1.b modifies a provision of N45.2.2 such that the minimum load for dynamic testing to re-rate hoisting equipment for special lifts becomes 110% of the rated load. The Handling section (7) of NQA-1, Subpart 2.2 defers to the provisions of Subpart 2.15. NSPM does not commit to Subpart 2.15, as there is no current NRC guidance regarding the other provisions of this part. For purposes of compliance to Regulatory Guide 1.38, Position C.1.b, NSPM commits to follow the guidance as stated (see section B.7). Regulatory Positions C.1.c, C.1.e, C.2.a, C.2.b, C.2.c, C.2.d and C.2.e recommend alterations to certain provisions of N45.2.2. The provisions of NQA-1, Subpart 2.2 establish requirements that are consistent with those recommendations. Regulatory Position C.1.d indicates that the requirements of the endorsed standard should be used during the operations phase "when applicable." This is addressed in section B.7 of this QATR, which also establishes any necessary exceptions or alternatives to the provisions of Subpart 2.2.

- Regulatory Guide 1.39, Revision 2, September 1997, Housekeeping Requirements for Water-Cooled Nuclear Power Plants, (ANSI N45.2.3-1973) – NSPM substitutes NQA-1 1994, Subpart 2.3 for N45.2.3 in its commitment to Regulatory Guide 1.39. As noted in Regulatory Position C.1, other industry standards may be referenced; the commitment in this QATR to NQA-1, Subpart 2.3 includes commitment to those standards to the extent necessary to implement Subpart 2.3 requirements. If NRC guidance applies to those referenced standards, it is followed. Regulatory Position C.2 indicates that the provisions of section 3.2.3 of N45.2.3 are not part of the Regulatory endorsement. As NQA-1, Subpart 2.3, section 3.2.3 has the same wording as N45.2.3, the Regulatory Position is applicable and will be followed in NSPM's implementation of Subpart 2.3. Regulatory Position C.3 indicates that the endorsed standard is "applicable for housekeeping activities during the operations phase that are comparable to those occurring during construction." This is addressed in section B.7 of this QATR, which also establishes any necessary exceptions or alternatives to the provisions of Subpart 2.3.

- Regulatory Guide 1.54, Revision 0, June 1973, Quality Assurance for Protective Coatings Applied to Nuclear Power Plants, (N101.4-1972) - Commitment to Regulatory Guide 1.54 is site specific, as required by the approved UFSAR/License at each NSPM site.

- Regulatory Guide 1.94, Revision 1, April 1976, Quality Assurance Requirements for Installation, Inspection, and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants, (ANSI N45.2.5-1974) – NSPM substitutes NQA-1 1994, Subpart 2.5 for N45.2.5 in its commitment to Regulatory Guide 1.94; however, Subpart 2.5 includes requirements for soils and foundations which were not included in N45.2.5, and the commitment to Subpart 2.5 herein does not include commitment to those requirements. As noted in Regulatory Position C.1, other industry standards may be referenced; the commitment in this QATR to NQA-1, Subpart 2.5 includes commitment to those standards to the extent necessary to implement Subpart 2.5 requirements. If NRC guidance applies to those referenced standards, it is followed. Regulatory Position C.2 recommends using the general planning provisions of N45.2.5 in conjunction with Regulatory Guide 1.55, which has since been withdrawn; therefore, this position is no longer applicable. Regulatory Positions C.3 and C.4 recommend alterations to certain provisions of N45.2.5. The provisions of NQA-1, Subpart 2.5 are consistent with those recommendations. Applicability and use of Subpart 2.5 is addressed in sections B.12 and B.16 of this QATR, which also establish any necessary exceptions or alternatives to the provisions of Subpart 2.5.

- Regulatory Guide 1.97, Revision 3, May 1983, Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident, (Table 1, paragraph 5) – In lieu of the Regulatory Guides listed in the Table, NSPM commits to the Regulatory Guidance and industry standards for quality assurance as described in this QATR. Commitment to the technical provisions of Regulatory Guide 1.97 is site specific as addressed in each plant UFSAR or other licensing commitments.

- Regulatory Guide 1.116, Revision 0-R, May 1977, Quality Assurance Requirements for Installation, Inspection, and Testing of Mechanical Equipment and Systems, (ANSI N45.2.8-1975) – NSPM substitutes NQA-1 1994, Subpart 2.8 for N45.2.8 in its commitment to Regulatory Guide 1.116. As noted in Regulatory Position C.1, other industry standards may be referenced; the commitment in this QATR to NQA-1, Subpart 2.8 includes commitment to those standards to the extent necessary to implement Subpart 2.8 requirements. If NRC guidance applies to those referenced standards, it is followed. Regulatory Position C.3 recommends using section 5 of N45.2.8 in conjunction with Regulatory Guide 1.68 for pre-operational, cold functional, and hot functional testing. While section 5 of NQA-1, Subpart 2.8 provides the same requirements, it is anticipated that NSPM plants, since they are already beyond these tests, will not need to implement Regulatory Guide 1.68. If testing in accordance with Regulatory Guide 1.68 becomes necessary, NSPM will comply with the guidance of the Regulatory Guide 1.116 position. Regulatory Position C.2 indicates that the endorsed standard should be “followed for those applicable operations phase activities that are comparable to activities occurring during the construction phase.” This is addressed in sections B.12 and B.16 of this QATR, which also establish any necessary exceptions or alternatives to the provisions of Subpart 2.8.

- 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 – Compliance to the quality assurance guidance cited in Regulatory Guide 1.143, Revision 2, November 2001 is site specific, as addressed in each plant USAR.

- Regulatory Guide 1.152, Revision 1, January 1996, Criteria for Digital Computers in Safety Systems of Nuclear Power Plants - None of the current NSPM plants were committed to this Regulatory Guidance during original construction. Regulatory Guide 1.152 may be used for plant modifications on a case by case basis, but this QATR makes no generic commitment thereto.

- Regulatory Guide 1.155, Revision 0, August 1988, Station Blackout (Position C.3.5) - NSPM commits to the quality assurance guidance cited in Position C.3.5, Appendix A. Compliance with Appendix B and the remainder of the [technical] positions of Regulatory Guide 1.155 is site specific, as addressed in each plant UFSAR or License commitments.

- Generic Letter 89-02/EPRI-NP-5652 (March 1988, and supplements through March 1993) – NSPM commits to compliance with the endorsed industry guidance regarding selection and qualification of commercial grade suppliers and dedication of commercial grade items for use in safety related applications.

- Branch Technical Position CMEB 9.5-1, Revision 2, July 1981 (Positions C.2 and C.4) – NSPM provisions for administrative controls for Fire Protection comply with site specific commitments, or with the provisions of Position C.2 of CMEB 9.5-1, Rev. 2, as specified in NRC approved site fire protection programs and the applicable NRC Safety Evaluation Reports. Application of the provisions of this QATR to fire protection activities provides elements of quality assurance that comply with site specific fire protection quality assurance commitments or with CMEB 9.5-1, Revision 2, Position C.4.

- Regulatory Guide 4.15, Revision 1, February 1979, Quality Assurance for Radiological Monitoring Programs (Normal Operations) – Effluent Streams and the Environment – NSPM commits to compliance with Regulatory Guide 4.15.

- Regulatory Guide 7.10, Revision 1, June 1986, Establishing Quality Assurance Programs for Packaging Used in the Transport of Radioactive Material – NSPM commits to implement the quality assurance guidance for activities related to the packaging and transport of radioactive material that are under its control. Quality Assurance for the design, fabrication and licensing of shipping containers is the responsibility of the container certificate holders.

- Generic Letter 85-06, April 1985, Quality Assurance Guidance for ATWS Equipment That Is Not Safety-Related - NSPM commits to the quality assurance guidance cited in the Generic Letter.

