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AmerGen SM

An Exelon Company

10 CFR 50.90

2130-05-20064
5928-05-20082

November 13, 2007

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

Oyster Creek Nuclear Generating Station
Facility Operating License No. DPR -16
NRC Docket No. 50-219

Three Mile Island Nuclear Station, Unit 1
Facility Operating License No. DPR-50
NRC Docket No. 50-289

Subject: Oyster Creek Technical Specification Change Request No. 336
TMI Unit 1 Technical Specification Change Request No. 330
Deletion of Technical Specification Requirements for Review and Audit, and Additional Administrative Changes

Pursuant to 10 CFR 50.90, "Application for amendment of license or construction permit," AmerGen Energy Company, LLC (AmerGen) hereby requests the following amendments to the Technical Specifications, Appendix A of Facility Operating License Nos. DPR-16 and DPR-50 for Oyster Creek Nuclear Generating Station (OCNGS) and Three Mile Island Nuclear Station, Unit 1 (TMI), respectively.

The proposed amendment will delete the OCNGS and TMI TS sections 6.5, Review and Audit. The requirements of the deleted subsections TS 6.5.1, Technical Review and Control, TS 6.5.2, Independent Safety Review Function, and TS 6.5.3, Audits, are currently being implemented in the Exelon/AmerGen Quality Assurance Topical Report (QATR).

The proposed amendment also incorporates several administrative changes. The OCNGS administrative changes include correcting typographical errors and removing a surveillance requirement for the condenser vacuum pump isolation trip system that was inadvertently missed during the removal of this trip system from the technical specifications under a previously approved amendment. The TMI administrative changes include correcting typographical errors,

A001
Q004
NRR

providing improved Technical Specification Figure legibility, updating the description of the installed spent fuel pool storage locations and correcting an error in the labeling of outfalls on the TMI site drawing.

Attachment 1 provides the Evaluation of Proposed Changes. Attachment 2 provides the proposed OCNGS Technical Specification Marked-Up Pages. Attachment 3 provides the proposed TMI Technical Specification Marked-Up Pages. Attachment 4 provides the referenced QATR Chapters. Attachment 5 provides the referenced AmerGen/Exelon procedures.

The proposed amendments have been reviewed by the OCNGS and TMI Plant Operations Review Committees and approved by the Nuclear Safety Review Board.

Using the standards in 10 CFR 50.92, AmerGen has concluded that these proposed changes do not constitute a significant hazards consideration, as described in the enclosed analysis performed in accordance with 10 CFR 50.91(a)(1). Pursuant to 10 CFR 50.91(b)(1), a copy of this Technical Specification Change Request is being provided to the designated officials of the State of New Jersey and the Commonwealth of Pennsylvania, as well as the chief executives of the township and county in which the facilities are located.

We request approval of the proposed amendments by November 13, 2008. The amendment shall be implemented within 60 days of issuance.

No new regulatory commitments are established by this submittal.

If any additional information is needed, please contact Frank Mascitelli at (610) 765-5512.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 13th day of November 2007.

Respectfully,

Pamela B. Cowan
Director - Licensing & Regulatory Affairs
AmerGen Energy Company, LLC

Attachments:
1) Oyster Creek Technical Specification Change Request No. 336 & TMI Unit 1 Technical Specification Change Request No. 330 - Evaluation of Proposed Changes
2) Oyster Creek Technical Specification Change Request No. 336 – Proposed Technical Specification Marked-Up Pages
3) TMI Unit 1 Technical Specification Change Request No. 330 – Proposed License and Technical Specification Marked-Up Pages
4) Referenced Exelon/AmerGen Quality Assurance Topical Report, Rev 79, Chapters
5) Referenced AmerGen/Exelon Procedures

cc: S. J. Collins, Administrator, USNRC Region I
D. M. Kern, USNRC Senior Resident Inspector, TMI Unit 1
M. Ferdas, USNRC Senior Resident Inspector, Oyster Creek
P. J. Bamford, USNRC Project Manager, TMI Unit 1
G. E. Miller, USNRC Project Manager, Oyster Creek
D. Allard, Director, Bureau of Radiation Protection-PA Department of Environmental Resources
Chairman, Board of County Commissioners of Dauphin County
Chairman, Board of Supervisors of Londonderry Township
Mayor of Lacey Township
P. Baldauf, Assistant Director, Bureau of Nuclear Engineering, New Jersey Department of Environmental Protection

Attachment 1

Oyster Creek Nuclear Generating Station
Technical Specification Change Request No. 336

Three Mile Island Unit 1
Technical Specification Change Request No. 330

Evaluation of Proposed Changes

Oyster Creek Technical Specification Change Request No. 336
TMI Unit 1 Technical Specification Change Request No. 330
Deletion of Technical Specification Requirements for Review and Audit, and Additional Administrative Changes

1.0 DESCRIPTION

In accordance with 10 CFR 50.90, "Application for amendment of license or construction permit," AmerGen Energy Company, LLC (AmerGen) is requesting amendments to Facility Operating License Nos. DPR-16 and DPR-50 for Oyster Creek Nuclear Generating Station (OCNGS) and Three Mile Island Nuclear Station, Unit 1 (TMI), respectively. The proposed amendments delete the TS 6.5 Review and Audit requirements from the OCNGS and TMI Technical Specifications (TSs).

The proposed changes will specifically delete the Technical Specification (TS) 6.5.1 requirements for Technical Review and Control, utilizing instead the Technical Review and Control (Station Qualified Review) and Design Control requirements of the NRC-approved Exelon/AmerGen Quality Assurance Topical Report (QATR) (Ref 1). The proposed changes will delete the TS 6.5.2 requirements for the Independent Safety Review (ISR) Function process. Independent safety reviews that are currently performed under the existing Plant Operations Review Committee (PORC) are an adequate replacement for the deleted TS defined Independent Safety Review Function. The proposed changes will also delete the TS 6.5.3 requirements for Audits, utilizing instead the Audit process described in Chapter 18 and Appendix B of the QATR.

The proposed amendment also incorporates several administrative changes. The OCNGS administrative changes include correcting a typographical error to TS Table 3.1.1 and removing a surveillance requirement for the condenser vacuum pump isolation trip system that was inadvertently missed during the removal of this trip system under a previous technical specification amendment (Ref 2). The TMI administrative changes include correcting a typographical error, providing improved Technical Specification Figure legibility, updating the description of the installed spent fuel pool storage locations, and correcting an error in the labeling of river outfalls on the TMI site drawing.

AmerGen requests that the following changed replacement pages be inserted into the existing Facility Operating Licenses:

Revised OCNGS TS Pages: iii, 3.1-19, 4.1-9, 4.1-10, 6-3, 6-4, 6-5, 6-6, 6-7, 6-8, and 6-10

Revised TMI TS Pages: License page 8, License page 9, ii, v, 3-9b, 3-39a, 3-39b, 3-39c, 5-7, 6-3, 6-4, 6-5, 6-6, 6-7, 6-8, 6-11 and Fig 5.3

The marked up pages showing the requested changes are provided in Attachments 2 and 3 for OCNGS and TMI, respectively.

2.0 PROPOSED CHANGES

Oyster Creek Nuclear Generating Station, Facility Operating License No. DPR-16

TS Table of Contents Page iii is being revised to show Section 6.5 as DELETED.

TS Table 3.1.1 Note ee, typographical error "FUNTIONAL" will be corrected to "FUNCTIONAL."

TS Table 4.1.1, page 6 of 6, typographical error "setporint" will be corrected to "setpoint."

TS Table 4.1.2 Item 11, Condenser Vacuum Pump Isolation, is being deleted from the list of trip systems.

TS section TS 6.5, Review and Audit, will be DELETED.

TS 6.8.2 and TS 6.8.3 are edited to remove references to deleted 6.5.1 and 6.5.1.14 sections.

Three Mile Island Nuclear Station, Unit 1 Facility Operating License No. DPR-50

License, page 8, Paragraph Section (14), typographical error "alter" will be corrected to "after."

License, page 9, typographical error "6" will be corrected to "3."

TS Table of Contents, Page ii is being revised to correct the page location for Section 3.1.13.

TS Table of Contents Page v is being revised to show Sections 6.5, 6.5.1, 6.5.2 and 6.5.3 as DELETED.

TS Figures 3.1-2a, 3.5-1, 3.5-2, and 3.5-3 are being reprinted to improve legibility.

TS 5.4.2.d is being revised to indicate the currently installed number of spent fuel pool storage locations.

TS Figure 5-3 river outfall location labels DSN001 and DSN003 are being switched to indicate the current locations.

TS section TS 6.5, Review and Audit, will be DELETED.

TS 6.8.2 and TS 6.8.3 are edited to remove references to deleted 6.5.1 and 6.5.1.14 sections.

