November 3, 2009

Mr. Russell J. Bell, Director
New Plant Licensing
Nuclear Generation Division
Nuclear Energy Institute
1776 I Street, NW, Suite 400
Washington, DC 20006-3708

SUBJECT: FINAL SAFETY EVALUATION FOR TECHNICAL REPORT NEI 06-14, "QUALITY ASSURANCE PROGRAM DESCRIPTION," REVISION 7

Dear Mr. Bell:

By letter dated May 7, 2008, the Nuclear Energy Institute (NEI) submitted NEI Technical Report 06-14, "Quality Assurance Program Description," Revision 5 for U.S. Nuclear Regulatory Commission (NRC) staff review. NEI 06-14 provides a template for a quality assurance program description (QAPD) to be applied to activities affecting the quality and performance of safety-related structures, systems, and components.

By letter dated November 14, 2008, NEI submitted Revision 6 of NEI 06-14 that included changes that addressed questions included in the NRC staff Request for Additional Information (RAI) dated September 17, 2008. By letter dated November 20, 2008, NEI submitted the responses to each of the NRC staff questions to facilitate the NRC staff's review. By letter dated June 24, 2009, NEI submitted NEI 06-14, Revision 7 that incorporates NEI responses to NRC RAI dated April 30, 2009.

The NRC staff has reviewed the NEI submittal and supporting documentation. On the basis of its review, the NRC staff concludes that the QAPD template can be used by an applicant or holder for early site permit (ESP), combined license (COL), construction, preoperational and/or operation activities, as applicable, for establishing a quality assurance program that complies with Appendix B to Title 10 of the *Code of Federal Regulations,* Part 50 (10 CFR Part 50) by using American Society of Mechanical Engineers Nuclear Quality Assurance (NQA) standard NQA-1-1994, as supplemented by additional regulatory guidance and industry guidance for nuclear operating facilities.

When an applicant submits the QAPD as part of a licensing request, the NRC staff will review site specific information substituted for the bracketed text of NEI 06-14 to determine if the applicant adequately followed the guidance provided in the QAPD template and has established controls that comply with the requirements of 10 CFR Part 52, Appendix B to 10 CFR Part 50, 10 CFR Part 21, and 10 CFR 50.55(e), and with the criteria contained in Standard Review Plan Section 17.5. Some of the areas that the applicant should address are:

- The organizational description addressed in Section 3.2.1 of the enclosed safety evaluation report (SER),
- record retention time addressed in Section 3.2.17 of the enclosed SER, and
- the regulatory commitments addressed in Section 3.4 of the enclosed SER.

Enclosed is the NRC staff's SER which defines the basis for acceptance of NEI 06-14, Revision 7. The NRC staff finds that for COL applications, NEI 06-14, Revision 7, provides an acceptable template for describing a quality assurance program.

Our acceptance applies only to material provided in NEI 06-14, Revision 7. We do not intend to repeat our review of the acceptable material described in the NEI 06-14, Revision 7. When NEI 06-14, Revision 7 appears as a reference in COL applications, our review will ensure that the material presented applies to the specific application involved. Licensing requests that deviate from NEI 06-14, Revision 7, will be subject to a plant-specific or site-specific review in accordance with applicable review standards.

In accordance with the guidance provided on the NRC website, we request that NEI publish the accepted version of NEI 06-14A, Revision 1 within 3 months of receipt of this letter. The accepted version should incorporate this letter and the enclosed SER. The accepted version should also contain historical review information, including NRC RAIs and your responses. The accepted versions shall include a "-A" (designating accepted) following the report identification symbol.

If future changes to the NRC's regulatory requirements affect the acceptability of NEI 06-14A, NEI will be expected to revise NEI 06-14A appropriately, or justify its continued applicability for subsequent referencing.

If you have any questions, please contact Sheryl A. Burrows at (301) 415-6086 or via email at Sheryl.Burrows@nrc.gov.

Sincerely,

/RA/

William F. Burton, Chief
Rulemaking and Guidance Development Branch
Division of New Reactor Licensing
Office of New Reactors

Project No. 689

Enclosure:
Safety Evaluation Report

cc w/encl: See next page

Enclosed is the NRC staff's SER which defines the basis for acceptance of NEI 06-14, Revision 7. The NRC staff finds that for COL applications, NEI 06-14, Revision 7, provides an acceptable template for describing a quality assurance program.

Our acceptance applies only to material provided in NEI 06-14, Revision 7. We do not intend to repeat our review of the acceptable material described in the NEI 06-14, Revision 7. When NEI 06-14, Revision 7 appears as a reference in COL applications, our review will ensure that the material presented applies to the specific application involved. Licensing requests that deviate from NEI 06-14, Revision 7, will be subject to a plant-specific or site-specific review in accordance with applicable review standards.

In accordance with the guidance provided on the NRC website, we request that NEI publish the accepted version of NEI 06-14A, Revision 1 within 3 months of receipt of this letter. The accepted version should incorporate this letter and the enclosed SER. The accepted version should also contain historical review information, including NRC RAIs and your responses. The accepted versions shall include a "-A" (designating accepted) following the report identification symbol.

If future changes to the NRC's regulatory requirements affect the acceptability of NEI 06-14A, NEI will be expected to revise NEI 06-14A appropriately, or justify its continued applicability for subsequent referencing.

If you have any questions, please contact Sheryl A. Burrows at (301) 415-6086 or via email at Sheryl.Burrows@nrc.gov.

Sincerely,

/RA/

William F. Burton, Chief
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Safety Evaluation Report
cc w/encl: See next page

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SAFETY EVALUATION REPORT BY THE OFFICE OF NEW REACTORS

FOR TECHNICAL REPORT NEI-06-14,

"QUALITY ASSURANCE PROGRAM DESCRIPTION", REVISION 7

1. INTRODUCTION

By letter dated October 19, 2006 (Ref. 1), the Nuclear Energy Institute (NEI) submitted an industry quality assurance program description (QAPD) template for review and approval by the U.S. Nuclear Regulatory Commission (NRC) staff. In its letter dated January 7, 2007, NEI updated the QAPD template in technical report NEI 06-14, "Quality Assurance Program Description," that provides a generic template for use by early site permit (ESP) and combined license (COL) applicants to implement NRC regulatory requirements related to the quality assurance (QA) program. The QAPD template is based on American Society of Mechanical Engineers (ASME) Nuclear Quality Assurance (NQA) 1-1994, "Quality Assurance Requirements for Nuclear Facility Applications," as supplemented by quality assurance and administrative requirements specific to the operations phase. The QAPD template provides a common format for applicants demonstrating compliance with Title 10 of the *Code of Federal Regulations,* Part 50 (10 CFR Part 50), Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," 10 CFR Part 52, and administrative control requirements applicable to the operations phase.