- Regulatory Issue Summary 2000-18, October 2000, Guidance on Managing Quality Assurance Records in Electronic Media – Should NSPM choose electronic media storage as a means of maintaining required records, NSPM will comply with the guidance of this Regulatory Issue Summary.

B PERFORMANCE/VERIFICATION

B.1 Methodology

Personnel who work directly or indirectly for NSPM are responsible for the achievement of acceptable quality in the work covered by this QATR. This includes design, engineering, procurement, manufacturing, construction, installation, start-up, maintenance, modifications, and operations.* NSPM personnel performing verification activities are responsible for verifying the achievement of acceptable quality. Activities governed by the QAP are performed as directed by documented instructions, procedures and drawings that are of a detail appropriate for the activity's complexity and effect on safety. Instructions, procedures and drawings specify quantitative or qualitative acceptance criteria as applicable or appropriate for the activity, and verification is against these criteria. Provisions are established to designate or identify the proper documents to be used in an activity, and to ascertain that such documents are being used.

B.2 Design Control

NSPM has established and implements a program to control the design of items that are subject to the provisions of this QATR (see A.1). The program includes provisions to control design inputs, processes, outputs, changes, interfaces, records and organizational interfaces. These provisions assure that design inputs (such as design bases and the performance, regulatory, quality, and quality verification requirements) are correctly translated into design outputs (such as specifications, drawings, procedures, and instructions) such that the final design output can be related to the design input in sufficient detail to permit verification. The program defines the interface controls (internal and external between participating design organizations and across technical disciplines) necessary to control the development, review, approval, release, distribution and revision of design inputs and outputs.

NSPM design processes provide for design verification (as described in Section B.3) that items and activities subject to the provisions of this QATR are suitable for their intended application, consistent with their effect on safety. Changes to final designs (including field changes) are subjected to these controls, which include measures commensurate with those applied to original plant design. Design changes and disposition of nonconforming items as "use as is" or "repair" are reviewed and approved by the responsible NSPM design authority.

NSPM maintains records sufficient to provide evidence that the design was properly accomplished. These records include the final design output and any revisions thereto, as well as record of the important design steps (e.g., calculations, analyses and computer programs) and the sources of input that support the final output.

*As NSPM retains ownership of the operating nuclear power plants and is not actively decommissioning, this QATR does not address "decommissioning" as an activity within its scope. Should NSPM become involved in plant decommissioning, this QATR will be revised, or a separate QATR developed, to assure appropriate programmatic controls are applied to that activity.

In addition, temporary design changes (temporary modifications), such as temporary bypass lines, electrical jumpers and lifted leads, and temporary trip-point settings, are controlled by procedures that include requirements for appropriate installation and removal verifications and status tracking.

In establishing its program for design control, NSPM commits to compliance with NQA-1, 1994, Basic Requirement 3, and Supplement 3S-1, Sections 1, 2, 3, 5, 6, and 7.

B.3 Design Verification

The NSPM design control program includes requirements for verifying the acceptability of design activities and documents, consistent with their effect on safety. This includes design inputs, design outputs and design changes. Design verification procedures are established and implemented to assure that an appropriate verification method is used, the appropriate design parameters to be verified are chosen, the acceptance criteria are identified, and the verification is satisfactorily accomplished and documented. Verification methods may include, but are not limited to, design reviews, alternative calculations and qualification testing. Testing used to verify the acceptability of a specific design feature demonstrates acceptable performance under conditions that simulate the most adverse design conditions expected for item's intended use.

NSPM completes design verification activities before the design outputs are used by other organizations for design work, and before they are used to support other activities such as procurement, manufacture or construction. When such timing cannot be achieved, the unverified portion of the design is identified and controlled such that, in all cases, the design verification is completed before relying on the item to perform its intended safety function.

The NSPM design verification can be performed by the designer's immediate supervisor, provided (1) the supervisor did not specify a singular design approach or rule out certain design considerations and did not establish the design inputs used in the design, or (2) the supervisor is the only technically qualified individual capable of performing the verification, and (3) the need is individually documented and approved in advance by the supervisor's management. The frequency and effectiveness of the use of supervisors as design verifiers are independently audited, as provided in Section C of this QATR, to guard against abuse.

In establishing its program for design verification, NSPM commits to compliance with NQA-1, 1994, Basic Requirement 3, and Supplement 3S-1, Section 4.

B.4 Procurement Control

NSPM establishes and implements controls to assure that purchased items (components, spares and replacement parts necessary for plant operation, refueling, maintenance and modifications) and services are subject to quality and technical requirements at least equivalent to those specified for original equipment or specified by properly reviewed and approved revisions to assure the items are suitable for the intended service, and are of acceptable quality, consistent with their effect on safety. These controls include provisions such that:

- 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. In the case of commercial-grade or "off-the-shelf" items and

services, this evaluation selects applicable critical characteristics and determines an appropriate dedication method for acceptance.

- Prospective suppliers of safety-related items and services are evaluated to assure that only qualified suppliers are used. Qualified suppliers are periodically evaluated to assure they continue to provide acceptable products and services. Industry programs, such as those applied by ASME, NUPIC, or other established utility groups, are used as input or the basis for supplier qualification whenever appropriate. In addition, NSPM commits to Position C.3.2 of Regulatory Guide 1.28, Revision 3, for auditing and evaluation of suppliers, with the exceptions that
    - For position C.3.2.1, NSPM will conduct or arrange for the conduct of triennial supplier audits with a maximum extension not to exceed 25% of the audit interval, except that a total combined interval for any three consecutive audits will not exceed 3.25 times the specified frequency.
    - for position C.3.2.2, NSPM will review the information described therein as it becomes available through its ongoing receipt inspection, operating experience, and supplier evaluation programs, in lieu of performing a specific evaluation on an annual basis. The results of the reviews are promptly considered for effect on a supplier's continued qualification and adjustments 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. NSPM 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 NSPM plants are not required to be evaluated or audited.

- Applicable technical, regulatory, administrative, quality and reporting requirements (such as specifications, codes, standards, tests, inspections, special processes, and 10 CFR 21) are invoked for procurement of items and services. Documentary evidence that an item conforms to these requirements is available at the site before relying on the item to perform its intended safety function. These documents are considered records according to section B.15.

- Provisions are made for accepting purchased items and services, such as source verification, receipt inspection, pre- and post-installation tests, certificates of conformance, and document reviews. Acceptance actions are completed to ensure that procurement, inspection, and test requirements, as applicable, have been satisfied before relying on the item to perform its intended safety function. Provisions are also established to enhance the detection of counterfeit and fraudulent items and to minimize the likelihood of such items in safety-related applications.

- Controls are imposed for the selection, determination of suitability for intended use (critical characteristics), evaluation, receipt and acceptance of commercial-grade or "off-the-shelf" items and services to assure they will perform satisfactorily in service in safety related applications. The commercial grade dedication process is consistent with Generic Letter 89-02 and 10 CFR 21. If a commercial grade item is modified, inspected and/or tested to demonstrate compliance to requirements more restrictive than the manufacturer's original specifications, then the item is uniquely identified as different from the off-the-shelf item and traceable to documents that record the difference.