3.0 BACKGROUND

The current licensing basis for the Technical Review and Control, Independent Safety Review, and Audit requirements at TMI (and subsequently OCNGS) arose from the TMI Unit 1 restart proceedings. The original programs were revised to reflect changes to the GPU Nuclear Corporation's program for Safety Review and Operational Advice endorsed by the NRC staff in Section III.C of Supplement 1 to NUREG-0680 (TMI-1 Restart Evaluation) (Ref 3). The NRC approved TMI TS 6.5 Review and Audit sections in Technical Specification Amendment No. 77 on April 28, 1982 (MLO 03763983) (Ref 4) and OCNGS TS 6.5 Review and Audit sections in Technical Specification Amendment

No. 69 on January 12,1984 (MLO 111601115) (Ref 5). These requirements have remained in place to date.

NRC regulatory requirements related to the content of the Technical Specifications (TS) are set forth in 10 CFR 50.36. That regulation requires that the TS include items in eight specific categories, including (1) safety limits, limiting safety system settings and limiting control settings, (2) limiting conditions for operation, (3) surveillance requirements, (4) design features, (5) administrative controls, (6) decommissioning, (7) initial notification, and (8) written reports. However, the regulation does not specify the particular requirements to be included in the plant's Technical Specifications. The proposed deletion of the Review and Audit requirements is categorized as administrative controls.

The proposed amendment meets the eligibility requirements for relocating administrative TS requirements to the QATR, as described in NRC Administrative Letter (AL) 96-05, "Relocation of Technical Specification Administrative Controls Related to Quality Assurance," dated December 12, 1995. Since the existing applicable QATR sections already contain the TS requirements proposed for deletion, relocation of the deleted TSs to the QATR is not required.

The remaining proposed OCNGS TS changes are administrative in nature and involve deleting the Condenser Vacuum Pump Isolation surveillance requirements. The Condenser Vacuum Pump Isolation trip system had been removed under a previously approved Technical Specification amendment request. The removal of the corresponding surveillance requirements on TS page 4.1-10 had been inadvertently missed. TS pages 3.1-19 and 4.1-9 are being revised to correct typographical errors. Also, TS 6.8.2 and TS 6.8.3 are being edited to remove references to deleted 6.5.1 and 6.5.1.14 sections.

The remaining proposed TMI Unit 1 changes are administrative in nature and involve correcting typographical errors to TMI Facility Operating License No. DPR-50 pages 8 and 9, updating TS Table of Contents pages ii and v, improving legibility of figures on TS pages 3-9b, 3-39a, 3-39b and 3-39c, updating the number of currently installed Spent Fuel Pool "A" fuel assembly storage locations on TS page 5-7 and re-labeling river outfall locations on the site map TS Figure 5-3. Also, TS 6.8.2 and TS 6.8.3 are being edited to remove references to deleted 6.5.1 and 6.5.1.14 sections.

4.0 TECHNICAL ANALYSIS

Deletion of Review and Audits Technical Specifications

The NRC provided guidance for the content of TS in its "Final Policy Statement on Technical Specifications Improvement for Nuclear Power Reactors, 58 FR 39132, July 22, 1993. In particular, the NRC indicated that certain items could be relocated from the TS to licensee-controlled documents. The Final Policy Statement identified future criteria to be used in determining whether particular safety functions are required to be included in the TS, as follows: (1) installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary; (2) a process variable, design feature, or operating restriction that is an initial condition of a Design Basis Accident or Transient analysis that

either assumes the failure of, or presents a challenge to the integrity of a fission product barrier; (3) a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a Design Basis Accident or Transient that either assumes the failure of, or presents a challenge to the integrity of a fission product barrier; (4) a structure, system, or component which operating experience or probabilistic safety assessment has shown to be significant to public health and safety.

The NRC adopted amendments to 10 CFR 50.36, (July 19,1995) pursuant to which the rule was revised to codify and incorporate these criteria. The NRC's policy statement provides that those existing TS Limiting Condition for Operation (LCOs) which do not satisfy these four specified criteria may be relocated to the Updated Final Safety Analysis Report (UFSAR), such that future changes could be made to these provisions pursuant to 10 CFR 50.59. Other requirements may be relocated to more appropriate documents (e.g., Security Plan, Quality Assurance Plan, and the Emergency Plan) and controlled by the applicable regulatory requirement. Similarly, while the required content of TS administrative controls is specified in 10 CFR 50.36(c)(5), particular details of administrative controls may be relocated to licensee controlled documents where section 50.54, 50.59, or other regulations provide adequate regulatory control.

While the criteria specifically apply to LCOs, in adopting the revision of the rule, the NRC indicated that the intent of these criteria could be utilized to identify the optimum set of administrative controls in the TS. Addressing administrative controls, 10 CFR 50.36 states that they are "the provisions relating to organization and management, procedures, record keeping, review and audit, and reporting necessary to assure operation of the facility in a safe manner." The specific content of the administrative controls section of the TS is, therefore, that information which the Commission deems essential for the safe operation of the facility, and which is not already adequately covered by other regulations. Accordingly, the NRC has determined that requirements that are not specifically required under 50.36(c)(5), and are not otherwise necessary to obviate the possibility of an abnormal situation, or event, giving rise to an immediate threat to the public health and safety, can be removed from the administrative controls section of the Technical Specifications. The scope of this license amendment that includes deletion of the Technical Review and Audit sections from the OCNGS and TMI Technical Specifications is applicable to the aforementioned discussion.

Accordingly, the proposed TS changes meet the above requirements in that the subject sections are not otherwise necessary to obviate the possibility of an abnormal situation or event, giving rise to an immediate threat to the public health and safety. The proposed removed sections involve procedure preparation, review and approval activities, design control, independent safety reviews and specification of activities required for audits.

On December 12, 1995, NRC issued Administrative Letter 95-06, "Relocation of Technical Specification Administrative Controls Related to Quality Assurance" (Ref 6) to inform licensees of recent experiences involving the relocation of technical specification administrative controls related to quality assurance. The scope of this TS change proposal conforms to the scope and requirements defined in the Review and Audits and Procedure Review Process sections of the letter.

The proposed TS changes conform to NRC regulatory guidance presented in the Review and Audits and Procedure Review Process sections of Administrative Letter 95-06. Accordingly, a matrix has been developed containing the existing TS requirements and a reference to an existing section of the QATR. No relocation of deleted TS requirements is necessary to the QATR since the applicable Technical Review and Control and Audit deleted TS requirements are contained in existing QATR requirements and are equivalent to the TS requirements being deleted. Therefore, no "relocation" of these deleted TSs to the QATR is required. Future changes to the technical control and review requirements of the QATR are governed by regulation 10CFR50.54(a).

Activities specified in TS 6.5.1.1 (TS 6.8 procedure changes), TS 6.5.1.2 (TS Appendix A changes), TS 6.5.1.4 (procedures for proposed tests and experiments), and TS 6.5.1.12 (cross-disciplinary reviews) receive appropriate independent technical reviews under the Station Qualified Review (SQR) program. The SQR program is employed fleet-wide at AmerGen/Exelon and is described in QATR Chapter 5. In addition, the SQR program requires independent technical review of: changes to administrative and implementing procedures for the station required by the OCNGS and TMI Technical Specifications and QATR, changes to the Offsite Dose Calculation Manual, Core Operating Limit Reports Technical Requirements Manual, and proposed changes to the Technical Specifications, their Bases, and the Operating License. Activities not covered in the SQR program specified in TS Section 6.5.1.3 (modifications), TS 6.5.1.5 (TS violation investigations), TS 6.5.1.6 (24-hour written notifications to the Commission, Reportable Events), TS 6.5.1.7 (Special Reviews), TS 6.5.1.8 (Security Plan changes), TS 6.5.1.9 (Emergency Plan changes), TS 6.5.10 (unplanned onsite release of radioactive material evaluations) and TS 6.5.1.11 (major radwaste system changes) receive appropriate independent technical reviews as identified in the Technical Specification/Process Matrix included in this section.

The SQR program is implemented through station qualified reviewers (SQRs). The SQR program had been incorporated into the QATR, Chapter 5, for OCNGS and TMI and approved by the NRC during the agency's review and approval of revision 70 of the QATR on December 24, 2002 (TAC NOS. MB4901 through MB 4913) (Ref 7). The Responsible Technical Reviewers (RTRs) and current SQRs have similar qualification requirements. The SQRs' qualification requirements meet the appropriate sections of the ANSI/ANS-3.1 revision that is committed to for the site. OCNGS and TMI are committed to ANSI/ANS 3.1-1978, as identified in QATR Appendix C. Under the new proposal, OCNGS and TMI SQRs will not have the alternate qualification path of seven years experience in lieu of meeting the ANSI 3.1 standard, as the current TSs afford.