The QAPD template was initially released in May 2008 as NEI 06-14A, Revision 0, the 'A' denoting NRC staff approval as documented by NRC safety evaluation dated April 25, 2007 (Ref. 4). Subsequent to issuance of NEI 06-14A, NEI submitted NEI 06-14, Revision 5 by letter dated May 7, 2008 (Ref. 9), to address generic QA program issues that had been identified during NRC staff review of COL applications. By letter dated June 24, 2008, NEI submitted NEI 06-14, Revision 7 (Ref. 12) and incorporated NEI responses to NRC Request for Additional Information dated April 30, 2009 (Ref. 10), and September 17, 2008 (Ref. 7). This safety evaluation report (SER) documents the basis for NRC acceptance of NEI 06-14, Revision 7, as an acceptable format for developing a QA program description.

2. REGULATORY EVALUATION

The Commission's regulatory requirements related to quality assurance programs for ESP and COL applications and holders are set forth in Appendix B, as invoked through 10 CFR 52.17(a)(1)(xi) and 10 CFR 52.79(a)(25), respectively.

Appendix B establishes QA requirements for the design, fabrication, construction, and testing of the structures, systems and components (SSCs) of the facility. Appendix B requirements apply to all activities affecting the SSC safety-related functions, including designing, purchasing, fabricating, handling, shipping, storing, cleaning, erecting, installing, inspecting, testing, operating, maintaining, repairing, refueling, and modifying.

3. EVALUATION

In evaluating the adequacy of the QAPD template, the NRC staff followed Standard Review Plan (SRP) Section 17.5 (Ref. 5), that provides guidance to NRC staff reviewers for evaluating QA program descriptions submitted under 10 CFR Part 52. SRP 17.5 is based on ASME standard NQA-1-1994 edition; Regulatory Guide (RG) 1.8, "Qualification and Training of Personnel for Nuclear Power Plants," Revision 3; RG 1.28, "Quality Assurance Program Requirements (Design and Construction)," Revision 3; and, RG 1.33, "Quality Assurance Program Requirements (Operation)." An evaluation of conformance with these RGs is included in Part IV of the QAPD template.

3.1 QAPD Template Overview

The QAPD template provides guidance for establishing a top-level policy document that defines quality policy and assigns major functional responsibilities. This QAPD template can be used for ESP, COL, construction, preoperational and/or operation activities, as applicable, affecting the quality and performance of safety-related SSCs.

The QAPD template includes brackets throughout the document to provide user-specific text for statements that are scope dependent; are not applicable to COL applications with an approved ESP, or are applicable only to ESP applications. In addition, the QAPD template uses brackets to provide guidance to users on how to address areas that are specific to the application. Brackets are also used to provide the user with different alternatives that satisfy Appendix B to 10 CFR Part 50 requirements.

When an applicant submits the QAPD as part of a licensing request, the NRC staff will further review bracketed text to determine if the applicant adequately followed the guidance provided in the QAPD template and has established controls that comply with the requirements of 10 CFR Part 52, Appendix B to 10 CFR Part 50, 10 CFR Part 21, and 10 CFR 50.55(e), and with the guidance contained in SRP Section 17.5. Some of the areas that the applicant is required to address are:

- The organizational description addressed in Section 3.2.1 of the enclosed SER,
- record retention time addressed in Section 3.2.17 of the enclosed SER, and
- the regulatory commitments addressed in Section 3.4 of the enclosed SER.

The QAPD template applies selected elements of the QAPD to SSCs that are not considered to be safety-related; however, nevertheless are considered to be significant contributors to plant safety.

3.2 QAPD Template Details

3.2.1 Organization

The QAPD template follows the guidance of SRP Section 17.5, paragraph II.A, in providing an example of a organizational description for a new plant, independence of working and checking organizations, and interrelationships of new plant and existing utility organizations. The level of detail provided by the example is less than the NRC staff would expect for an application, but is

adequate for providing guidance to ESP or COL applicants for development of an organization description meeting the requirements of Appendix B, Criteria I, "Organization," and Criteria II, "Quality Assurance Program." The template provides adequate guidance for ESP and COL applicants to describe an organizational structure that clearly delineates those management positions responsible for establishing, maintaining, and implementing regulatory requirements from corporate through operating plant positions. The template provides guidance for applicants to describe functional responsibilities and position descriptions for the construction, preoperational and operations phases, as well as characterizing control and transitions between phases. The template allows management to size the QA organization commensurate with assigned duties and responsibilities. Information in this section is applicant-specific and will require additional review and approval by the NRC staff during the review of an ESP or COL application.

The template commits the applicant to the quality standards described in NQA-1-1994, Basic Requirement 1 and Supplement 1S-1.

During review of some previous COL applications, the NRC staff noted that replacement of bracketed information with application-specific information was not always consistently applied and required additional guidance to ensure that titles used in QAPD Section 1 were consistent with bracketed information. Revision 7 of QAPD template provides additional guidance to ensure that generic titles (e.g., Nuclear Development, Quality Assurance Manager) are used consistently throughout the document.

3.2.2 Quality Assurance Program

The QAPD template follows the guidance of SRP Section 17.5, paragraph II.B for establishing the necessary measures to implement a QA program to ensure that the design, construction, and operation of nuclear power plants are in accordance with governing regulations and license requirements. The QA program comprises those planned and systematic actions necessary to provide confidence that SSCs will perform their intended safety function, including certain non-safety-related SSCs and activities that are significant contributors to plant safety, as described in the ESP site safety analysis report or COL final safety analysis report (FSAR). A listing or system identifying SSCs and activities within the scope of the QA program is maintained by the applicant at an appropriate facility.

The QAPD template provides measures to assess the adequacy of the QAPD and to ensure its effective implementation at least once each year or at least once during the life of a quality-related activity, whichever is shorter. The period for assessing the QAPD during the operations phase may be extended to once every 2 years. In addition, consistent with SRP Section 17.5, paragraph II.B.8, a grace period of 90 days is applied to activities that must be performed on a periodic basis. The grace period does not allow the "clock" for a particular activity to be reset forward. However, the "clock" for an activity may be reset backwards when an activity is performed early.