- When purchasing commercial grade calibration or testing services from a laboratory holding accreditation by an accrediting body recognized by the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA), commercial grade surveys need not be performed provided each of the following conditions are met:
    - A documented review of the supplier's accreditation is performed and includes a verification of the following:
        - The calibration or test laboratory holds accreditation by an accrediting body recognized by International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA). The accreditation encompasses ISO/IEC-17025:2017, General Requirements for the Competence of Testing and Calibration Laboratories.
        - For procurement of calibration services, the published scope of accreditation for the calibration laboratory covers the needed measurement parameters, ranges, and uncertainties.
        - 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.
        - The laboratory has achieved accreditation based on an on-site accreditation assessment by the selected accrediting body within the past 48 months. The laboratory's accreditation cannot be based on two consecutive remote accreditation assessments.
    - The purchase documents require that:
        - The service must be provided in accordance with their accredited ISO/IEC-17025:2017 program and scope of accreditation.
        - As-found calibration data must be reported in the certificate of calibration when calibrated items are found to be out-of-tolerance. (for calibration services only)
        - The equipment/standards used to perform the calibration must be identified in the certificate of calibration. (for calibration services only)
        - Subcontracting of these accredited services is prohibited.
        - The customer must be notified of any condition that adversely impacts the laboratory's ability to maintain the scope of accreditation.
        - Performance of the services listed on this order is contingent on the laboratory's accreditation having been achieved through an on-site accreditation assessment by the Accreditation Body within the past 48 months.
        - 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.
    - It is validated, at receipt inspection, that the laboratory's documentation certifies that:
        - 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
        - The purchase order's requirements are met.

In establishing controls for procurement, NSPM commits to compliance with NQA-1, 1994, Basic Requirements 4 and 7, and Supplements 4S-1 and 7S-1, with the following exceptions:

- For Supplement 4S-1, section 2.3, which includes a requirement that procurement documents require suppliers to have a documented quality assurance program that implements NQA-1-1994, Part 1, NSPM may require suppliers to have a documented supplier quality assurance program that is determined to meet the applicable requirements of 10 CFR 50, Appendix B, as appropriate to the circumstances of the procurement. NSPM may also elect to purchase items or services commercially available and then dedicate them for safety-related service per Generic Letter 89-02/EPRI NP-5652.

- For Supplement 7S-1, section 8.1, documentary evidence that items conform to procurement requirements need not be available at the site prior to item installation, but will be available at the site prior to placing reliance on the item for its intended safety function.

B.5 Procurement Verification

NSPM establishes and implements measures to verify the quality of purchased items and services, whether purchased directly or through contractors, at intervals and to a depth consistent with the item's or service's importance to safety, complexity, quantity and the frequency of procurement. Verification actions include testing, as appropriate, during design, fabrication and construction activities associated with plant maintenance or modifications. Verifications occur at the appropriate phases of the procurement process, including, as necessary, verification of activities of suppliers below the first tier.

For acceptance of commercial grade calibration or testing services based solely on laboratory accreditation, receipt inspection verifies that the supplied documentation certifies that the service was performed in accordance with the supplier's ISO/IEC 17025:2017 program, and within the scope of accreditation of said program, and that purchase order requirements have been met.

In establishing procurement verification controls, NSPM commits to compliance with NQA-1, 1994, Basic Requirement 7 and Supplement 7S-1.

B.6 Identification and Control of Items

NSPM establishes and implements provisions for the identification and control of items to prevent the use of incorrect or defective items. This includes controls for consumable materials and items with limited shelf life. The identification of items is maintained throughout fabrication, erection, installation and use so that the item can be traced to its documentation, consistent with the item's effect on safety. Identification locations and methods are selected so as not to affect the function or quality of the item.

In establishing provisions for identification and control of items, NSPM commits to compliance with NQA-1, 1994, Basic Requirement 8 and Supplement 8S-1.

B.7 Handling, Storage and Shipping

NSPM establishes and implements provisions to control the handling, storage, shipping, cleaning and preservation of items to prevent inadvertent damage, loss or deterioration. These provisions include specific procedures, when required to maintain acceptable quality, for cleaning, handling, storage, packaging, shipping and preserving items important to safety. Items are appropriately marked and labeled during packaging, shipping, handling and storage to identify, maintain and preserve the item's integrity and indicate the need for special controls. Special controls (such as containers, shock absorbers, accelerometers, inert gas atmospheres, specific moisture content levels and temperature levels) are provided when required to maintain acceptable quality.

In establishing provisions for handling, storage and shipping, NSPM commits to compliance with NQA-1, 1994, Basic Requirement 13 and Supplement 13S-1. NSPM also commits to compliance with the requirements of NQA-1, 1994, Subpart 2.2, with the following exceptions:

- Subpart 2.2, section 2.2 establishes criteria for classifying items into protection levels. Instead of classifying items into protection levels, NSPM plants may establish controls for the packaging, shipping, handling and storage of such items on a case-by-case basis with due regard for the item's complexity, use, and sensitivity to damage. Prior to installation or use, the items are inspected and serviced as necessary to assure that no damage or deterioration exists which could affect their function.

- Subpart 2.2, section 5.2.2 requires receiving inspections be performed in an area equivalent in environmental controls to those for the level of storage of the item. At NSPM plants, receiving inspection area environmental controls may be less stringent than the storage environmental requirements for the item. Such inspections are performed in a manner and in an environment which does not endanger the required quality of the item.

- Subpart 2.2, section 7.1 refers to Subpart 2.15 for requirements related to handling of items. The scope of Subpart 2.15 includes hoisting, rigging and transporting of items for nuclear power plants. This scope exceeds the scope of the NRC's original endorsement of ANSI N45.2.2 in Regulatory Guide 1.38, and establishes requirements for which there is no NRC regulatory position. In lieu of compliance with Subpart 2.15, NSPM establishes and implements controls over hoisting, rigging and transport activities to the extent necessary to protect the integrity of the items involved, as well as potentially affected nearby structures and components. For re-rating of lifting equipment to allow "special lifts," NSPM performs dynamic load testing over the full range of the lift using test loads at least 110% of the lift weight. Dynamic tests include raising, lowering and traversing the load. Where required, NSPM complies with applicable hoisting, rigging and transportation regulations and codes.

Housekeeping practices during normal operations and maintenance activities, including refueling, are established to account for the control of radiation zones and other conditions or environments that could affect the quality of structures, systems and components within the plant. This includes control of cleanness of facilities and materials, fire prevention and protection, disposal of combustible material and debris, control of access to work areas, protection of equipment, radioactive contamination control and storage of solid radioactive waste. Housekeeping practices assure that only proper materials, equipment, processes and procedures are used and that the quality of items is not degraded as a result. Necessary procedures or work instructions, such as for electrical bus and control center cleaning, cleaning of control consoles, and radioactive decontamination are developed and used.

In addition, NSPM commits to compliance with the requirements of NQA-1, 1994, Subpart 2.1, to establish appropriate provisions for the cleaning of fluid systems and associated components; and Subpart 2.3, to establish appropriate provisions for housekeeping; with the following exceptions:

- Subpart 2.1, sections 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, NSPM plants may establish cleanness requirements on a case-by-case basis, consistent with the other provisions of Subpart 2.1. NSPM 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 materials prior to system closure.

- Instead of the five-level zone designation in Subpart 2.3, NSPM bases its control over housekeeping activities on a consideration of what is necessary and appropriate for the activity involved. The controls are effected through procedures or instructions which, in the case of maintenance or modification work, are developed on a case-by-case basis. Factors considered in developing the procedures and instructions include cleanliness control, personnel safety, fire prevention and protection, radiation control and security. The procedures and instructions make use of standard janitorial and work practices to the extent possible.

B.8 Test Control

NSPM establishes and implements testing programs to demonstrate that items subject to the provisions of this QATR will perform satisfactorily in service, that the plant can be operated safely and as designed, and that the coordinated operation of the plant as whole is satisfactory. These programs include criteria for determining when testing is required, such as proof tests before installation, pre-operational tests, post-maintenance tests, post-modification tests, inservice tests, and operational tests (such as surveillance tests required by Plant Technical Specifications), to demonstrate that performance of plant systems is in accordance with design intent. Programs also include provisions for establishing and adjusting test schedules and maintaining status for periodic or recurring tests. Tests are performed according to applicable procedures that include, consistent with the effect on safety, (1) instructions and prerequisites to perform the test, (2) use of proper test equipment, (3) acceptance criteria, and (4) mandatory verification points as necessary to confirm satisfactory test completion. Test results are documented and evaluated by the organization performing the test and reviewed by the appropriate authority having responsibility for the item being tested. If acceptance criteria are not met, retesting is performed as needed to confirm acceptability following correction of the system or equipment deficiencies that caused the failure.