The qualifications of independent technical reviewers, for activities outside the SQR program, are similar to the preparer of the activity. Modifications and major radwaste system changes receive independent technical reviews by Engineering Reviewer qualified individuals. TS violation investigations, 24-hour written notifications to the NRC, Reportable Events, Special Reviews, and unplanned onsite release of radioactive material evaluations receive independent technical reviews by an independent review body (Management Review Committee) made up of senior personnel typically qualified to ANSI 3.1 Section 4.2 management qualifications. Site Security Plan changes are required to be reviewed by a Corporate Director prior to PORC review. Emergency Plan changes are reviewed by independent technical reviewers that are SQR qualified.

In addition, TS 6.5.1.1 through 6.5.1.11 activities are required, in general, to be assessed in accordance with HU-AA-1212, "Technical Task Risk/Rigor Assessment, Pre-Job Brief, Independent Third Party Review, and Post-Job Brief," which will provide, as applicable, an additional independent technical review by either a qualified independent third party reviewer or an independent Collegial/Challenge Review Board.

The ISR Function TS requirements and associated ISR program are being deleted. The ISR Function is a redundant program to the independent reviews being performed under the AmerGen/Exelon PORC process, as defined in QATR Chapter 1. The need for the ISR Function originated from the post TMI Unit 2 accident and restart period and is no longer required due to the AmerGen/Exelon independent safety review processes currently in place. Currently, PORC reviews all the activities that require an ISR Function with the exception of written summaries of audit reports. Under this proposal audit reports will be subject to the requirements of the QATR Chapter 18, which does not include an ISR Function or PORC review.

The NRC SER (Ref 4) dated April 28,1982, stated: "the reviews will be performed by an individual/group not having direct responsibility for the activity under review. This function was previously performed by the Met Ed Corporate Technical Support Staff (Generation Review Committee)." The establishment of the ISR Function was designed to bring more accountability to the performance of independent safety reviews. Since 1982 the ISR Function has evolved to the point where independent safety reviews are performed under an onsite (PORC) and offsite (Nuclear Safety Review Board (NSRB)) process. Under existing standardized AmerGen/Exelon Fleet processes the ISR Function is no longer required because the condition that drove the institution of this process (need more accountability) does not exist today. Station PORCs and NSRBs are robustly performing independent safety reviews at AmerGen/Exelon today.

The TS 6.5.3, Audits, section scope, frequency and review requirements that are proposed for deletion from the OCNGS and TMI TSs are bounded by the current audit requirements of the AmerGen/Exelon QATR, Rev 79. The deletion is in accordance with the recommendations contained in the relocation of the audit requirements section of NRC Administration Letter (AL) 95-06, "Relocation of Technical Specification Administrative Controls Related to Quality Assurance," dated December 12,1995. Since the QATR Appendix B contains the audit scope and frequency requirements and QATR Chapter 18 contains the audit reporting and follow-up requirements that are being deleted from the TSs, no additional relocation of requirements to the QATR is required.

A detailed review of the TS 6.5.3.1 list of audit activities for OCNGS and TMI was compared to the current list of audit activities in the QATR, Appendix B. The only difference is that the OCNGS and TMI TS contain the following activity whereas the QATR does not: "Any other area of unit operation considered appropriate by the Chief Nuclear Officer." This generic audit requirement is not specifically listed as an audit requirement in QATR Appendix B; however, it is inherently implied in QATR Chapter 1 section 2.2.3 of the QATR. The President and Chief Nuclear Officer (CNO) is the senior executive responsible for setting and implementing policies, objectives, expectations, and priorities to ensure activities are performed in accordance with the Quality Assurance Plan (QAP) and other requirements. The management position responsible for Nuclear Oversight (NOS) reports to the CNO and is responsible for the audit program. Due to this reporting relationship the CNO is periodically apprised by the NOS

director of the status of the quality assurance aspects at the nuclear stations. The CNO can direct the NOS organization to perform additional audits in any other areas of operation that warrant concern.

In addition, the Standard Technical Specification Administrative Control sections do not contain the amount of detail for Review and Audit as found in the OCNGS and TMI TS 6.5 sections. The NRC approved NUREG-1433, "Standard Technical Specifications - General Electric Plants, BWR/4," and the NRC approved NUREG-1430, Standard Technical Specifications - Babcock and Wilcox Plants. The Standard Technical Specifications were developed based on the criteria in the "Final Commission Policy Statement on Technical Specifications Improvement for Nuclear Power Reactors," dated July 22, 1993, and subsequently codified in 10 CFR 50.36. The preface to these documents encourages licensees to adopt some or all of the improved TS into their existing TSs. The TS sections proposed herein for deletion do not appear in the improved Standard Technical Specification (STS) presented in NUREG-1433 and NUREG-1430, and accordingly, are not required to be in the TSs.

Revisions to the administrative controls section of the OCNGS and TMI Technical Specifications are currently subject to a no significance hazards consideration determination pursuant to 10 CFR 50.92. This determination is oriented to the design and operational requirements described in the TS. The administrative controls selected for deletion are considered by the NRC in the above referenced AL 95-06 to be quality assurance requirements, and therefore, qualify for incorporation into documents describing the licensee's quality assurance program. As stated in AL 95-06,10 CFR 50.54(a) and 10CFR50.59 are the appropriate regulations for controlling changes to these and other quality assurance program requirements. Future changes to the QATR and the SQR program, as described in the QATR, are controlled by 10CFR 50.54(a) process. Prior NRC approval is required of any changes to the quality assurance program that reduce the commitments in the program description as accepted by the NRC. Accordingly, the proposed license amendment removing these administrative requirements from the TS while utilizing documents subject to the controls of 10 CFR 50.54(a), results in an equivalent level of regulatory authority while providing for a more appropriate change control process.

The following Technical Specification/Process Matrix has been prepared to identify the existing programs and processes that currently meet the requirements of the Technical Specification Technical Review and Audit requirements proposed for deletion. Notes are provided in the Evaluation column where there are minor differences that need additional explanation or clarification.

Technical Specification/Process Matrix

OCNGS/TMI TS Section	TS Topic	Currently Implemented	Evaluation
6.5.1	Technical Review & Control	QATR Chapters 3 and 5	Equivalent
6.5.1.1	TS 6.8 Procedures	QATR Chapters 3 and 5	Equivalent
6.5.1.2	TS Appendix A	QATR Appendix C	Note 1
6.5.1.3	Modifications	QATR Chapters 3 and 5	Equivalent
6.5.1.4	Test & Experiments	QATR Chapters 2, 5, and 11	Note 2
6.5.1.5	TS Violations	QATR Chapter 16	Equivalent
6.5.1.6	Reportable Events (TMI only) and 24-hour written notifications (OCNGS only)	QATR Chapter 16	Equivalent
6.5.1.7	VP driven special reviews	QATR Chapter 16	Note 3
6.5.1.8	Security Plan & Procedures	QATR Chapter 5 and Appendix A	Note 4
6.5.1.9	Emergency Plan & Procedures	QATR Chapter 5 and Appendix C	Equivalent
6.5.1.10	Unplanned Radioactive Releases	QATR Chapter 16	Note 5
6.5.1.11	Radwaste System Changes	QATR Chapter 3	Equivalent
6.5.1.12	Cross-Disciplinary Reviews	QATR Chapter 5	Equivalent
6.5.1.13	Written records for Technical Reviews	QATR Chapter 5 and 17	Equivalent
6.5.1.14	Qualifications for Responsible Technical Reviewers (RTRs)	QATR Chapters 2, 5	Note 6
6.5.2	Independent Safety Review (ISR)	QATR Chapters 1, 3, and 5	Note 7
6.5.2.1	Director responsibilities	QATR Chapters 1, 3, and 5	Note 7
6.5.2.2	Independence for ISRs	QATR Chapters 1, 3, and 5	Note 7
6.5.2.3 a. through l.	Technical Experience areas	QATR Chapters 1, 3, and 5	Note 7
6.5.2.4	Technical Consultants	QATR Chapters 1, 3, and 5	Note 7