The QAPD template follows the guidance of SRP Section 17.5, paragraphs II.S and II.T, for describing the necessary measures to establish and maintain formal indoctrination and training programs for personnel performing, verifying, or maintaining activities within the scope of the QAPD to ensure task-related proficiency is maintained. Plant technical specifications delineate

the minimum qualifications for plant and support staff. Personnel complete the training for positions identified in 10 CFR 50.120, "Training and Qualification of Nuclear Plant Personnel," according to programs accredited by the National Nuclear Accrediting Board of the National Academy for Nuclear Training. The QAPD template provides the minimum training requirements for managers responsible for QAPD implementation and for the manager responsible for planning, implementing, and maintaining the QAPD.

The QAPD template provides two options for establishing an independent review program that performs independent reviews of operating activities. Revision 7 of the QAPD template added the acceptable level of experience for independent review supervisors and personnel for Option 1 following the guidance of RG 1.8, Revision 3, "Qualification and Training of Personnel for Nuclear Power Plants."

The QAPD template commits the applicant to the quality standards described in NQA-1-1994, Basic Requirement 2 and Supplements 2S-1, 2S-2, 2S-3, and 2S-4, with the following clarifications and exceptions:

- NQA-1-1994, Supplement 2S-1, includes use of the guidance provided in Appendix 2A-1 to NQA-1-1994. The applicant may either adopt the use of the Appendix 2A-1 with the alternative provided in Option 1 or take exception to Appendix 2A-1 following Option 2.

    - Option 1: When applying option 1, the following alternatives may be applied to the implementation of Supplement 2S-1 and Appendix 2A-1:

        - As an alternative to the requirement in Appendix 2A-1 to be certified as Level I, II, or III; personnel performing independent quality verification inspections, examinations, measurements, or tests will be required to possess qualifications equal to or better than those required for performing the task being verified. In addition, the verification performed must be within the skills of these personnel and/or addressed by procedures. These personnel will not be responsible for planning quality verification inspections and tests (i.e., establishing hold points and acceptance criteria in procedures, and determining who will be responsible for performing the inspection), evaluating inspection training programs, or certifying inspection personnel. This alternative is consistent with SRP Section 17.5, paragraph II.T.5.

        - A qualified engineer may plan inspections, evaluate the capabilities of an inspector, or evaluate the training program for inspectors. For the purposes of these functions, a qualified engineer is one who has a baccalaureate degree in engineering in a discipline related to the inspection activity (such as electrical, mechanical, or civil engineering) and has at least 5 years of engineering work experience, with at least 2 years of this experience related to nuclear facilities. In accordance with Supplement 2S-1 to NQA-1-1994, the organization must designate those activities that require qualified inspectors and test personnel and establish written procedures for the qualification of these personnel. The NRC staff determined that the designation of a qualified engineer with the described qualifications is acceptable for planning inspections, evaluating inspectors, or evaluating the inspector qualification programs.

- Option 2: Use the following Option 2 to take exception to the use of Appendix 2A-1:

  - In lieu of Appendix 2A-1, the applicant does not establish levels of qualification/ certification for inspection personnel. Instead, the applicant 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. The NRC staff determined that this exception is acceptable as documented in a previous safety evaluation (Ref. 15) and is only applicable during operations. Three Mile Island regulations at 10 CFR 50.34(f)(3)(iii) are applicable during construction phase.

  - When selecting Option 2, the applicant may apply the following alternative to the implementation of 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. 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 (BPV) Code are qualified and certified according to Code requirements. This alternative is consistent with SRP Section 17.5, paragraphs II.T.5 and II.T.6, and therefore, is acceptable.

- As an alternative to NQA-1-1994, Supplement 2S-2, for the qualification requirements of nondestructive examination personnel, the QAPD template provides guidance to follow the applicable standard cited in the version(s) of Sections III and XI of the ASME BPV Code. The regulation in 10 CFR 50.55a, “Codes and Standards,” requires use of the latest edition and addenda of Sections III and XI. Therefore, the NRC staff finds the use of Sections III and XI of the ASME BPV Code for qualification of nondestructive examination personnel acceptable.

- As an alternative to the requirement of NQA-1-1994, Supplement 2S-3, that prospective lead auditors must have participated in a minimum of five audits in the previous 3 years, the QAPD template follows the guidance provided in SRP Section 17.5, paragraph II.S.4.c:

  - The prospective Lead Auditor shall demonstrate his/her ability to properly implement the audit process, as implemented by the company, to effectively lead an audit team, and to effectively organize and report results, including participation in at least one nuclear audit within the year preceding the date of qualification. This alternative is consistent with SRP Section 17.5, paragraph II.S.4.c, and therefore, is acceptable.

3.2.3 Design Control

The QAPD template follows the guidance of SRP Section 17.5, paragraph II.C, for establishing the necessary measures to control design, design changes, and temporary modifications (e.g., temporary bypass lines, electrical jumpers and lifted wires, and temporary setpoints) of items

within the scope of the QAPD. The QAPD template includes measures to control design inputs, outputs, changes, interfaces, records, and organizational interfaces among the applicant and its suppliers. These provisions ensure that the design inputs (such as design bases and the performance, regulatory, quality, and quality verification requirements) are correctly translated into design outputs (such as analyses, specifications, drawings, procedures, and instructions). In addition, the QAPD template requires for individuals knowledgeable in QA principles to review design documents to ensure that they contain the necessary QA requirements.

The QAPD template commits the applicant to the quality standards described in NQA-1-1994, Basic Requirement 3 and Supplement 3S-1, for establishing a program for design control and verification, Subpart 2.20 for subsurface investigation and Subpart 2.7 for computer software QA controls.

3.2.4 Procurement Document Control

The QAPD template follows the guidance of SRP Section 17.5, paragraph II.D, for establishing the necessary administrative controls and processes to ensure that procurement documents include or reference applicable regulatory, technical, and QA program requirements. Applicable technical, regulatory, administrative, quality, and reporting requirements (such as specifications, codes, standards, tests, inspections, special processes, and the regulation at 10 CFR Part 21, "Reporting of Defects and Noncompliance") are invoked for procurement of items and services.