In establishing provisions for testing, NSPM commits to compliance with NQA-1, 1994, Basic Requirement 11 and Supplement 11S-1.

B.9 Measuring and Test Equipment Control

NSPM establishes and implements provisions to control the calibration, maintenance, and use of measuring and test equipment, including installed plant instrumentation, that provide information important to safe plant operation. The provisions cover equipment such as

indicating and actuating instruments and gages, tools, reference and transfer standards, and nondestructive examination equipment. The provisions assure that:

- Measuring and test equipment is calibrated at specified intervals on the basis of the item's required accuracy, intended use, frequency of use, and stability characteristics or other conditions affecting its performance. Alternatively, equipment may be calibrated immediately before and after use if a defined interval is not appropriate.

- Measuring and test equipment is labeled, tagged or otherwise controlled to indicate its calibration status and provide traceability to calibration test data or records.

- Calibrations are performed against standards that have an accuracy of at least four times the required accuracy of the equipment being calibrated. When this is not possible, the standards have an accuracy that ensures the equipment being calibrated will be within the required tolerance.

- Where possible, calibration standards are traceable to appropriate national standards. Calibration standards have greater accuracy than the standards being calibrated, except where the same accuracy as the instruments being calibrated can be shown to be adequate for the service requirements.

- Measuring and test equipment found out of calibration is tagged or segregated and not used until it is successfully re-calibrated. An evaluation is performed to determine the acceptability of any items measured, inspected or tested with an out-of-calibration device from the time of the previous calibration.

In establishing provisions for control of measuring and test equipment, NSPM commits to compliance with NQA-1, 1994, Basic Requirement 12, Supplement 12S-1 and Subpart 2.16 for establishing appropriate requirements for calibration and control of measuring and test equipment, including installed plant instrumentation, with the following exception:

- Section 5.5 of IEEE 498-85 (NQA-1, Subpart 2.16) requires all M&TE to be labeled. As stated above, NSPM plants may not label certain M&TE, such as installed instrumentation, but provide other means of identification so appropriate controls can be implemented. This exception also applies to Section 7.2.1 of IEEE 336-85 (NQA-1, Subpart 2.4).

B.10 Inspection, Test and Operating Status

NSPM establishes and implements measures to identify the inspection, test and operating status of items and components subject to the provisions of this QATR in order to maintain personnel and reactor safety and avoid unauthorized operation of equipment. Where necessary to preclude inadvertent bypassing of inspections or tests, or to preclude inadvertent operation, these measures require the inspection, test or operating status be verified before release, fabrication, receipt, installation, test or use. These measures also establish the necessary authorities and controls for the application and removal of status indicators or labels. Equipment control provisions for workmen's protection comply with applicable federal and state OSHA regulations.

In establishing measures for control of inspection, test and operating status, NSPM commits to compliance with NQA-1, 1994, Basic Requirement 14.

B.11 Special Process Control

NSPM establishes and implements provisions to assure that special processes that require interim process controls to assure quality, such as welding, heat treating, chemical cleaning, and nondestructive examination, are controlled. These provisions include assuring that special processes are accomplished by qualified personnel using qualified procedures and equipment. Special processes are performed in accordance with applicable codes, standards, specifications, criteria or other specially established requirements. Special processes are those where the results are highly dependent on the control of the process or the skill of the operator, or both, and for which the specified quality cannot be fully and readily determined by inspection or test of the final product.

In establishing measures for the control of special processes, NSPM commits to compliance with NQA-1, 1994, Basic Requirement 9 and Supplement 9S-1, as well as the applicable ASME Boiler and Pressure Vessel Code provisions established via 10 CFR 50.55a.

B.12 Inspection

NSPM establishes and implements provisions for inspections to assure that items and activities affecting safety meet established requirements and conform to applicable documented instructions, procedures and drawings. Inspection may also be applied to items and activities affecting plant reliability. Types of inspections may include those related to maintenance, modification, in-service, and operational activities. Inspections are carried out by properly qualified persons independent of those who performed or directly supervised the work. (Note: QATR requirements can be met for peer inspection provided the individual meets the minimum qualifications for the task and was not the task performer or task supervisor. The individual can be assigned to the work order/job being inspected, provided the individual was not involved in the particular task subject to inspection). [2]

Inspection planning (for those activities subject to inspection) identifies the characteristics and activities to be inspected, the inspection techniques, the acceptance criteria and the organization responsible for performing the inspection. Inspection planning identifies required hold points, beyond which work is not to proceed without the consent of the inspection organization. Provisions for ASME Boiler and Pressure Vessel Code Authorized Inspections are included when required.

Inspection results are documented by the inspector and approved by authorized personnel. If acceptance criteria are not met, corrected areas are re-inspected.

In establishing inspection requirements, NSPM commits to compliance with NQA-1, 1994, Basic Requirement 10, Supplement 10S-1 and Subpart 2.4. In addition, for situations comparable to original construction, NSPM commits to compliance with the requirements of Subparts 2.5 and 2.8 for establishing appropriate inspection requirements.

B.13 Corrective Action

NSPM establishes and implements provisions to assure that personnel have both the responsibility and authority to identify conditions adverse to quality, and the opportunity to suggest, recommend or provide solutions to resolve the condition. Provisions also include verification of resolution of significant issues (see also section A.6). Reworked, repaired and

replacement items are inspected and tested to meet the original inspection or test requirements, or appropriately specified alternatives (see also sections B.8 and B.12).

If evidence indicates that common components in safety related systems have performed unsatisfactorily, compensatory or corrective measures are planned prior to replacement or repair of such components. Replacement components receive adequate testing or are of a design for which experience indicates a high probability of satisfactory performance. Consideration is given to phased replacement to permit inservice performance to be evaluated and minimize the possibility of systemic failure.

[2] Ref. QATR Interpretation 05-02 Rev 1.

In establishing provisions for corrective action and control of non-conforming items, NSPM commits to compliance with NQA-1, 1994, Basic Requirements 15 and 16, and Supplement 15S-1.

B.14 Document Control

NSPM establishes and implements provisions to specify the format and content (see Appendix B for procedures), and control the development, review, approval, issue, use and revision, of documents that specify quality requirements or prescribe activities affecting quality or safe operation to assure the correct documents are being employed. These provisions assure that specified documents are reviewed for adequacy, approved prior to use by authorized persons, and distributed according to current distribution lists and used at the location where the prescribed activity takes place. Procedures governing generating site activities (see Appendix B) are reviewed by qualified persons, other than the preparer, as designated by the Plant Manager (Note: only safety-related procedures, and procedures important to safety as used in 10 CFR 71 and 72, from the types listed in Appendix B of the QATR require this review. Most administrative procedures (site or Fleet) would not require this review)[3]. Such procedure review includes determination whether additional cross-discipline reviews are required. Only safety-related procedures, and procedures important to safety as used in 10 CFR 71 and 72, from the types listed in Appendix B, require this review. Provisions include establishing levels of use, such as requiring the document to be present at the work location. Documents subject to control provisions include, but are not limited to, drawings (design, as-built), engineering documents (calculations, analyses, specifications, computer codes, Updated Final Safety Analysis Reports, Plant Technical Specifications), and procedures (administrative, operating, emergency operating, maintenance, calibration, surveillance, inspection, test). Other documents, such as those related to procurement, corrective actions, and audits, are controlled as defined by the provisions and commitments cited in those sections of this QATR. Controlled copies of instructions and procedures are made available to and used by the persons performing the activity covered. New or revised controlled documents are made available in a timely fashion to support ongoing work and preclude use of incorrect information. Superseded documents are identified or removed from availability. Each site maintains documentation that describes how implementing documents are maintained to assure that QAP requirements are met and are not inadvertently removed in later revisions.