OCNGS/TMI TS Section	TS Topic	Currently Implemented	Evaluation
6.5.2.5	Scope of ISR	QATR Chapters 1, 3, and 5	Note 7
6.5.2.5.a	UFSAR Changes	QATR Chapters 1, 3, and 5	Note 8
6.5.2.5.b	Safety-Related Procedure Changes	QATR Chapters 1, 3, and 5	Note 8
6.5.2.5.c	TS changes & License Amendments	QATR Chapters 1, 3, and 5	Note 9
6.5.2.5.d	Violations, Deviations and Reportable Events	QATR Chapters 1, 5 and 16	Note 9
6.5.2.5.e	Audit Report Summaries	QATR Chapter 18	Note 10
6.5.2.5.f	Other matters involving safe operation	QATR Chapters 1, 3, and 5	Note 11
6.5.2.6	Qualifications for ISRs	QATR Chapters 1 and 5	Note 7
6.5.2.7	ISR Records transmitted to Director & VP	QATR Chapters 1, 5, 17	Note 7
6.5.3	Audits	QATR Chapter 18 and Appendix B	Equivalent
6.5.3.1	Audits performed in accordance with QATR	QATR Chapter 18 and Appendix B	Equivalent
6.5.3.1.a	Conformance to TS & License	QATR Appendix B	Equivalent
6.5.3.1.b	Staff performance, training & qualifications	QATR Appendix B	Equivalent
6.5.3.1.c	Results of corrective actions	QATR Appendix B	Equivalent
6.5.3.1.d OCNGS 6.5.3.1.e TMI	Emergency Plan & procedures	QATR Appendix B	Equivalent
6.5.3.1.e OCNGS 6.5.3.1.f TMI	Security Plan & Procedures	QATR Appendix B	Equivalent
6.5.3.1.f OCNGS 6.5.3.1.g TMI	Fire Protection Program & Procedures	QATR Appendix B	Equivalent
6.5.3.1.g OCNGS 6.5.3.1.d TMI	10 CFR Appendix B activities	QATR Appendix B	Equivalent
6.5.3.1.h OCNGS 6.5.3.1.j TMI	Radiological Environmental Monitoring Program (REMP)	QATR Appendix B	Equivalent
6.5.3.1.i OCNGS 6.5.3.1.h TMI	Offsite Dose Calculation Manual (ODCM) & Procedures	QATR Appendix B	Equivalent
6.5.3.1.j OCNGS 6.5.3.1.i TMI	Process Control Program (PCP) & Procedures	QATR Appendix B	Equivalent

OCNGS/TMI TS Section	TS Topic	Currently Implemented	Evaluation
6.5.3.1.k	CNO requested audits	QATR Chapter 1	Note 12
6.5.3.2	Audits performed under Technical Support	QATR Appendix B	Equivalent
6.5.3.2.a OCNGS 6.5.3.2.b TMI	Fire protection & loss prevention programs	QATR Appendix B	Equivalent
6.5.3.2.b OCNGS 6.5.3.2.a TMI	Inspection and fire protection audit by outside consultant	QATR Appendix B	Equivalent
6.5.3.3	Audit records forwarded to management within 30 days (OCNGS) and 60 days (TMI)	QATR Chapter 18	Note 13

Note 1: QATR implementing procedure LS-AA-101 requires a technical verification team review for License and Technical Specification amendment revisions. QATR implementing procedure AD-AA-102 requires an SQR review for License and Technical Specification amendment revisions.

Note 2: Tests and Experiments are performed to written procedures subject to the 10CFR50.59 Process and the quality requirements of QATR Chapters 2, 5 and 11. All proposed tests and experiments receive an independent technical review.

Note 3: Special reviews, investigations or analyses and reports requested by the Vice President TMI Unit 1 are controlled through the Corrective Action Program (CAP), as described in QATR, Chapter 16.

Note 4: Security Plan Implementing Procedures are procedures subject to the requirements of QATR Chapter 5 Section 2.3.1. Although the QATR does not specifically state that qualified personnel should independently review Security Plan changes, Exelon procedure SY-AA-101-104, Revision, Control and Distribution of Security Plans and Implementing Procedures/T&RMs, states that security plan changes shall be reviewed by the Director of Nuclear Security and approved by PORC. This meets the requirements for Security Plan changes to be reviewed by knowledgeable individuals other than the individuals who prepared them. Changes to the Security Plan are evaluated under the 10CFR 50.54(p) controls and Security Plan changes requiring prior NRC approval are subject to QATR Appendix A and 10CFR50.90 controls.

Note 5: Although the QATR does not specifically state that unplanned onsite release of radioactive material shall be reviewed by a knowledgeable individual(s)/group, QATR Chapter 16 describes the Corrective Action Program (CAP), which fulfills the intent of the TS requirement. An Issue Report would be initiated for an unplanned onsite release of radioactive material to the environs. The CAP

process ensures that a knowledgeable qualified individual would evaluate the event and perform the appropriate level of investigation. Significant events would involve root cause analysis in which the final report would be reviewed by the station management review committee (MRC) to assure the corrective actions are appropriate and would prevent recurrence.

Note 6: Station Qualified Reviewers (SQRs) are qualified to the education and experience requirements of ANSI/ANS-3.1 revision to which the station is committed. OCNGS and TMI stations are committed to ANSI/ANS 3.1 of 1978. The qualifications of independent technical reviewers, for activities outside the SQR program, are similar to the preparer of the activity. QATR Chapter 2 requires the proficiency of personnel performing and verifying activities affecting quality be maintained by re-training, re-examining, re-qualifying, and/or re-certifying as determined by management or program commitment.

Note 7: The ISR function, as described in the TSs, is being deleted; however, independent safety review functions are being performed by PORC and NSRB. OCNGS and TMI PORC members perform the same type of independent safety review that ISRs perform. PORC members must not be the preparer or responsible technical reviewer of the document being reviewed. The PORC review documentation, as detailed in PORC minutes, is generally more comprehensive than ISR Function review documentation. For OCNGS, PORC members meet the qualification requirements of TS 6.5.2.6. For TMI, PORC members are required to be ANSI/ANS-3.1-1978 qualified which, in general, is equivalent to the ISR qualification, which is 9 years of experience, or, Bachelors Degree and 5 years experience. For both OCNGS and TMI, NSRB members shall have a minimum of nine years technical experience in one or more of the disciplines in the plant specified ANSI standard for the subject being reviewed, with a maximum of four of the nine years fulfilled through academic training in the pursuit of a degree in engineering or the physical sciences.

Note 8: Written safety evaluations, procedure changes, facility changes, and tests or experiments that require a change to the Technical Specification or prior NRC approval receive an independent safety review (PORC) in accordance with LS-AA-106 and as described in QATR Chapter 1 Section 2.3.5 and QATR Chapter 5 Section 2.3.1.2. The 10CFR50.59/50.54/72.48 processes and QATR implementing procedures AD-AA-102 and LS-AA-101 ensure that regulatory screenings, independent technical reviews and license/TS amendment reviews cause an independent safety review (PORC) to be performed when required. An additional ISR Function review is not required because of the robustness of the existing processes.

Note 9: Changes to the TSs or license amendments currently receive an independent safety review through the PORC as described in the QATR Appendix C Section 1.1 and LS-AA-101. Results of investigations for violations, deviations, and reportable events that are reportable to the NRC via 10CFR50.72 (for items affecting nuclear safety), 10CFR50.73 or 10CFR72.216 covering evaluations and recommendations to prevent recurrence are reviewed by the PORC as

described in LS-AA-106. An ISR Function review is not required because of the robustness of the existing processes.

Note 10: Audit Reports will not receive an independent safety review. Audit Reports are reviewed and approved in accordance with QATR Chapter 18 requirements. Findings of noncompliance with NRC requirements, and any significant nuclear safety or quality issues requiring escalated action, are directed through the management position responsible for Nuclear Oversight to the President and CNO in accordance with procedural requirements. In addition a periodic assessment (not to exceed 24 months) of the status and adequacy of the Quality Assurance Plan is performed by an independent organization to assure that assessments are being accomplished to program requirements.

Note 11: Procedure and design control reviewers always have the ability to specify additional independent safety reviews, as described in QATR Chapter 1 (PORC), and Chapter 5 (Technical Review and Control).

Note 12: The Nuclear Oversight (NOS) Director reports to the CNO. Due to this reporting relationship, the CNO is periodically apprised by the NOS director of the status of the quality assurance aspects at the nuclear stations. The CNO can direct the NOS organization to perform additional audits in any other areas of operation that warrant concern.

Note 13: OCNGS and TMI TS 6.5.3.3 require audit reports to be issued to the applicable functional organizations after completion of the audit within 30 days and 60 days, respectively. The AmerGen/Exelon fleet wide audit and assessment reporting requirements are described in QATR Chapter 18. Although specific time requirements for issuing the report are not specified in the QATR, report findings or deficiencies requiring prompt corrective action are reported immediately to the management of the assessed organization. The QATR implementing procedure NO-AA-200-002 requires audit reports to be distributed within 30 days of the last audit exit or as approved by the NOS Audit and Programs Director.