The QAPD template commits the applicant to the quality standards described in NQA-1-1994, Basic Requirement 4 and Supplement 4S-1, with the following clarifications and exceptions:

- As an alternative to NQA-1-1994, Supplement 4S-1, Section 2.3, which states that procurement documents must require suppliers to have a documented QA program that implements NQA-1-1994, Part I, the QAPD proposes that suppliers have a documented QA program that meets Appendix B to 10 CFR Part 50, as applicable to the circumstances of the procurement. Criterion IV, "Procurement Document Control," of Appendix B requires suppliers to have a QA program consistent with Appendix B. Therefore, the NRC staff determined that this clarification is acceptable, as delineated in SRP Section 17.5, paragraph II.D.2.d.

- The QAPD proposes that procurement documents allow the supplier to work under the applicant's QAPD, including implementing procedures, in lieu of the supplier having its own QA program. Criterion IV of Appendix B requires suppliers to have a QA program consistent with Appendix B. Therefore, the NRC staff determined this clarification to be acceptable, as delineated in SRP 17.5, paragraph II.D.2.d.

- As an alternative to NQA-1-1994, Supplement 4S-1, Section 3, which requires procurement documents to be reviewed before award of the contract, the QAPD proposes to conduct the QA review of procurement documents through review of the applicable procurement specification, including the technical and quality procurement requirements, before contract award. In addition, procurement document changes (e.g., scope, technical, or quality requirements) will also receive QA review. The NRC staff evaluated this proposed alternative and determines that it provides adequate QA review of procurement documents

before awarding the contract and after any change. Therefore, the NRC staff concluded that this alternative is acceptable.

- Procurement documents for commercial-grade items that the applicant or holder will procure as safety-related items shall contain technical and quality requirements such that the procured item can be appropriately dedicated. This alternative is consistent with NRC staff guidance in Generic Letter (GL) 89-02, "Actions to Improve the Detection of Counterfeit and Fraudulently Marked Products," dated March 21, 1989, and GL 91-05, "Licensee Commercial-Grade Procurement and Dedication Programs," dated April 9, 1991, as delineated in SRP Section 17.5, paragraphs II.U.1.c and II.U.1.d, and therefore, is acceptable.

3.2.5 Instructions, Procedures, and Drawings

The QAPD template follows the guidance of SRP Section 17.5, paragraph II.E, for establishing necessary measures and governing procedures to ensure that activities affecting quality are prescribed by and performed in accordance with documented instructions, procedures, and drawings.

The QAPD template commits the applicant to the quality standards described in NQA-1-1994, Basic Requirement 5, for establishing procedural controls.

3.2.6 Document Control

The QAPD template follows the guidance of SRP 17.5, paragraph II.F, for establishing the necessary measures and governing procedures to control the preparation, review, approval, issuance, and changes of documents that specify quality requirements or prescribe measures for controlling activities affecting quality, including organizational interfaces. The template provides measures to ensure that the same organization that performed the original review and approval also reviews and approves revisions or changes to documents, unless other organizations are specifically designated. A listing of all controlled documents identifying the current approved revision or date is maintained so that personnel can readily determine and access current and applicable documents for specific applications.

To ensure effective and accurate procedures during the operational phase, procedures are reviewed and updated as necessary, consistent with the guidance provided in SRP Section 17.5, paragraph II.F.8. During the operational phase, changes to a procedure that clearly do not alter the intent of the procedure may be implemented, provided that two members of the operations staff knowledgeable in the areas affected by the procedure approve the changes. These temporary changes include a specific period of time during which the revised procedure may be used.

In establishing provisions for document control, the QAPD template commits the applicant to the quality standards described in NQA-1-1994, Basic Requirement 6 and Supplement 6S-1.

3.2.7 Control of Purchased Material, Equipment, and Services

The QAPD template follows the guidance of SRP Section 17.5, paragraph II.G, for establishing necessary measures and governing procedures that control procurement of items and services to ensure conformance with specified requirements. The controls include measures for evaluating prospective suppliers and selecting only those that are qualified. In addition, controls include auditing and evaluating suppliers to ensure that qualified suppliers continue to provide acceptable products and services.

The program provides for acceptance actions, such as source verification, receipt inspection, pre- and post-installation tests and review of documentation, such as certificates of conformance, to ensure that the procurement, inspection, and test requirements have been satisfied before relying on the item to perform its intended safety function. 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 by properly reviewed and approved revisions to design documentation to ensure that the items are suitable for the intended service and are of acceptable quality, consistent with their effect on safety.

In establishing procurement verification control, the QAPD template commits the applicant to the quality standards described in NQA-1-1994, Basic Requirement 7 and Supplement 7S-1, with the following clarifications and exceptions:

- The QAPD template proposes that other 10 CFR Part 50 licensees (i.e., other than the applicant or holder), authorized nuclear inspection agencies, the National Institute of Standards and Technology (NIST), and other State and Federal agencies that may provide items or services to the applicant or holder are not required to be evaluated or audited.

  The NRC staff acknowledges that 10 CFR Part 50 licensees, authorized nuclear inspection agencies, the NIST, and other State and Federal agencies perform work under acceptable quality programs, and no additional audit or evaluation is required. The NRC staff determined that this exception is acceptable as documented in a previous safety evaluation (Ref. 13). The applicant or holder is still responsible for ensuring that the items or services conform to its Appendix B program, applicable ASME BPV Code requirements, and other regulatory requirements and commitments. The applicant or holder is also responsible for ensuring that the items or services are suitable for the intended application and for documenting this evaluation. The proposed exception is acceptable on the basis that it provides an appropriate level of quality and safety.

- The QAPD template includes provisions consistent with the regulatory guidance provided in SRP Section 17.5, paragraph II.L.8, for the procurement of commercial-grade calibration services for safety-related applications. The QAPD template proposes not to require procurement source evaluation and selection measures provided each of the following conditions are met:

  - Purchase documents impose additional technical and administrative requirements to satisfy QAPD and technical requirements.

- Purchase documents require reporting as-found calibration data when calibrated items are found to be out of tolerance.

- A documented review of the supplier's accreditation will be performed and will include a verification of the following:

  - The calibration laboratory holds a domestic accreditation by any one of the following accrediting bodies, which are recognized by the International Laboratory Accreditation Cooperation (ILAC), Mutual Recognition Arrangement (MRA):

    - National Voluntary Laboratory Accreditation Program (NVLAP), administered by NIST,
    - American Association for Laboratory Accreditation (A2LA),
    - ACLASS Accreditation Services (ACLASS),
    - International Accreditation Service (IAS),
    - Laboratory Accreditation Bureau (L-A-B), and
    - Other NRC-recognized laboratory accrediting body.