Revisions to controlled documents are reviewed for adequacy and approved for release by the same organization(s) as originally did so, or by other designated organizations that are qualified and sufficiently knowledgeable of the requirements and intent of the original document. NSPM also establishes programmatic procedure preparation, review and usage controls that ensure procedures are technically and administratively correct. These controls ensure that procedures

are reviewed when pertinent source material is revised (such as when Technical Specifications are revised), when unusual incidents occur, when plant modifications are made, and when significant deficiencies are identified. Procedures may also be reviewed because industry experience reviews, use during job execution or training, self-assessments, or independent audits identify deficiencies or opportunities for improvement. Revisions are made as necessary.

[3] Ref. QATR Interpretation 05-01.

Temporary changes to approved procedures that do not change the intent are approved by two members of plant staff knowledgeable in the areas affected by the procedure. Temporary changes to procedures identified in Appendix B are approved by two members of plant staff knowledgeable in the areas affected by the procedure, at least one of whom is a person holding an active senior reactor operator's license. Temporary changes are documented and, if appropriate, incorporated in the next revision of the procedure.

In establishing provisions for document control, NSPM commits to compliance with NQA-1, 1994, Basic Requirement 6 and Supplement 6S-1.

B.15 Records

NSPM establishes and implements provisions to ensure that sufficient records of items and activities affecting quality are generated and maintained to reflect completed work. Such records may include, but are not limited to, design, engineering, procurement, manufacturing, construction, inspection, test, installation, modification, operations, maintenance, corrective action, audit, and associated reviews. The provisions establish requirements for records administration, including generation, receipt, preservation, storage, safekeeping, retrieval and final disposition. For activities governed by 10 CFR 71 or 72, these provisions address the specific requirements of sections 71.135 and 72.174.

NSPM uses the list of records in 10 CFR 71.135, 10 CFR 72.174, and NQA-1 Non-mandatory Appendix 17A-1, supplemented by the recommended retention times established in Regulatory Guide 1.28, position C.2 (Table 1), to establish the types of records that will be created and retained in support of plant operation. Non-mandatory Appendix 17A-1 of NQA-1-1994 lists only those operations phase records having permanent (lifetime) retention; Regulatory Guide 1.28, Table 1, which provides for lifetime, 3, and 10 year (non-permanent) retention periods, does not specifically list operations phase record types. NSPM establishes appropriate retention times for non-permanent operations phase records based on similarity to the same record types identified in Table 1 of Regulatory Guide 1.28. Thus, non-permanent records are designated for 3 or 10 year retention, as required by NQA-1-1994, Supplement 17S-1, sections 2.7 and 2.8. In cases where local or State retention requirements are more restrictive than the regulatory guidance, the local requirements are met. In addition, when using electronic media storage as a means of maintaining required records, NSPM complies with NRC guidance in RIS 2000-18.

In lieu of applying 10 CFR 50, Appendix B Criterion XVII, the requirements for generation, control and maintenance of records of Safeguards Information (SGI) and personal identifiable information (PII) related to physical protection, safeguards, access authorization and fitness for duty activities are established consistent with applicable regulatory requirements, including 10 CFR 26 for Fitness for Duty, and 10 CFR 73 for Security and Access Authorization records.[4]

In establishing provisions for records, NSPM commits to compliance with NQA-1, 1994, Basic Requirement 17 and Supplement 17S-1, with the following exception:

- Supplement 17S-1, section 4.2(b) requires records to be firmly attached in binders or placed in folders or envelopes for storage in steel file cabinets or on shelving in containers. For hard-copy records maintained by NSPM, the records are suitably stored in steel file cabinets or on shelving in containers, except that methods other than binders, folders or envelopes may be used to organize the records for storage.

[4] Ref. QATR Interpretation 15-02.

B.16 Plant Maintenance

NSPM establishes controls for the maintenance or modification of items and equipment subject to this QATR to ensure quality at least equivalent to that specified in original design bases and requirements, such that safety-related structures, systems and components are maintained in a manner that assures their ability to perform their intended safety function(s). Maintenance activities (both corrective and preventive) are scheduled and planned so as not to unnecessarily compromise the safety of the plant. Permission to release equipment or systems for maintenance is granted by designated operating personnel who are responsible to verify that the equipment or system can be released and determine how long it may be out of service.

This includes attention to the potentially degraded degree of protection when one subsystem of a redundant safety system has been removed for maintenance. Release is documented. When equipment is ready to be returned to service, operating personnel place the equipment in operation and verify and document its functional acceptability. In completing maintenance and restoring equipment, attention is given to restoration of normal conditions, such as removal of jumpers or signals used in maintenance or testing, or such as returning valves, breakers or switches to proper operating positions.

In establishing controls for plant maintenance, NSPM commits to compliance with NQA-1, 1994, Subpart 2.18, with the following exceptions:

- Section 2.3.a requires cleanliness during maintenance to be in accordance with Subpart 2.1. NSPM commitment to Subpart 2.1 is described in section B.7.

- Section 2.7 requires the application of Subparts 2.4, 2.5 and 2.8 for inspections of installation activities. NSPM commitment to Subparts 2.5 and 2.8 is limited to activities comparable in nature and extent to those during original construction (see B.12). Inspections (verifications) of maintenance or modification activities are established, conducted and documented as required by Section B.12 to establish a suitable level of confidence in affected structures, systems, or components. The inspection criteria in Subparts 2.5 and 2.8 may be used in establishing required inspections for maintenance and minor modifications.

B.17 Computer Software Control

NSPM establishes and implements provisions to assure that computer software used in applications affecting safety is prepared, documented, verified and tested, and used such that the expected output is obtained and configuration control maintained. To this end NSPM commits to compliance with the requirements of NQA-1 1994, Supplement 11S-2 and Subpart 2.7 to establish the appropriate provisions.

C. ASSESSMENT

C.1 Methodology

NSPM establishes programs for reviews and audits to verify that activities covered by this QATR are performed in conformance with the requirements established, review significant proposed plant changes or tests, verify that reportable events are promptly investigated and corrected, and detect trends which may not be apparent to the day-to-day observer. These programs are, themselves, reviewed for effectiveness as part of the overall assessment process, as described herein. Nuclear Oversight provides for independent audit of work carried out under the requirements of the QAP that is delegated to other (non-NSPM) entities.

NSPM uses independent audits performed by the Nuclear Oversight organization to monitor overall performance, identify anomalous performance and precursors of potential problems, and verify satisfactory resolution of problems. Persons responsible for carrying out audits are cognizant of day-to-day activities such that they can act in a management advisory function with respect to the scope of the audit. Independent audits are accomplished using instructions or procedures that provide detail commensurate with the activity's complexity and importance to safety.

NSPM plants maintain plant operating review committees to review overall plant performance, and advise site Management on matters related to nuclear safety. Appendix A establishes the minimum requirements for these committees.

NSPM periodically performs independent reviews of matters involving the safe operation of its fleet of nuclear power plants, with a minimum of one such review being conducted for each generating site each year. The review addresses matters that plant and corporate management determine warrant special attention, such as plant programs, performance trends, employee concerns, or other matters related to safe plant operations. The review is performed by a team consisting of personnel with experience and competence in the activities being reviewed, but independent (from cost and schedule considerations) from the organizations responsible for those activities. The review is supplemented by outside consultants or organizations as necessary to ensure the team has the requisite expertise and competence. Results are documented and reported to responsible management.