MATRIX referenced documents:

QATR Chapter 1	Organization
QATR Chapter 2	Quality Assurance Program
QATR Chapter 3	Design Control
QATR Chapter 5	Instructions, Procedures, and Drawings
QATR Chapter 11	Test Control
QATR Chapter 16	Corrective Action
QATR Chapter 17	Quality Assurance documents
QATR Chapter 18	Assessments
QATR Appendix A	Augmented Quality
QATR Appendix B	Assessment Frequency
QATR Appendix C	Codes, Standards, and Guides
AD-AA-102	Station Qualified Review

LS-AA-101	License and Technical Specification Amendment Process
LS-AA-106	Plant Operations Review Committee
NO-AA-200-002	Nuclear Oversight Regulatory Audit Procedure
SY-AA-101-104	Revision, Control, and Distribution of Security Plans and Implementing Procedures/T&RM

Administrative Changes

The following additional proposed changes to the OCNGS Technical Specifications are administrative in nature:

1. TS Table of Contents Page iii is being revised to show Section 6.5 as DELETED
2. TS Table 3.1.1 Note ee, typographical error will be corrected to "FUNCTIONAL."
3. TS Table 4.1.1, page 6 of 6, typographical error will be corrected to "setpoint."
4. TS Table 4.1.2 item 11, Condenser Vacuum Pump Isolation, is being deleted from the list of trip systems. Technical Specification Amendment # 169 (Ref 2) to License No DPR-16 was approved on July 29,1994 (TAC NO M89198) to delete the Condenser Vacuum Pump Isolation system from table 3.1.1 item L.1. Table 4.1.2 item 11, which contains the corresponding surveillance requirements for the Condenser Vacuum Pump Isolation system, should have also been deleted at this time, but was inadvertently missed during the amendment submittal and approval process. The technical analysis performed under TS Amendment # 169 is applicable for this administrative change and provides the technical justification for removing the system's surveillance requirements. This proposed change deletes the Condenser Vacuum Pump Isolation system test frequency from Table 4.1.2 item 11.
5. TS 6.8.2 and TS 6.8.3 are edited to remove references to deleted 6.5.1 and 6.5.1.14 sections.

The following additional proposed changes to the TMI Technical Specifications are administrative in nature:

1. DPR-50 License page 8 typographical error "alter" is revised to "after"
2. DPR-50 License page 9 typographical error "6" is revised to "3".
3. The revision to the Table of Contents page ii corrects a typographical error involving a page number.
4. TS Table of Contents Page v is being revised to show Sections 6.5, 6.5.1, 6.5.2 and 6.5.3 as DELETED
5. The revision to Technical Specification Figures 3.1-2a, 3.5-1, 3.5-2, and 3.5-3 involves a reprint of these Figures to provide improved legibility; no changes to the actual Figures have been made.
6. The revision to the Spent Fuel Storage Design Features Section 5.4.2.d updates the number of currently installed Spent Fuel Pool "A" fuel assembly storage locations (1062) based on the completed Phase 2 re-rack installation, which is bounded by the total allowable Spent Fuel Pool "A" fuel assembly

storage locations (1494) previously licensed in TMI Unit 1 Amendment No. 164, dated April 27, 1992.

7. The revision to Figure 5.3 site map switches river outfall locations DSN001 and DSN003 to correctly agree with the labeled outfall locations on the NPDES permit.
8. TS 6.8.2 and TS 6.8.3 are edited to remove references to deleted 6.5.1 and 6.5.1.14 sections.

Summary

No changes to the physical design or operation of the facility will occur as a result of this amendment proposal.

Based on the above, the proposed changes to: delete the TS 6.5.1, Technical Control and Review, and replace with existing QATR Chapters 2, 3, 5,11, 16, 17, 18, Appendices A and C and administrative procedures AD-AA-102, HU-AA-1212, LS-AA-101 and SY-AA-101-104 requirements; remove the TS 6.5.2 Independent Safety Review requirements while utilizing PORC reviews in accordance with LS-AA-106; delete TS 6.3 Audits and replace with existing requirements of the QATR Chapters 1, 3, 5, 17,18 and Appendix B and administrative procedure NO-AA-200-002; and implement administrative changes to the OCNGS Tables 3.1.1 and 4.1.2, and TS Sections 6.8.2 and 6.8.3, and the TMI TS Figures 3.1-2a, 3.5-1, 3.5-2, 3.5-3, 5.3 and TS Sections 5.4.2.d, 6.8.2 and 6.8.3 will not adversely affect nuclear safety or safe plant operations.

Revisions to the administrative controls section of the OCNGS and TMI Technical Specifications are currently subject to a no significance hazards consideration determination pursuant to 10 CFR 50.92. This determination is oriented to design and operational requirements described in the TS. The administrative controls selected for deletion are considered by the NRC in the above referenced AL 95-06 to be quality assurance requirements, and therefore qualify for incorporation into documents describing the licensee's quality assurance program. As stated in AL 95-06,10 CFR 50.54(a) and 10CFR50.59 are the appropriate regulations for controlling changes to these and other quality assurance program requirements. The QATR changes are controlled by 10CFR 50.54(a). Prior NRC approval is required for any changes to the quality assurance program that reduce the commitments in the program description as accepted by the NRC. Accordingly, the proposed license amendment removing these administrative requirements from the TS while utilizing documents subject to the controls of 10 CFR 50.54(a) results in an equivalent level of regulatory authority while providing for a more appropriate change control process.

5.0 REGULATORY ANALYSIS

5.1 No Significant Hazards Consideration

AmerGen Energy Company, LLC (AmerGen) has evaluated whether or not a significant hazards consideration is involved with the proposed amendments by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

   Response: No.

   No physical changes to the facilities, OCNGS and TMI, will occur as a result of this proposed amendment. The proposed changes will not alter the physical design or operational procedures associated with any plant structure, system, or component.

   The proposed changes involve the deletion of several administrative requirements from the Technical Specifications (TS) that are now controlled under the Exelon/AmerGen Quality Assurance Topical Report (QATR) and several administrative procedures, AD-AA-102, (SQR), HU-AA-1212 (Independent Third Party Reviews), LS-AA-101 (License/TS changes), LS-AA-106 (PORC), NO-AA-200-002 (Audits) and SY-AA-101-104 (Security Plan changes), and are, therefore, administrative in nature. The TS requirements involve Technical Review and Control and Audits. In accordance with the guidance provided in NRC Administrative Letter 95-06, "Relocation of Technical Specification Administrative Controls related to Quality Assurance," the proposed changes are an acceptable method for removing technical specification quality assurance requirements.

   The Independent Safety Review Function is being deleted because it is a redundant independent safety review to the existing independent review process being performed under the AmerGen/Exelon PORC.

   The remaining proposed changes are administrative in nature and have no affect on plant operation. The changes do not reduce the duties and responsibilities of the organizations performing the technical review, independent safety review and audit functions essential to ensuring the safe operation of the plant.

   Therefore, the proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

   Response: No.

   The proposed changes are administrative in nature. The proposed changes do not alter the physical design, safety limits, or safety analysis assumptions associated with the operation of the plant. Accordingly, the changes do not introduce any new accident initiators, nor do they reduce or adversely affect the capabilities of any plant structure, system, or component to perform their safety function.

   Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed amendment involve a significant reduction in a margin of safety?

   Response: No.

   The proposed changes conform to NRC regulatory guidance regarding the content of plant Technical Specifications. The guidance is presented in Administrative Letter 95-06, NUREG-1430 and NUREG-1433. The relocation of these administrative requirements and the deletion of a redundant independent safety review function will not reduce the quality assurance commitments as accepted by the NRC, nor reduce administrative controls essential to the safe operation of the plant. Future changes to these administrative requirements will be performed in accordance with NRC regulation 10 CFR 50.54(a), consistent with the guidance identified above. Accordingly, the replacement of TS requirements by existing QATR requirements results in an equivalent level of regulatory control.

   Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

Based on the above, AmerGen concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

5.2 APPLICABLE REGULATORY REQUIREMENTS/CRITERIA

10CFR 50.36, Technical specifications

10 CFR 50.36, "Technical specifications," provides the regulatory requirements for the content required in a licensee's TS. 10 CFR 50.36(c)(5), Administrative Controls states: Administrative controls are the provisions relating to the organization and management, procedures, recordkeeping, review and audit, and reporting necessary to assure operation of the facility in a safe manner.

The NRC provided guidance for the content of TSs in its "Final Policy Statement on Technical Specifications Improvement for Nuclear Power Reactors", 58 FR 39132, July 22, 1993. In particular, the NRC indicated that certain items could be relocated from the TS to licensee-controlled documents, and identified criteria to be used to determine the functions to be included in the Technical Specifications (TS). The NRC's policy statement provides that particular details of administrative controls may be relocated to licensee-controlled documents where section 50.54, 50.59, or other regulations provide adequate regulatory control. The NRC adopted revisions to 10 CFR 50.36, "Technical Specifications," pursuant to which the rule was revised to codify and incorporate these criteria. In adopting the revision of the rule, the NRC indicated that the intent of these criteria could be utilized to identify the optimum set of administrative controls in the TS. The NRC further concluded that the specific content of the administrative controls section of the TS is, therefore, that information which the

Commission deems essential for the safe operation of the facility and which is not already adequately covered by other regulations. Accordingly, the NRC has determined that requirements that are not specifically required under 50.36(c)(5), and are not otherwise necessary to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety, can be removed from TS administrative controls.