- The accreditation is based on ANS/ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories."

- The published scope of the accreditation for the calibration laboratory covers the necessary measurement parameters, range, and uncertainties.

For this alternative, since the last approval of the QAPD template, the NRC staff had approved the use of additional calibration laboratories that hold a domestic accreditation by certain accrediting bodies. Revision 7 of the QAPD template was modified to restate the current regulatory position regarding the acceptability of procuring commercial grade calibration services from NRC-recognized calibration laboratories and add additional calibration laboratories, which have been recognized by the NRC. Therefore, the NRC staff determined the addition of these additional laboratories to be acceptable, as delineated in SRP Section 17.5, paragraph II.L.8 and letters to these laboratories.

- As an alternative to NQA-1-1994, Supplement 7S-1, Section 8.1, in terms of the requirement for documents to be available at the site, the QAPD template proposes that documents may be stored in approved electronic media under the applicant's, holder's or supplier's control and not physically located at the plant site, as long as they are accessible from the respective nuclear facility. Following completion of the construction period, sufficient as-built documentation will be turned over to the licensee to support operations. The NRC staff determines that this alternative meets the requirements of Appendix B, Criterion VII, "Control of Purchased Material, Equipment, and Services." Criterion VII requires documentary evidence that items conform to procurement documents to be available at the nuclear facility before installation or use. Therefore, this provision, which would allow for accessing and reviewing the necessary procurement documents at the site before installation and use, would meet this requirement.

- As an alternative to NQA-1-1994, Supplement 7S-1, Section 10, requirements for the control of commercial-grade items and services, the QAPD template commits the applicant to follow

NRC guidance discussed in GL 89-02 and GL 91-05 as delineated in SRP Section 17.5, paragraphs II.U.1.c and II.U.1.d, and therefore, is acceptable.

- Consistent with the guidance mentioned above for commercial-grade items and services, the commercial-grade program provides for special quality verification requirements to be established and described in applicable documents to provide the necessary assurance that the item will perform satisfactorily in service. In addition, the documents provide for determining critical characteristics to ensure that an item is suitable for its intended use, technical evaluation of the item, receipt requirements, and quality evaluation of the item.

The previous revisions to the QAPD template used Regulatory Issue Summary (RIS) 2002-22, "Use of EPRI/NEI Joint Task Force Report, *Guideline on Licensing Digital Upgrades: EPRI TR-102348, Revision 1, NEI01-01: a Revision of EPRI TR-102348 to Reflect Changes to the 10 CFR 50.59 Rule*," as providing an approved regulatory method for commercial grade dedication for digital instrumentation and control (I&C) items. Because RIS 2002-22 does not provide an approved regulatory method for commercial grade dedication, the reference in this exception was changed from RIS 2002-22 to Electric Power Research Institute (EPRI) topical report TR-106439, "Guideline on Evaluation and Acceptance of Commercial Grade Digital Equipment for Nuclear Safety Applications," dated October 1996. EPRI TR-106439 was approved in an NRC Safety Evaluation dated July 17, 1997 (Ref. 16) for the commercial grade dedication of digital equipment. However, the use of EPRI TR-106439 is limited to digital I&C. Reference to RIS 2002-22 and EPRI TR-106439 were removed from the QAPD template to be used in implementing procedures specific to digital I&C. The staff agrees that these documents are appropriate to be included in implementing procedures.

3.2.8 Identification and Control of Materials, Parts, and Components

The QAPD template follows the guidance of SRP Section 17.5, paragraph II.H, for establishing necessary measures for identification and control of items such as materials, including consumables, and items with limited shelf life, parts, components, and partially fabricated subassemblies. Identification of items is maintained throughout fabrication, erection, installation, and use so that the item is traceable to its documentation.

In establishing provisions for identification and control of items, the QAPD template commits the applicant to the quality standards described in NQA-1-1994, Basic Requirement 8 and Supplement 8S-1.

3.2.9 Control of Special Processes

The QAPD template follows the guidance of SRP Section 17.5, paragraph II.I, for establishing and implementing programs, procedures, and processes to ensure that special processes requiring interim process controls to ensure quality, such as welding, heat treating, chemical cleaning, and nondestructive examinations, are controlled in accordance with applicable codes, specifications, and standards for the specific application.

In establishing measures for the control of special processes, the QAPD template commits the applicant to the quality standards described in NQA-1-1994, Basic Requirement 9 and Supplement 9S-1.

3.2.10 Inspection

The QAPD template follows the guidance of SRP Section 17.5, paragraph II.J, for establishing necessary measures to implement inspections that ensure items, services, and activities affecting safety meet established requirements and conform to documented specifications, instructions, procedures, and design documents. The inspection program establishes requirements for planning inspections, determining applicable acceptance criteria, setting the frequency of inspection, and identifying special tools needed to perform the inspection. Qualified personnel perform the inspections and are independent of those who performed or directly supervised the work.

In establishing inspection requirements, the QAPD template commits the applicant to the quality standards described in NQA-1-1994, Basic Requirement 10, Supplement 10S-1, and Subparts 2.4, 2.5 and 2.8, with the following clarifications and exceptions:

- NQA-1-1994, Subpart 2.4, commits the applicant or licensee, as applicable, to Institute of Electrical and Electronic Engineers (IEEE) Standard 336-1985, "IEEE Standard Installation, Inspection, and Testing Requirements for Power, Instrumentation, and Control Equipment at Nuclear Facilities." IEEE 336-1985 refers to IEEE 498-1985, "IEEE Standard Requirements for the Calibration and Control of Measuring and Test Equipment Used in Nuclear Facilities." Both of these standards use the definition of "safety systems equipment" from IEEE 603-1980, "IEEE Standard Criteria for Safety Systems for Nuclear Power Generating Stations." The QAPD template commits the applicant or licensee, as applicable, to the definition of safety systems equipment from IEEE 603-1980 but does not commit the applicant or holder to the balance of IEEE 603-1980. This definition applies only to equipment in the context of Subpart 2.4.

  The following is the definition of safety system in IEEE 603-1980:

  - Those systems (the reactor trip system, an engineered safety feature, or both, including all their auxiliary supporting features and other auxiliary feature) which provide a safety function. A safety system is comprised of more than one safety group of which any one safety group can provide the safety function.