C.2 Independent Audit

NSPM has established a program of planned and periodic independent audits to confirm that activities affecting quality comply with the QAP and that the QAP is effectively implemented. The organization performing independent audits (Nuclear Oversight) is technically and quality oriented, with its focus on the quality of the end product, compliance with established requirements, and the effective implementation of procedures and processes. Persons performing independent audits do not have direct responsibility for any area being examined, and do not report to a management position with immediate responsibility for the activity being audited. NSPM audit resources may be supplemented with technical specialists as needed. The independent audit program provides evaluations of activities and procedures. Planning for independent audits identifies the characteristics and activities to be audited and the relevant acceptance criteria. In addition, independent audits include examination of selected procedures to verify that the procedure review and revision controls of section B.14 are effectively implemented. As appropriate to the scope of an audit, these criteria include related plant Technical Specification requirements. Independent audits are then conducted using these predetermined criteria.

Scheduling and resource allocation for independent audits are based on the status, performance, and effect on safety of the activity or process being assessed. Scheduling is dynamic to provide for response to developing performance issues and resources are supplemented as necessary when performance is in question.
Independent audits are scheduled and completed such that:

- Certain programs or activities, as identified in Table 1, receive audits at frequencies established by related NRC rules.
- Audits of activities required by the QATR and to meet the criteria of 10 CFR 50, Appendix B, 10 CFR 72.140 and 10 CFR 71.101 are scheduled Nominally* at a 36-month frequency.
- Audits of additional required QATR topics listed in Table 2 are scheduled Nominally* at a 36- month frequency
- Schedules are based on the month in which the original audit exit was conducted. Thus, the subsequent audit exit must be conducted in the same month, but may be completed earlier or later in that month than the last exit.

*Nominally means that the audit may be completed within a period of 25% longer than the period stated. Thus, the next scheduled due date for a triennial audit could be no later than 45 months from the original audit schedule. Likewise, audits on an annual (12 month) frequency cannot be extended beyond 15 months. When an audit interval extension is used, the next audit for that particular audit area is scheduled from the original anniversary month rather than from the month of the extended audit. Audits completed earlier than the scheduled month result in establishing a new interval start date of the earlier month the audit exit was completed.

Table 1
Programs or Activities Subject to Regulatory-related Independent Audit Frequencies

Topic	Frequency	Basis
Emergency Planning	Annual (May be extended up to two years based on performance data)	10 CFR 50.54(t)
Fitness For Duty	Biennial (Nominally)	10 CFR 26.41(b)
Access Authorization (Contractor Programs)	Biennial (Nominally) (Annual (Nominally))	10 CFR 73.56(n)
Site Security (includes Safe-Guards Contingency Plans)	Annual (May be extended up to two years based on performance data)	10 CFR 73.55(m) 10 CFR 50.54(p)
Shipping of >Type A Radioactive Waste	Annual (Nominally)	Regulatory Guide 7.10

Table 2
Additional QATR required Activities to be Audited

Topic	Basis
Fire Protection • Prevention, Detection and Response • Alternate Shutdown Capability • Includes use of a non-company, qualified fire protection specialist	March 24, 2005 NRC approval of QATR
Radiological Environmental Monitoring	Regulatory Guide 4.15
Station Blackout	Regulatory Guide 1.155

An evaluation will be performed once per calendar year, to determine the need for additional audit activities. When determined necessary, an additional audit activity will be performed within a timeframe established by the evaluation. The evaluation will include consideration of the following:

- When significant changes are made in functional areas of the quality assurance program, such as significant reorganizations or procedure changes;
- When it is suspected that quality or safety is in jeopardy due to deficiencies in implementation of the quality assurance program;
- When necessary to verify implementation of significant corrective actions.

Results of independent audits are reported in an understandable form and in a timely fashion to a level of management having the authority to effect corrective action. Nuclear Oversight conducts timely follow-up action, including re-audit of deficient areas, as determined necessary to establish adequacy of corrective actions.
Independent audit results are documented and reviewed by Nuclear Oversight management and by management having responsibility for the area audited.
In establishing the independent audit program, NSPM commits to compliance with NQA-1, 1994, Basic Requirement 18 and Supplement 18S-1.

Appendix A — Plant Operating Review Committee

1.0 General

The Plant Operating Review Committee (PORC) is responsible to the Plant Manager for advice on all plant-related matters concerning nuclear safety. The requirements for personnel, committee composition, meeting frequency, quorum and meeting records are identified in implementing procedures. A general description of these areas is included below. (Note: Each plant may name this function differently. Regardless of the name, these requirements are met.)

In discharging its independent review responsibilities, PORC shall keep safety considerations paramount when opposed to cost or schedule considerations. Should a voting member at a particular meeting have direct responsibility for an item under review where a conflict of such considerations is likely, that member shall be replaced (to fill the quorum) by another voting member not having such potential conflict.

2.0 Composition

PORC is comprised of a minimum number of members as designated by the Plant Manager and detailed in implementing procedures. All members are qualified in accordance with implementing procedure requirements that meet site Technical Specifications. Membership includes representation from at least the following disciplines: Operations, Maintenance, Engineering, Radiation Protection and Chemistry. PORC collectively has, or has access to, the experience and competence necessary to review the areas of (1) nuclear power plant operations, (2) nuclear engineering, (3) chemistry and radiochemistry, (4) metallurgy, (5) nondestructive testing, (6) instrumentation and control, (7) radiological safety, (8) mechanical and electrical engineering, (9) administrative controls and quality assurance practices, and (10) other fields associated with the unique characteristics of the plant. Consultants may be utilized to provide expert advice as needed.

Alternate chairmen and members may be appointed by the Plant Manager to serve on a permanent or temporary basis.

3.0 Meetings

The PORC meets commensurate with the scope of activities, but minimal frequency requirements are specified in procedures.

Rules for a quorum are established and adhered to. However, no more than a minority of alternates may participate as voting members at any one time.

4.0 Review

The PORC reviews at least the following:

(1) The Offsite Dose Calculation Manual (ODCM) and the Process Control Program (PCP).
(2) Proposed tests or experiments that affect nuclear safety.
(3) Proposed changes or modifications to plant systems or equipment that affect nuclear safety.

Appendix A **Plant Operating Review Committee**

(4) Written 10 CFR 50.59/72.48 Evaluations to verify that changes to the facility or procedures, tests or experiments do not involve a change in the Technical Specifications or require prior NRC review.
(5) Proposed changes to Operating License and Technical Specifications.
(6) Reports covering violations of applicable statutes, codes, regulations, orders, Technical Specifications, license requirements, or of internal documents having nuclear safety significance.
(7) Reports of special reviews and investigations as requested by the Site Vice President or Plant Manager.
(8) Events reportable in writing to the NRC according to applicable regulations.
(9) Any other matter related to nuclear safety requested by the Site Vice President or Plant Manager, selected by PORC members, or referred to PORC by other organizations, such as: plant operations to detect potential nuclear safety hazards, reports covering any indication of an unanticipated deficiency in some aspect of design or operation of safety-related structures, systems or components, and significant Nuclear Industry operating experience.

Reviews of items (6) through (9) include results of any investigations made and recommendations resulting from such investigations to prevent or reduce the probability of recurrence of the event.

5.0 Authority

The PORC:

- Recommends in writing to the Plant Manager approval or disapproval of items reviewed.
- Renders determinations in writing with regards to whether items (1) through (5), or changes thereto, require prior NRC approval in accordance with 10 CFR 50.59/72.48.
- Provides written notification to the onsite management level(s) above the Plant Manager of any disagreements between the PORC and the Plant Manager.

The PORC shall advise the Plant Manager on matters related to safe operation and overall performance. The PORC has authority to obtain access to records and personnel as needed to conduct reviews.

In carrying out its review responsibilities, the PORC may establish subcommittees or use designated organizational units to carry out the review. The subcommittees or organizational units regularly report results of reviews for full committee consideration and may recommend items for full committee review as warranted.