Consistent with this policy position, the NRC staff issued Administrative Letter (AL) 95-06, December 12, 1995, identifying TS administrative control requirements that qualify for relocation to licensee quality assurance control documents subject to the controls of 10 CFR 50.54(a). Requirements identified by AL 95-06 included review and audit, procedure review and approval, and record retention requirements. The scope of changes proposed herein conforms to the NRC staff position presented in AL 95-06.

NRC approved NUREG-1433, "Standard Technical Specifications – General Electric Plants, BWR/4," and NRC approved NUREG-1430, Standard Technical Specifications – Babcock and Wilcox Plants were developed based on the criteria in the "Final Commission Policy Statement on Technical Specifications Improvement for Nuclear Power Reactors," dated July 22, 1993, and subsequently codified in 10 CFR 50.36. The preface to these documents encourages licensees to adopt some or all of the improved TS into their existing TS. The TS sections proposed herein for relocation do not appear in the improved Standard Technical Specification (STS) presented in NUREG-1430 and NUREG-1433, and accordingly, are not required to be in the TS.

The proposed license amendment to remove these administrative requirements while utilizing documents subject to the controls of 10 CFR 50.54(a) conforms to NRC guidance as stated above, and results in an equivalent level of regulatory control.

AmerGen has determined that the proposed changes do not require any exemptions or relief from regulatory requirements and do not affect conformance with any General Design Criteria.

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

6.0 ENVIRONMENTAL CONSIDERATION

A review has determined that the proposed amendment would not change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. The proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in

10 CFR 51.22(c)(9). Additionally, the proposed amendment is confined to (i) changes to surety, insurance, and/or indemnity requirements, or (ii) changes to recordkeeping, reporting, or administrative procedures or requirements. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(10). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

7.0 PRECEDENT

OCNGS and TMI Re: Amendments to Relocate the Independent Onsite Safety Review Group Function to the Quality Assurance Topical Report (TAC NOS. MC2406 and MC2407) 11/08/04.

Limerick Generating Station, Units 1 and 2 - Issuance of Amendment Re: Relocate Administrative Control Requirements (TAC NOS. MC2739 and MC2740) 07/25/05

St Lucie Units 1 and 2 - Issuance of Amendments regarding transfer of Administrative controls related to Quality Assurance from the Technical Specifications to the Quality Assurance Plan (TAC NOS. MC1514 and MC 1515) 03/11/04

Seabrook Station, Unit No. 1 - Issuance of Amendment: Administrative Changes to Technical Specification Section 6 (TAC NO. MB7160) 06/06/03

8.0 REFERENCES

1. Exelon/AmerGen Quality Assurance Topical Report (QATR) NO-AA-10, Revision 79

2. OCNGS License Amendment No. 169, dated July 29,1994

3. NUREG-0680, Supplement 1, "TMI-1 Restart", dated November 1980

4. TMI Unit 1 License Amendment No. 77, dated April 28, 1982 (ML003763983)

5. Oyster Creek License Amendment No. 69, dated January 12, 1984

6. NRC Administrative Letter 95-06: Relocation of Technical Specification Administrative Controls Related to Quality Assurance dated December 12, 1995

7. Approval of Proposed revision 70 of Quality Assurance Topical report EGC-1A, Rev 70 in accordance with 10CFR50.54(a) requirements for Exelon/AmerGen Plants (ML023440300)

8. Exelon/AmerGen Procedure AD-AA-102, Station Qualified Review Rev 6

9. TMI Unit 1 License Amendment No. 164, dated April 27, 1992

Attachment 2

Oyster Creek Nuclear Generating Station
Technical Specification Change Request No. 336

Proposed Technical Specification Marked-Up Pages

The pages included in this attachment are:

iii
3.1-19
4.1-9
4.1-10
6-3
6-4
6-5
6-6
6-7
6-8
6-10

TABLE OF CONTENTS (cont'd)

*Issued by NRC Order dated 10-24-80

dd. If any isolation condenser inlet (steam side) isolation valve becomes or is made inoperable in the open position during the RUN MODE comply with
Specification 3.8.E. If an AC motor-operated outlet (condensate return) isolation valve becomes or is made inoperable in the open position during the
RUN MODE comply with Specification 3.8.F.

ee. With the number of OPERABLE channels one less than the Minimum Number of OPERABLE Instrument Channels per OPERABLE Trip System,
operation may proceed until performance of the next required CHANNEL ~~FUNTIONAL~~ TEST provided the inoperable channel is placed in the tripped condition
within 1 hour.

FUNCTIONAL

ff. This function is not required to be OPERABLE when the associated safety bus is not required to be energized or fully OPERABLE as per applicable
sections of these Technical Specifications.

gg. Deleted

hh. The high flow trip function for "B" Isolation Condenser is bypassed upon initiation of the alternate shutdown panel. This prevents a spurious trip of the
Isolation Condenser in the event of fire induced circuit damage.

ii. Instrument shall be OPERABLE during main condenser air ejector operation except that a channel may be taken out-of-service for the purpose of a check, calibration, test, or maintenance without declaring it inoperable.

jj. With no channel OPERABLE, main condenser offgas may be released to the environment for as long as 72 hours provided the stack radioactive noble gas monitor is OPERABLE. Otherwise, be in at least SHUTDOWN CONDITION within 24 hours.

kk. One channel may be placed in an inoperable status for up to two hours for required surveillance without placing the trip system in the tripped condition.

ll. This function not required to be OPERABLE with the reactor vessel head removed or unbolted.

mm. "Instrument Channel" in this case refers to the bellows which sense vacuum in each of the three condensers (A, B, and C), and "Trip System" refers to
vacuum trip systems 1 and 2.

MINIMUM CHECK, CALIBRATION AND TEST FREQUENCY FOR PROTECTIVE INSTRUMENTATION

NOTE 1: Each automatic scram contactor is required to be tested at least once per week. When not tested by other means, the weekly test can be performed by using the subchannel test switches.

NOTE 2: At least daily during reactor POWER OPERATION, the reactor neutron flux peaking factor shall be estimated and flow-referenced
APRM scram and rod block settings shall be adjusted, if necessary, as specified in Section 2.3 Specifications A.1 and A.2.

NOTE 3: Calibrate electronic bistable trips by injection of an external test current once per 3 months. Calibrate transmitters by application of test
pressure once per 12 months.

NOTE 4: Perform LPRM detectors calibration every 1000 MWD/MT Average Core Exposure

The following notes are only for Item 15 of Table 4.1.1:

A channel may be taken out of service for the purpose of a check, calibration, test or maintenance without declaring the channel to be inoperable.

a. The Channel Test CHANNEL FUNCTIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exists:

1) Instrument indicates measured levels above the alarm ~~setpoint~~.
2) Instrument indicates a downscale failure.
3) Instrument controls not set in operate mode.
4) Instrument electrical power loss.

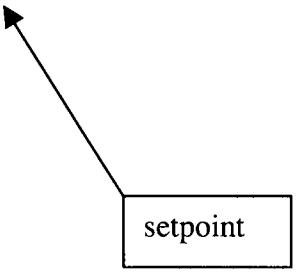


TABLE 4.1.2

MINIMUM TEST FREQUENCIES FOR TRIP SYSTEMS

Trip System	Minimum Test Frequency
1) Dual Channel (Scram)	Same as for respective Instrumentation in Table 4.1.1
2) Rod Block	Same as for respective Instrumentation in Table 4.1.1
3) DELETED	DELETED
4) Automatic Depressurization each trip system, one at a time	Each refueling outage
5) MSIV Closure each closure logic circuit independently (1 valve at a time)	Each refueling outage
6) Core Spray each trip system, one at a time	1/3 mo and each refueling outage
7) Primary Containment Isolation each trip circuit independently (1 valve at a time)	Each refueling outage
8) Refueling Interlocks	Prior to each refueling operation
9) Isolation Condenser Actuation and Isolation each trip circuit independently (1 valve at a time)	Each refueling outage
10) Reactor Building Isolation and SGTS Initiation	Same as for respective Instrumentation in Table 4.1.1
11) DELETED ~~Condenser Vacuum Pump Isolation~~	~~Prior to each startup~~ DELETED
12) Air Ejector Offgas Line Isolation	Each refueling outage
13) Containment Vent and Purge Isolation	1/24 mo