  The QAPD needs to commit to the definition of safety systems equipment from IEEE 603-1980 in order to appropriately implement Subpart 2.4 of NQA-1-1994. The clarification is to reinforce the fact that the QAPD is not committing to the entirety of IEEE 603-1980. The NRC staff determined that the use of the definition of safety systems equipment in the context of Subpart 2.4 is acceptable because it clarifies the definition.

- As an alternative for sites that may not meet the requirement of NQA-1-1994, Supplement 10S-1, Section 3.1, for independent reporting, the QAPD proposes that the inspector must report to quality control management while performing the inspection. This alternative is consistent with staff guidance provided in SRP Section 17.5, paragraph II.J.1, and therefore, is acceptable.

3.2.11 Test Control

The QAPD template follows the guidance of SRP Section 17.5, paragraph II.K, for establishing necessary measures and governing provisions to demonstrate that items within the scope of the QAPD will perform satisfactorily in service, that the plant can be operated safely as designed, and that the operation of the plant, as a whole, is satisfactory.

In establishing provisions for testing, the QAPD template commits the applicant to comply with the quality standards described in NQA-1-1994, Basic Requirement 11 and Supplement 11S-1.

In establishing provisions to ensure that computer software used in applications affecting safety is prepared, documented, verified, tested, and used such that the expected outputs are obtained and configuration control maintained, the QAPD template commits the applicant to the quality standards described in NQA-1-1994, Supplements 11S-2 and Subpart 2.7.

3.2.12 Control of Measuring and Test Equipment

The QAPD template follows the guidance of SRP Section 17.5, paragraph II.L, for establishing necessary measures to control the calibration, maintenance, and use of measuring and test equipment that provides information important to safe plant operation.

In establishing provisions for control of measuring and test equipment, the QAPD template commits the applicant to comply with the quality standards described in NQA-1-1994, Basic Requirement 12 and Supplement 12S-1, with the following clarifications and exceptions:

- The QAPD template clarifies that the out-of-calibration conditions, described in paragraph 3.2 of Supplement 12S-1 of NQA-1-1994, refer to cases where the measuring and test equipment are found to be out of the required accuracy limits (i.e., out of tolerance) during calibration. The NRC staff determined that the clarification for the out-of-calibration conditions is acceptable.

- As an alternative to the NQA-1-1994, Subpart 2.4, Section 7.2.1, calibration labeling requirements, the QAPD template proposes that the required calibration information be maintained in suitable documentation traceable to the device for measuring and test equipment which is impossible or impractical to mark because of equipment size or configuration. This alternative is consistent with the staff guidance provided in SRP Section 17.5, paragraph II.L.3, and therefore, is acceptable.

3.2.13 Handling, Storage, and Shipping

The QAPD template follows the guidance of SRP Section 17.5, paragraph II.M, for establishing necessary measures to control the handling, storage, packaging, shipping, cleaning, and preservation of items to prevent inadvertent damage or loss and to minimize deterioration.

In establishing provisions for handling, storage, and shipping, the QAPD template commits the applicant to the quality standards described in NQA-1-1994, Basic Requirement 13 and Supplement 13S-1. The QAPD template also commits the applicant, during the construction and preoperational phase of the plant, as applicable, to comply with the guidance of

NQA-1-1994, Subparts 2.1, 2.2, and 2.15, with the following clarification and exception:

- As an alternative to NQA-1-1994, Subpart 2.1, Section 3, "Cleanness Criteria," the QAPD template provides commitments to take precautions to add a suitable chloride stress-cracking inhibitor to the fresh water used to flush systems containing austenitic stainless steels. The NRC staff determines that the proposed alternative is acceptable, on the basis that these precautions are consistent with the regulatory positions of RG 1.37.

- As an alternative to the NQA-1-1994, Subpart 2.2, Section 6.6, "Storage Records," requirement for the preparation of records containing information on personnel access to QA records, the QAPD template provides for documents to establish control of storage areas that describe those authorized to access the area and the requirements for recording access of personnel. The QAPD template proposes not to consider these records as QA records. The plants will retain these records in accordance with the plants' administrative controls. The NRC staff determined that the proposed alternative is acceptable, on the basis that these records do not meet the classification of a quality record as defined in NQA-1-1994, Supplement 17S-1, Section 2.7.

3.2.14 Inspection, Test, and Operating Status

The QAPD template follows the guidance of SRP Section 17.5, paragraph II.N, for establishing necessary measures to identify the inspection, test, and operating status of items and components within the scope of the QAPD to maintain personnel and reactor safety and avert inadvertent operation of equipment.

In establishing procurement verification control, the QAPD template commits the applicant to the quality standards described in NQA-1-1994, Basic Requirement 14.

3.2.15 Nonconforming Materials, Parts, or Components

The QAPD template follows the guidance of SRP Section 17.5, paragraph II.O, for establishing necessary measures to control items, including services that do not conform to specified requirements to prevent inadvertent installation or use. Non-conformances are evaluated for their impact on operability of quality SSCs to ensure that the final condition does not adversely affect safety, operation or maintenance of the item or service. Results of evaluations of conditions adverse to quality are analyzed to identify quality trends, documented, and reported to upper management in accordance with applicable procedures.

In addition, the QAPD template establishes the necessary interfaces between the QA program for identification and control of nonconforming material, parts, and components and the non-QA reporting program that satisfy the applicable requirements of 10 CFR 50.55(e), and/or 10 CFR Part 21 during design, construction and operations.

In establishing measures for nonconforming material, the QAPD template commits the applicant to the quality standards described in NQA-1-1994, Basic Requirement 15 and Supplement 15S-1.

3.2.16 Corrective Action

The QAPD template follows the guidance of SRP Section 17.5, paragraph II.P, for establishing necessary measures to promptly identify, control, document, classify, and correct conditions adverse to quality. The QAPD template requires personnel to identify known conditions adverse to quality. Reports of conditions adverse to quality are analyzed to identify trends. Significant conditions adverse to quality are documented and reported to responsible management. In the case of suppliers working on safety-related activities or similar situations, the applicant or holder, as applicable, may delegate specific responsibility for the corrective action program, but the applicant or holder maintains responsibility for the program's effectiveness.