6.0 Records

The PORC maintains written minutes of each PORC meeting, to include identification of items reviewed, and decisions and recommendations of the Committee. Copies of the minutes are provided to the onsite management position(s) above the Plant Manager, and to other onsite and offsite management responsible for the areas reviewed as necessary. PORC records are retained according to section B.15.

APPENDIX B Procedures

NSPM uses procedures to provide an approved, preplanned method of conducting activities affecting safety. As stated in position C.1 of Regulatory Guide 1.33, Revision 2, NSPM commits to use Appendix A of Regulatory Guide 1.33 as guidance for establishing the types of procedures that are necessary to control and support plant operation. Procedures are sufficiently detailed for a qualified individual to perform the required function without direct supervision, but may not provide a complete description of the system or plant process.

Guidance is 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, as 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. When documentation of an action is specified, the necessary data is recorded as the task is performed.

The format of procedures may vary from plant to plant within NSPM; however, procedures include the following elements, as appropriate to the purpose or task covered. These elements are not intended to imply a specific format is required:

Title/status: each procedure is given a title descriptive of the work or subject it addresses, and includes a revision number and/or date and an approval status.

Purpose/Statement of applicability: the purpose for which the procedure is intended is clearly stated (if not clear from the title).

References: applicable references, including reference to appropriate Technical Specifications, are included. References are included within the body of the procedure when the sequence of steps requires other tasks to be performed (according to the reference) prior to or concurrent with a particular step.

Prerequisites: identifies those independent actions or procedures that must be accomplished and plant conditions which must exist prior to performing the procedure. A prerequisite applicable to only a specific portion of a procedure is so identified.

Precautions: alert the user to those important measures to be used to protect equipment and personnel, including the public, or to avoid an abnormal or emergency situation during performance of the procedure. Cautionary notes applicable to specific steps are included in the main body of the procedure and are identified as such.

Limitations and actions: limitations on the parameters being controlled and appropriate corrective measures to return the parameter to the normal control band are specified.

Main body: contains the step-by-step instructions in the degree of detail necessary for performing the required function or task.

Acceptance criteria: the quantitative or qualitative criteria against which the success or failure (as of a test-type activity) of the step or action would be judged.

Check-off lists: complex procedures use check-off lists (aka checklists) which may be included as part of the procedure or appended to it.

Certain types of procedures governing generating site activities are common to all plants. Individual plant terminology may vary from the following, and some procedure types may be combined. Sufficent procedures are maintained to provide appropriate direction for these activities. In amplification to the appropriate elements above, such procedures are further defined as follows:

System Procedures: 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. System procedures contain check-off lists where appropriate.

Start-up Procedures: 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 instrumentation is operable and properly set; necessary system procedures, tests and calibrations have been completed; and required approvals have been obtained. The main body includes the major steps of the start-up sequence, including reference to appropriate systems procedures. Start-up procedures contain check-off lists where appropriate.

Shutdown Procedures: contain instructions for operations during controlled shutdown and following reactor trips, and include instructions for establishing or maintaining hot 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, cooldown rates, activating or deactivating equipment, and provisions for decay heat removal. Check-off lists are used, as appropriate, for confirming completion of major steps in proper sequence.

Power Operation and Load Changing Procedures: contain instructions for steady-state power operation and load changing that include provisions for use of control rods, chemical shim, coolant flow channel control, or for any other system available for short- or long-term control of reactivity, making deliberate load changes and adjusting operating parameters.

APPENDIX B **Procedures**

Process Monitoring Procedures: 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.

Fuel Handling Procedures: 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 and locations.

Maintenance Procedures: contain instructions in sufficient detail to permit maintenance work to be performed correctly and safely, and include provisions for conducting and recording results of required inspections or tests. Appropriate referencing to other procedures or vendor manuals is provided. Instructions are also provided, although not necessarily in Maintenance Procedures, for equipment removal and return to service, and appropriate radiation protection measures (such as protective clothing and radiation monitoring).

Radiation Control Procedures: contain instructions for implementation of 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.

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

APPENDIX B **Procedures**

Chemistry-radiochemistry Control Procedures: contain instructions for chemical and radiochemical activities such as the nature and frequency of sampling and analyses; maintaining coolant quality within prescribed limits; limitations on concentrations of agents that could cause corrosive attack, foul heat transfer surfaces or become sources of radiation hazards due to activation; control, treatment and management of radioactive wastes and control of radioactive calibration sources, including shipping.

Emergency Procedures: 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.

Emergency Plan Implementing Procedures: 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 site's NRC approved Emergency Plan are met.

Test and Inspection Procedures: contain the objectives, acceptance criteria, prerequisites for performing the test or inspection, limiting conditions, and appropriate instructions for performing the test or inspection. These procedures also specify any special equipment or calibrations required to conduct the test or inspection and provide for 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.

While not specifically a procedure type, **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 normal procedures; and to insure 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 affected in such manner that portions of existing procedures do not apply. Temporary Procedures include designation of the period of time during which they may be used.

APPENDIX C Definitions

NSPM uses the definitions of terms as provided in Section 4 of the Introduction of NQA-1 1994 in interpreting the requirements of NQA-1 and the other standards to which the QATR commits. In addition, definitions are provided for the following terms not covered in NQA-1:

Administrative controls: rules, orders, instructions, procedures, policies, practices and designations of authority and responsibility.

Emergency procedures: see Appendix B.

Experiments: performance of plant operations carried out under controlled conditions in order to establish characteristics or values not previously known.

Maintenance and modification procedures: written procedures defining the policies and practices by which structures, mechanical, electrical and instrumentation and control systems, and components thereof, are kept in a condition of good repair or efficiency so that they are capable of performing their intended functions.

Nuclear power plant: any plant using a nuclear reactor to produce electric power, process steam or space heating.

Off-normal condition procedures: written procedures which specify operator actions for restoring an operating variable to its normal controlled value when it departs from its range, or to restore normal operating conditions following a perturbation. (May be called Abnormal, Off-normal or other terms conveying the same intent.)

On-site operating organization: on-site personnel concerned with the operation, maintenance and certain technical services.

Operating activities: work functions associated with normal operation and maintenance of the plant, and technical services routinely assigned to the on-site operating organization.

Operating procedures: written procedures defining the normal methods, means and limits of operation of the nuclear power plant, a plant system or systems, or processes, including actions to be taken by operating personnel for removal from and return to service equipment on which maintenance is to be or has been performed.

APPENDIX C Definitions

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.

Review: a deliberately critical examination, including observation of plant operation, evaluation of assessment results, procedures, certain comtemplated actions, and after-the-fact investigations of abnormal conditions.

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

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, and to provide assurance that failures or substandard performance do not remain undetected and that the required reliability of safety related systems is maintained. Such functions include keeping parameters within normal bounds or acting to put the plant in a safe condition if they exceed normal bounds.