6.4 DELETED

6.5 DELETED ~~REVIEW AND AUDIT~~

~~6.5.1 TECHNICAL REVIEW AND CONTROL~~

~~The director of each department shall be responsible for ensuring the preparation, review, and approval of documents required by the activities described in 6.5.1.1 through 6.5.1.5 within his functional area of responsibility as assigned in the Review and Approval Matrix. Implementing approvals shall be performed at the cognizant manager level or above.~~

~~ACTIVITIES~~

~~6.5.1.1 Each procedure required by Technical Specification 6.8 and other procedures which affect nuclear safety, and substantive changes thereto, shall be prepared by a designated individual(s)/group knowledgeable in the area affected by the procedure. Each such procedure, and substantive change thereto, shall be reviewed for adequacy by an individual(s)/group other than the preparer, but who may be from the same division as the individual who prepared the procedure or change.~~

~~6.5.1.2 Proposed changes to the Appendix "A" Technical Specifications shall be reviewed by a knowledgeable individual(s)/group other than the individual(s)/Group who prepared the change.~~

~~6.5.1.3 Proposed modifications, that affect nuclear safety, to facility structures, systems and components shall be designed by an individual/organization knowledgeable in the areas affected by the proposed modification. Each such modification shall be reviewed by an individual/group other than the individual/group which designed the modification but may be from the same division as the individual who designed the modification.~~

~~6.5.1.4 Proposed tests and experiments that affect nuclear safety shall be reviewed by a knowledgeable individual(s)/group other than the preparer but who may be from the same division as the individual who prepared the tests and experiments.~~

~~6.5.1.5 Investigation of all violations of the Technical Specifications including the preparation and forwarding of reports covering evaluation and recommendations to prevent recurrence, shall be reviewed by a knowledgeable individual(s)/group other than the individual/group which performed the investigation.~~

~~6.5.1.6 Events requiring 24-hour written notification to the Commission shall be reviewed by an individual/group other than the individual/group which prepared the report.~~

~~6.5.1.7 Special reviews, investigations or analyses and reports thereon as requested by the Vice President - Oyster Creek shall be performed by a knowledgeable individual(s)/group.~~

~~6.5.1.8 The Security Plan and implementing procedures shall be reviewed by a knowledgeable individual(s)/group other than the individual(s)/group which prepared them.~~

~~6.5.1.9 The Emergency Plan and implementing procedures shall be reviewed by a knowledgeable individual(s)/group other than the individual(s)/group which prepared them.~~

~~6.5.1.10 Review of every unplanned onsite release of radioactive material to the environs including the preparation and forwarding of reports covering evaluation shall be performed by a knowledgeable individual(s)/group. Recommendations and disposition of the corrective action to prevent recurrence shall be sent to the Vice President - Oyster Creek.~~

~~6.5.1.11 Major changes to radwaste systems shall be reviewed by a knowledgeable individual(s)/group other than the individual(s)/group which prepared them.~~

~~6.5.1.12 Individuals responsible for reviews performed in accordance with 6.5.1.1 through 6.5.1.4 shall include a determination of whether or not additional cross-disciplinary review is necessary. If deemed necessary, such review shall be performed by the appropriate personnel. Individuals responsible for reviews considered under 6.5.1.1, 6.5.1.3, and 6.5.1.4 shall render determinations in writing with regard to whether or not NRC approval is required pursuant to 10CFR50.59.~~

~~RECORDS~~

~~6.5.1.13 Written records of activities performed under specifications 6.5.1.1 through 6.5.1.11 shall be maintained.~~

~~QUALIFICATIONS~~

~~6.5.1.14 Responsible Technical Reviewers shall meet or exceed the qualifications of ANSI/ANS 3.1-1978 Section 4.6 or 4.4 for applicable disciplines or have 7 years of appropriate experience in the field of his specialty. Credit towards experience will be given for advanced degrees on a one-for-one basis up to a maximum of two years. These Reviewers shall be designated in writing.~~

~~6.5.2 INDEPENDENT SAFETY REVIEW FUNCTION~~

~~6.5.2.1 The director of each department shall be responsible for ensuring the periodic independent safety review of the subjects described in 6.5.2.5 within his assigned area of safety review responsibility, as assigned in the Review and Approval Matrix.~~

~~6.5.2.2 Independent safety review shall be completed by an individual/group not having direct responsibility for the performance of the activities under review, but who may be from the same functionally cognizant organization as the individual/group performing the original work.~~

~~6.5.2.3 The licensee shall collectively have or have access to the experience and competence required to independently review subjects in the following areas:~~

~~a. Nuclear power plant operations~~
~~b. Nuclear engineering~~
~~c. Chemistry and radiochemistry~~
~~d. Metallurgy~~
~~e. Nondestructive testing~~
~~f. Instrumentation and control~~
~~g. Radiological safety~~
~~h. Mechanical engineering~~
~~i. Electrical engineering~~
~~j. Administrative controls and quality assurance practices~~
~~k. Emergency plans and related organization, procedures and equipment~~
~~l. Other appropriate fields associated with the unique characteristics of Oyster Creek~~

~~6.5.2.4 Consultants may be utilized as determined by the cognizant department direct or to provide expert advice.~~

~~RESPONSIBILITIES~~

~~6.5.2.5 The following subjects shall be independently reviewed by the functionally assigned divisions:~~

~~a. Written evaluations of changes in the facility as described in the Updated Final Safety Analysis Report (UFSAR), of changes in procedures as described in the UFSAR, and of tests or experiments not described in the UFSAR, which are completed without prior NRC approval under the provisions of 10 CFR 50.59(c)(1). This review is to verify that such changes, tests or experiments did not involve a change in the Technical Specifications or require NRC approval pursuant to 10CFR50.59. Such reviews need not be performed prior to implementation.~~

~~b. Proposed changes in procedures, proposed changes in the facility, or proposed tests or experiments, any of which involves a change in the Technical Specifications or requires NRC approval pursuant to 10CFR50.59. Matters of this kind shall be reviewed prior to submittal to the NRC.~~

~~c. Proposed changes to Technical Specifications or license amendments related to nuclear safety shall be reviewed prior to submittal to the NRC for approval.~~

~~d. Violations, deviations, and reportable events which require reporting to the NRC in writing. Such reviews are performed after the fact. Review of events covered under this subsection shall include results of any investigations made and the recommendations resulting from such investigations to prevent or reduce the probability of recurrence of the event.~~

~~e. Written summaries of audit reports in the areas specified in section 6.5.3 and involving safety related functions.~~

~~f. Any other matters involving safe operations of the nuclear power plant which a reviewer deems appropriate for consideration, or which is referred to the independent reviewers.~~

~~QUALIFICATIONS~~

~~6.5.2.6 The independent reviewer(s) shall either have a Bachelor's Degree in Engineering or the Physical Sciences and five (5) years of professional level experience in the area being reviewed or have 9 years of appropriate experience in the field of his specialty. An individual performing reviews may possess competence in more than one specialty area. Credit toward experience will be given for advanced degrees on a one-for-one basis up to a maximum of two years.~~

~~RECORDS~~

~~6.5.2.7 Reports of reviews encompassed in Section 6.5.2.5 shall be prepared, maintained and transmitted to the cognizant department director and the Vice President - Oyster Creek.~~

~~6.5.3 AUDITS~~

~~6.5.3.1 Audits of facility activities shall be performed in accordance with the Quality Assurance Topical Report (QATR). These audits shall encompass:~~

~~a. The conformance of facility operations to provisions contained within the Technical Specifications and applicable license conditions.~~

~~b. The performance, training and qualifications of the facility staff.~~

~~c. The results of actions taken to correct deficiencies occurring in facility equipment, structures, systems or method of operation that affect nuclear safety.~~

~~d. The Facility Emergency Plan and implementing procedures.~~

~~e. The Facility Security Plan and implementing procedures.~~

~~f. The Fire Protection Program and implementing procedures.~~

~~g. The performance of activities required by the QATR to meet the criteria of Appendix 'B', 10 CFR 50.~~

~~h. The radiological environmental monitoring program and the results thereof.~~

~~i. The OFFSITE DOSE CALCULATION MANUAL and implementing procedures.~~

~~j. The PROCESS CONTROL PROGRAM and implementing procedures for radioactive wastes.~~

~~k. Any other area of facility operation considered appropriate by the Chief Nuclear Officer.~~

~~6.5.3.2 Audits of the following shall be performed under the cognizance of the department director responsible for technical support.~~

~~a. An independent fire protection and loss prevention program inspection and audit shall be performed utilizing either qualified licensee personnel or an outside fire protection firm.~~

~~b. An inspection and audit of the fire protection and loss prevention program, by an outside qualified fire consultant.~~

~~RECORDS~~

~~6.5.3.3 Audit reports encompassed by sections 6.5.3.1 and 6.5.3.2 shall be forwarded for action to the management positions responsible for the areas audited within 30 days after completion of the audit. Upper management shall be informed per the QATR.~~ shall be distributed in accordance with the QATR.