In addition, the QAPD template establishes the necessary interfaces between the QA corrective actions program and the non-QA reporting program to identify, evaluate, and report defects and non-compliances to satisfy the applicable requirements of 10 CFR 50.55(e) and/or 10 CFR Part 21.

In establishing a corrective action program, the QAPD template commits the applicant to the quality standards described in NQA-1-1994, Basic Requirement 16.

3.2.17 Quality Assurance Records

The QAPD template follows the guidance of SRP Section 17.5, paragraph II.Q, for establishing necessary measures to ensure that sufficient records of items and activities affecting quality are generated, identified, retained, maintained, and retrievable.

Regulatory position C.2 of RG 1.28, Revision 3 provides record retention times for lifetime and nonpermanent records. In establishing the retention time for records, the QAPD template provides ESP and COL applicants the guidance to base the retention on Regulatory Position C.2 and Table 1 of RG 1.28, Revision 3 or by including their specific table in the QAPD. The NRC staff will evaluate the adequacy of records retention times as site-specific information when an ESP or COL applicant submits its application.

Concerning the use of electronic records storage and retrieval systems, the QAPD template provides for compliance with NRC guidance given in GL 88-18, “Proposed Final NRC Generic Letter 88-18, Supplement 1,” “Guidance on Managing Quality Assurance Records in Electronic Media,” dated September 13, 1999; RIS 2000-18, “Guidance on Managing Quality Assurance Records in Electronic Media,” dated October 23, 2000; and associated Nuclear Information and Records Management Association (NIRMA) guidelines turbine generator (TG) 11-1998, TG 15-1998, and TG 21-1998.

In establishing provisions for records, the QAPD template commits the applicant to comply with the quality standards described in NQA-1-1994, Basic Requirement 17 and Supplement 17S-1, with the following clarification and exception:

- As an alternative to the NQA-1-1994, Supplement 17S-1, Section 4.2(b), requirements for records to be firmly attached in binders or placed in folders or envelopes for storage in steel file cabinets or on shelving in containers, the QAPD template proposes that hard records be stored in steel cabinets or on shelving in containers, except that methods other than binders,

folders, or envelopes may be used to organize records for storage. In a previous safety evaluation (Ref. 14), the NRC staff determined that this proposed alternative is acceptable.

3.2.18 Quality Assurance Audits

The QAPD template follows the guidance of SRP Section 17.5, paragraph II.R, for establishing necessary measures to implement audits to verify that activities covered by the QAPD are performed in conformance with the established requirements. The effectiveness of the audit program is reviewed as part of the overall audit process. The QAPD provides for the applicant or holder, as applicable, to conduct periodic internal and external audits. Internal audits are conducted to determine the adequacy of the program and its procedures and to determine if they are meaningful and comply with the QAPD requirements. Internal audits are performed with a frequency commensurate with safety significance and in such a manner as to ensure that an audit of all applicable QA program elements is completed for each functional area within a period of 2 years after the initial determination that the audit program has been soundly established. External audits determine the adequacy of a supplier's or contractor's QA program. The applicant's responsible management reviews audit results; these reviews are documented. Management responds to all audit findings and initiates corrective action where indicated. Where corrective actions are indicated, documented follow-up of applicable areas through inspections, review, re-audits, or other appropriate means is conducted to verify that corrective action have been adequately implemented.

In establishing the independent audit program, the QAPD template commits the applicant to comply with the quality standards described in NQA-1-1994, Basic Requirement 18 and Supplement 18S-1.

3.3 Non-safety-Related SSC Quality Assurance Control

3.3.1 Non-safety-Related SSCs—Significant Contributors to Plant Safety

The QAPD template follows the guidance of SRP Section 17.5, paragraph II.V.1, for establishing specific program controls applied to non-safety-related SSCs that are significant contributors to plant safety and to which Appendix B does not specifically apply. Specific, applicable QAPD controls are used in a prescribed manner, targeting those characteristics or critical attributes that make the SSC a significant contributor to plant safety consistent.

3.3.2 Non-safety-Related SSCs Credited for Regulatory Events

In establishing quality requirements for non-safety-related SSCs credited for regulatory events, the QAPD template follows the guidance of SRP Section 17.5, paragraph II.V.2, and commits the applicant to comply with the following NRC guidance:

- The applicant or holder shall implement quality requirements for the fire protection system in accordance with Regulatory Position 1.7, "Quality Assurance," in RG 1.189, "Fire Protection for Operating Nuclear Power Plants," issued April 2001.

- The applicant or holder shall implement quality requirements for anticipated transient without scram (ATWS) equipment in accordance with GL 85-06, "Quality Assurance Guidance for ATWS Equipment That Is Not Safety Related," issued January 1985.

- The applicant or holder shall implement quality requirements for station blackout (SBO) equipment in accordance with Regulatory Position 3.5, "Quality Assurance and Specific Guidance for SBO Equipment That Is Not Safety Related," and Appendix A, "Quality Assurance Guidance for Non-Safety Systems and Equipment," in RG 1.155, "Station Blackout," issued August 1988.

3.4 Regulatory Commitments

Inconsistent referencing and commitments noted by NRC reviewers for some COL applications required the need for additional QAPD guidance with regard to NRC RGs identified in the Chapter 1 (FSAR). Additional guidance for addressing evaluations of conformance with applicable RGs is provided in Revision 7 of the QAPD template.

An applicant must make a specific statement for evaluation of conformance to the following RGs related to an applicant's QA program. These RGs are typically identified in Chapter 1 of the FSAR and are consistent with RG 1.206, section C.I.1.9.

- RG 1.8, Revision 3, "Qualification and Training of Personnel for Nuclear Power Plants," issued May 2000.

- RG 1.26, Revision 4, "Quality Group Classification and Standards for Water-, Steam-, and Radioactive-Waste-Containing Components of Nuclear Power Plants," issued March 2007.

- RG 1.28, Revision 3, "Quality Assurance Program Requirements (Design and Construction)," issued August 1985.

- RG 1.29, Revision 4, "Seismic Design Classification," issued March 2007.

- RG 1.33, Revision 2, "Quality Assurance Program Requirements (Operations)," issued February 1978.

- RG 1.37, Revision 1, "Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants," issued March 2007.

Applicants must provide an evaluation for conformance to the RGs identified in Part IV of the QAPD template by either providing commitment to the regulatory positions or providing an alternative or exception to be reviewed for adequacy by the NRC staff. The NRC staff will review the adequacy of applicant commitments to these RGs on an applicant-specific basis.