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

APPENDIX D – REVISION SUMMARIES

Revision/Section	Change/ Reason for Change	Basis for Meeting 10 CFR 50, Appendix B
Revision 0, 03/31/2009, All	NMC-1 deleted and replaced by NSPM-1, Rev 0	Program is unchanged, transition to NSPM from NMC.
Revision 0, 03/31/2009 A.1	Revised titles, changed terminology and removed section on operating service agreements due to transition to NSPM/Xcel Energy Nuclear Department (from NMC).	Program is unchanged.
Revision 0, 03/31/2009 B.4	Bullet item concerning use of commercial grade calibration laboratories revised to include ACLASS Accreditation Services as an alternative method.	NRC approval (dated 12/19/07, ML073440472) provided bases for accepting ACLASS calibration services as an alternative method for qualifying suppliers.
Revision 0, 03/31/2009 C.3, Table 2	Revised the audit frequency and basis of the topic Fitness For Duty to biennial (from annual) due to new 10 CFR 26 rule change.	Section 26.41 of the new rule renamed and amended the former section 26.80, thus changing the required audit frequency and section number. [10 CFR 26.41(b)]
Revision 1, 09/16/2009 Policy Statement	Added a statement to clarify NSPM retaining ownership of the nuclear facilities.	Program is unchanged; added clarification of NSPM ownership of facilities.
Revision 1, 09/16/2009 A.1 note	Revised the note clarifying the purpose of NSPM (retain ownership of the nuclear power plants/not actively decommissioning).	Program is unchanged; added clarification regarding NSPM ownership of nuclear power plants.
Revision 1, 09/16/2009 B.14	Corrected page numbers for Appendix B	Editorial only; program is unchanged.
Revision 2, 03/25/2010 C.3, Table 2	Revised the basis of the topic Access Authorization due to 10 CFR 73 rule change.	Section 73.56 of the revised rule renumbered the former section 73.56(g), thus changing the required section letter. [10 CFR 73.56(n)]
Revision 3, 08/19/2010 A.7.3	Revised the bullet item for Regulatory Guide 1.143 to remove the broad commitment from the QATR and utilize a reference to each site USAR as the basis for a commitment to Regulatory Guide 1.143 Revision 2, November 2001.	Approved per NRC Correspondence dated 7/9/2010. Quality Assurance Program for Radioactive Waste Management Systems, Structures and Components will be in accordance with the QATR NSPM-1 in the absence of specific commitments in the Site USAR.

Revision/Section	Change/ Reason for Change	Basis for Meeting 10 CFR 50, Appendix B
Revision 4, 12/29/2010 A.2.1, A.2.2	Updated title to Senior Director Nuclear Oversight (from General Manager Nuclear Oversight)	Program is unchanged, position title change only.
Revision 4, 12/29/2010 C.3, Table 2	Revised the basis of the topic Site Security to state 10 CFR 73.55(m) due to the revised 10 CFR 73 rule, effective 3/31/2010.	Section 73.55(m) of the revised rule was renumbered, thus changing the required section letter.
Revision 5, 12/29/2011 A.1, A.2	Updated title to Senior Vice President, Chief Nuclear Officer (from Vice President, Chief Nuclear Officer).	Program is unchanged, position title change only.
Revision 5, 12/29/2011 A.2.2	Removed the word “Site”.	Program is unchanged; removed wording for clarification of procedure used to provide detailed positions.
Revision 6, 8/16/2012 A.2.2.1	Added reporting relationship from Site Vice President to Senior Vice President, Chief Nuclear Officer.	Program is unchanged; reporting relationship added.
Revision 6, 8/16/2012 A.2.2	Removed the word "Specific".	Program is unchanged; removed wording for clarification of functional responsibilities that may be delegated.
Revision 6, 8/16/2012 A.5, B.12, B.14, Appendix E	Added note and new appendix for referenced QATR Interpretations.	Program is unchanged, added QATR Interpretations references for additional clarification/information.
Revision 7, 12/20/2013 A.5, B.12, B.14, B.15	Added information from the QATR interpretations. Added note for referenced QATR interpretations.	Program is unchanged, added statements or wording from the associated QATR interpretation for clarification.
Revision 7, 12/20/2013 Appendix E	Removed Appendix E.	Program is unchanged, Appendix removed as actual wording or statement from QATR interpretation was incorporated in place of the referenced QATR interpretation.
Revsion 8, 5/1/2015	Editorial corrections. Reduction in commitment to apply NQA-1 audit requirements to newly described QA audit program, not to independent assessments as had been the case.	Program changes submitted for NRC approval. NRC Safety Evaluation/approval received dated February 20, 2015.
Revision 9, 5/1/2016	Align record provisions for certain Security related items to governing CFR requirements.	Program requirements for records of quality related activities not altered. Change recognizes precedence of other CFR requirements to related records.

Revision/Section	Change/ Reason for Change	Basis for Meeting 10 CFR 50, Appendix B
Revision 10, 1/16/2017	Relocate self-assessment from Section C and delete requirements for independent assessment.	Program changes submitted for NRC approval. NRC Safety Evaluation/approval received dated 11/28/2016.
Revision 10, 1/16/2017	Relocate site NOS manager responsibilities to the Senior Manager, Nuclear Oversight.	Organizational revision [10 CFR 50.54(a)(3)(vi)]
Revision 10, 1/16/2017	Provide a 25% audit frequency allowance for internal and external audits.	SNOC SER dated June 17, 2005 provides the necessary NRC approval.
Revision 10, 1/16/2017	Adopt provisions of NEI 14-05A, Rev 1 regarding use of accreditation in lieu of commercial grade surveys for procurement of calibration or testing services.	Ameren SER dated April 1, 2016 provides the necessary approval. [10 CFR 50.54(a)(3)(ii)]
Revision 10, 1/16/2017	Revise QATR section related to procurement control and inspection to remove unnecessarily duplicative wording and clarify application of inspection criteria	Administrative improvements and clarifications [10 CFR 50.54(a)(3)] Elimination of quality assurance program information that duplicates language in quality assurance regulatory guides and quality assurance standards to which the licensee is committed. [10 CFR 50.54(a)(3)(v)]
Revision 11, 6/16/2017	Revise B.4 to apply the testing language for NEI 14-05A and clarify the receipt inspection language for accredited calibration and testing services in B.5.	Administrative clarifications [10 CFR 50.54(a)(3)] NEI 14-05A testing services based on Ameren SER dated April 1, 2016. [10 CFR 50.54(a)(3)(ii)]
Revision 12, 3/30/2018	Revise B.4 to clarify the documentation requirements for review of laboratory accreditation.	Administrative clarifications [10 CFR 50.54(a)(3)] NEI 14-04A calibration and testing services based on Ameren SER dated April 1, 2016. [10 CFR 50.54(a)(3)(ii)]
Revision 13, 6/1/2018	Revise C.2 Table 1 to allow extending EP and Security Audits up to max periodicity allowed by basis code. Revise A.2.2 for organizational changes.	Periodicity allowance per FPL SE dated December 29, 2006. [10 CFR 50.54(a)(3)(ii)] Organizational changes [10 CFR 50.54(a)(3)(iv)]

Revision/Section	Change/ Reason for Change	Basis for Meeting 10 CFR 50, Appendix B
Revision 14, 6/10/2019	Revise B.4 and B.5 to allow use of ISO/IEC 17025:2017	Quality assurance alternative per NRC letter dated April 16, 2019 (ML19056A451) [10 CFR 50.54(a)(3)(ii)]
Revision 14, 6/10/2019	Revise B.14 to remove page number reference	Organizational changes [10 CFR 50.54(a)(3) editorial change]
Revision 14, 6/10/2019	Revise Appendix A to remove reference to Director Site Operations.	Organizational changes [10 CFR 50.54(a)(3)(vi)]
Revision 15, 5/28/2021	1. Section A.1 - Added description of alternate treatments. 2. Section A.7.1 - deleted comma from10 CFR Part 72, Subpart G title. 3. Section B.4 - Revised direction for use of accreditation in lieu of Commercial Grade Survey 4. Section C.2 - Revised to use a 3 year audit frequency for some audits. 5. Throughout - Corrected 10 CFR numbering by adding spaces where needed. 6. Throughout - removed quotes from document titles.	1. SER ML1917A421 and ML19276F684 2. Editorial change, comma not need. 3. SER ML20322A019 4. SER ML20287A130 5. Editorial change to correct numbering. 6. Editorial change to align with Fleet Writers Manual.
Revision 16, 9/16/2022	1. Section B.4 revising implementing requirements for NQA-1-1994 4S-1, section 2.3 QA Program 2. Revising Section B.4 to remove reference to ISO17025-2005	1. NRC SER (ADAMS Accession Number ML071510506) 2. Clarification