NEI Template provides as an alternative to RG 1.33, position C.4 & C.5, an applicant can follow SRP Section 17.5. The NRC staff does not agree with this alternative because SRP Section 17.5 does not address these positions. Therefore, each applicant needs to specifically address regulatory positions C.4 & C.5 or propose an acceptable alternative.

The QAPD template includes regulatory commitments to the following industry guidance related to QA:

- ASME NQA-1-1994, "Quality Assurance Requirements for Nuclear Facility Applications," Parts I and II, as described in Sections 3.2.1 through 3.2.18 of this SER.

- NIRMA technical guides, as described in Section 3.2.17 of this SER.

4. CONCLUSION

Based on review of NEI 06-14, Revision 7, in accordance with the review guidance of SRP Section 17.5, the NRC staff concludes that the QAPD template provides an acceptable format and adequate guidance for establishing a QA program that complies with Appendix B to 10 CFR Part 50. The QAPD template is based on ASME NQA standard NQA-1-1994, as supplemented by additional regulatory guidance and industry guidance applicable to administrative and quality controls during nuclear power plant operation. Accordingly, the NRC staff concludes that the QAPD template can be used, by an applicant under the provisions of 10 CFR Part 52, as an acceptable format for providing the application-specific information necessary for developing the QA program description required by the provisions of 10 CFR 52.17(a)(1)(xi) for an ESP application and 10 CFR 52.79(a)(25) for a COL application.

The NRC staff will further review the bracketed text included in the QAPD template that the applicant will submit in its QAPD as part of a licensing request. The NRC staff will use this information to determine if the applicant has established controls that comply with the requirements of 10 CFR Part 52, Appendix B to 10 CFR Part 50, 10 CFR Part 21, and 10 CFR 50.55(e), and with the criteria contained in SRP Section 17.5. In addition to the site-specific information provided as delineated by bracketed text in the QAPD template, areas that the applicant is required to address and that the NRC staff will review with the application are:

- the organizational description addressed in Section 3.2.1 of this SER,
- record retention time addressed in Section 3.2.17 of this SER, and
- the regulatory commitments addressed in Section 3.4 of this SER.

5. REFERENCES

- Heymer, A. P., NEI to the NRC, "NEI Technical Report on Template for an Industry Quality Program Description," October 19, 2006, Agencywide Documents Access and Management System (ADAMS) Accession Number ML062990149.

- Heymer, A. P., NEI to the NRC, "NEI Technical Report 06-14, *Template for an Industry Quality Program Description*, Request for Additional Information (RAI) Responses," January 4, 2007, ADAMS Accession Number ML070470234.

- Heymer, A. P., NEI to the NRC, "NEI Technical Report 06-14, *Template for an Industry Quality Program Description*, Revision 3," February 13, 2007, ADAMS Accession Number ML070600650.

- NRC/Office of New Reactors (NRO), Final Safety Evaluation for Technical Report NEI 06-14, "Quality Assurance Program Description," April 25, 2007, ADAMS Accession Number ML070510300.

- NUREG-0800, SRP Section 17.5, "Quality Assurance Program Description-Design Certification, Early Site Permit and New License Applicants," March 2007, ADAMS Accession Number ML063190019.

- Bell, R. J., NEI to the NRC, "NEI Technical Report 06-14, *Quality Assurance Program Description*, Revision 5," May 7, 2008, ADAMS Accession Number ML081350560.

- NRC/NRO to the NEI, "Request for Additional Information Regarding Nuclear Energy Institute Technical Report 06-14A, Quality Assurance Program Description, Revision 5," dated September 17, 2008, ADAMS Accession Number ML0824607713, and Enclosure: "Request for Additional Information Regarding the Nuclear Energy Institute Quality Assurance Program Description Topical Report No. NEI-06-14A," Revision 5, ADAMS Accession Number ML082460783.

- Bell, R. J., NEI to the NRC, "Response to September 17, 2008, Request for Additional Information on NEI 06-14A, Revision 5, "Quality Assurance Program Description," and "Revised NEI 06-14A for NRC Endorsement," dated November 14, 2008, ADAMS Accession Number ML083380308.

- Bell, R. J., NEI to the NRC, "Supplemental Response to NRC's September 17, 2008, Request for Additional Information on NEI 06-14A, *Quality Assurance Program Description*, Revision 5," November 20, 2008, ADAMS Accession Number ML083380335.

- NRC/NRO to the NEI, "Supplemental Request for Additional Information Regarding Nuclear Energy Institute Technical Report 06-14A, Quality Assurance Program Description, Revision 6," dated April 30, 2009, ADAMS Accession Number ML091140483.

- Bell, R. J., NEI to the NRC, "Response to April 30, 2009 Request for Additional Information on NEI 06-14A, Revision 6, *Quality Assurance Program Description*," dated June 12, 2009, ADAMS Accession Number ML091800447, and Enclosure: "NEI response to NRC's Request for Additional Information Regarding the Nuclear Energy Institute QAPD Topical Report No. NEI-06-14A," Revision 6, ADAMS Accession Number ML091800448.

- Bell, R. J., NEI to the NRC, "Submittal of NEI 06-14, Revision 7, *Quality Assurance Program Description*," dated June 24, 2009, ADAMS Accession Number ML092660025.

- NRC/Office of Nuclear Reactor Regulation (NRR), "Edwin I. Hatch Nuclear Power Station, Units 1 and 2, Approval of Relief Request RR-27, Third-Year Interval Inservice Inspection Program (TAC Nos. MA6163 and MA6164)," March 20, 2000, ADAMS Accession Number ML003693241.

- NRC/NRR, Safety Evaluation of the Proposed Change to the Quality Assurance Program, "Approval of Nuclear Management Company Quality Assurance Topical Report," August 26, 2005, ADAMS Accession Number ML052360625.

- NRC/NRR, “Approval of Nuclear Management Company Quality Assurance Topical Report (TAC Numbers MC1309, MC1310, MC1311, MC1312, MC1313, MC1314, MC1315, MC1316),” March 24, 2005, ADAMS Accession Number ML050700416.

- NRC/NRR, Safety Evaluation by the NRR, “EPRI Topical Report TR-106439, Guideline on Evaluation and Acceptance of Commercial Grade Digital Equipment for Nuclear Safety Applications,” dated July 17, 1997.