~~6.5.4 DELETED~~

6.8 PROCEDURES AND PROGRAMS

6.8.1 Written procedures shall be established, implemented, and maintained covering the items referenced below:

a. The applicable procedures recommended in Appendix "A" of Regulatory Guide 1.33 as referenced in the QATR.

b. Surveillance and test activities of equipment that affects nuclear safety and radioactive waste management equipment.

c. Refueling Operations.

d. Security Plan Implementation.

e. Fire Protection Program Implementation.

f. Emergency Plan Implementation.

g. Process Control Plan Implementation.

h. Offsite Dose Calculation Manual Implementation.

i. Quality Assurance Program for effluent and environmental monitoring using the guidance in Regulatory Guide 4.15, Revision 1.

j. Plant Staff Overtime pursuant to Technical Specification 6.2.2.2(i), above.

6.8.2 Each procedure required by 6.8.1 above, and substantive changes thereto, shall be reviewed and approved ~~as described in 6.5.1~~ prior to implementation and shall be reviewed periodically as set forth in administrative procedures.

6.8.3 Temporary changes to procedures of 6.8.1, above, may be made provided:

a. The intent of the original procedure is not altered;

b. The change is approved by two members of the licensee's management staff ~~qualified in accordance with 6.5.1.14 and~~ knowledgeable in the area affected by the procedure. For changes which may affect the operational status of unit systems or equipment, at least one of these individuals shall be a member of unit management or supervision holding a Senior Reactor Operator's License on the unit.

c. The change is documented, reviewed and approved ~~as described in 6.5.1~~ within 14 days of implementation.

Attachment 3

Three Mile Island Unit 1
Technical Specification Change Request No. 330

Proposed License and Technical Specification Marked-Up Pages

The pages included in this attachment are:

License, page 8
License, page 9
ii
v
3-9b
3-39a
3-39b
3-39c
5-7
Fig 5.3
6-3
6-4
6-5
6-6
6-7
6-8
6-11

(14) AmerGen shall provide decommissioning funding assurance of no less than $303 million, after payment of any taxes, to be held in the decommissioning trust(s) for TMI-1 at the time of the transfer of the TMI-1 license to AmerGen, including any amounts held in any decommissioning trust(s) that may continue to be maintained by GPU Energy for TMI-1 ~~alter~~ such license transfer.

(15) AmerGen shall take all necessary steps to ensure that the ~~decommissioning~~ trust is maintained in accordance with the application, the requirements of the Order Approving Transfer of License and Conforming Amendment, dated April 12, 1999, and the related Safety Evaluation dated April 12, 1999.

after

(16) AmerGen shall take no action to cause Exelon Generation Company, LLC (or successors or assigns of Exelon Generation Company, LLC approved by the NRC) to void, cancel, or diminish the $200 million contingency fund commitment from Exelon Generation Company, LLC (or successors or assigns of Exelon Generation Company, LLC approved by the NRC) dated December 22, 2003, or cause it to fail to perform or impair its performance under the commitment, or remove or interfere with AmerGen's ability to draw upon the commitment. Further, AmerGen shall inform the Director, Office of Nuclear Reactor Regulation, in writing, at such time that it draws upon the $200 million contingency fund. This provision does not affect the NRC's authority to assure that adequate funds will remain available to fund the transition to safe shutdown, should any question arise regarding availability of funds for such a purpose.

(17) Mitigation Strategy License Condition

The licensee shall develop and maintain strategies for addressing large fires and explosions and that include the following key areas:

(a) Fire fighting response strategy with the following elements:
1. Pre-defined coordinated fire response strategy and guidance
2. Assessment of mutual aid fire fighting assets
3. Designated staging areas for equipment and material
4. Command and control
5. Training of response personnel

(b) Operations to mitigate fuel damage considering the following:
1. Protection and use of personnel assets
2. Communications
3. Minimizing fire spread
4. Procedures for implementing integrated fire response strategy
5. Identification of readily-available pre-staged equipment
6. Training on integrated fire response strategy
7. Spent fuel pool mitigation measures

(c) Actions to minimize release to include consideration of:

1. Water spray scrubbing
2. Dose to onsite responders

3

6. This license is effective as of the date of issuance and shall expire at midnight, April 19, 2014.

FOR THE ATOMIC ENERGY COMMISSION

Original Signed by A. Giambusso

A. Giambusso, Deputy Director
for Reactor Projects
Director of Licensing

Attachment: Appendix A Technical Specifications

Date of Issuance: April 19, 1974

Revised by letter dated July 18, 2007

TABLE OF CONTENTS

TABLE OF CONTENTS

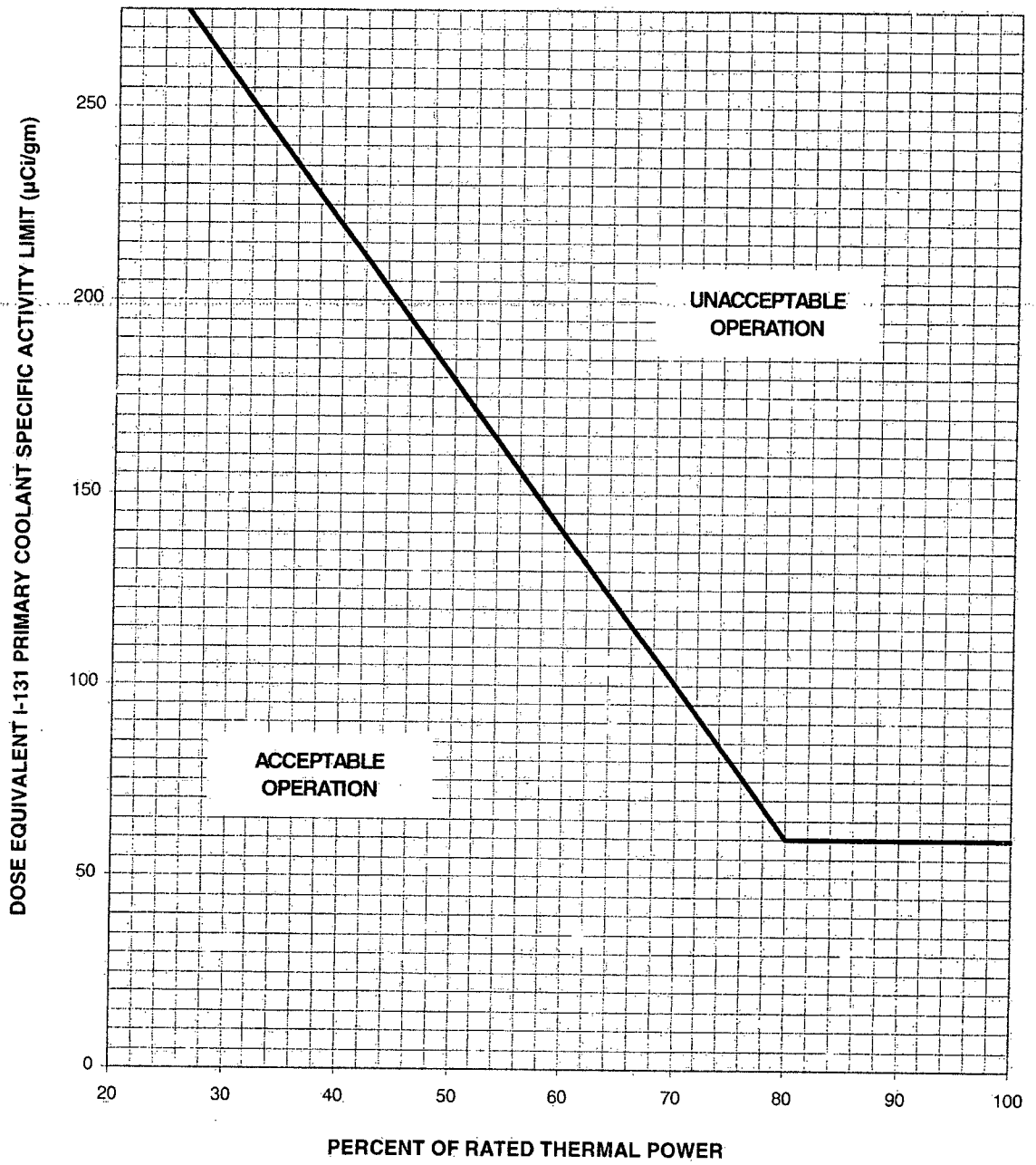
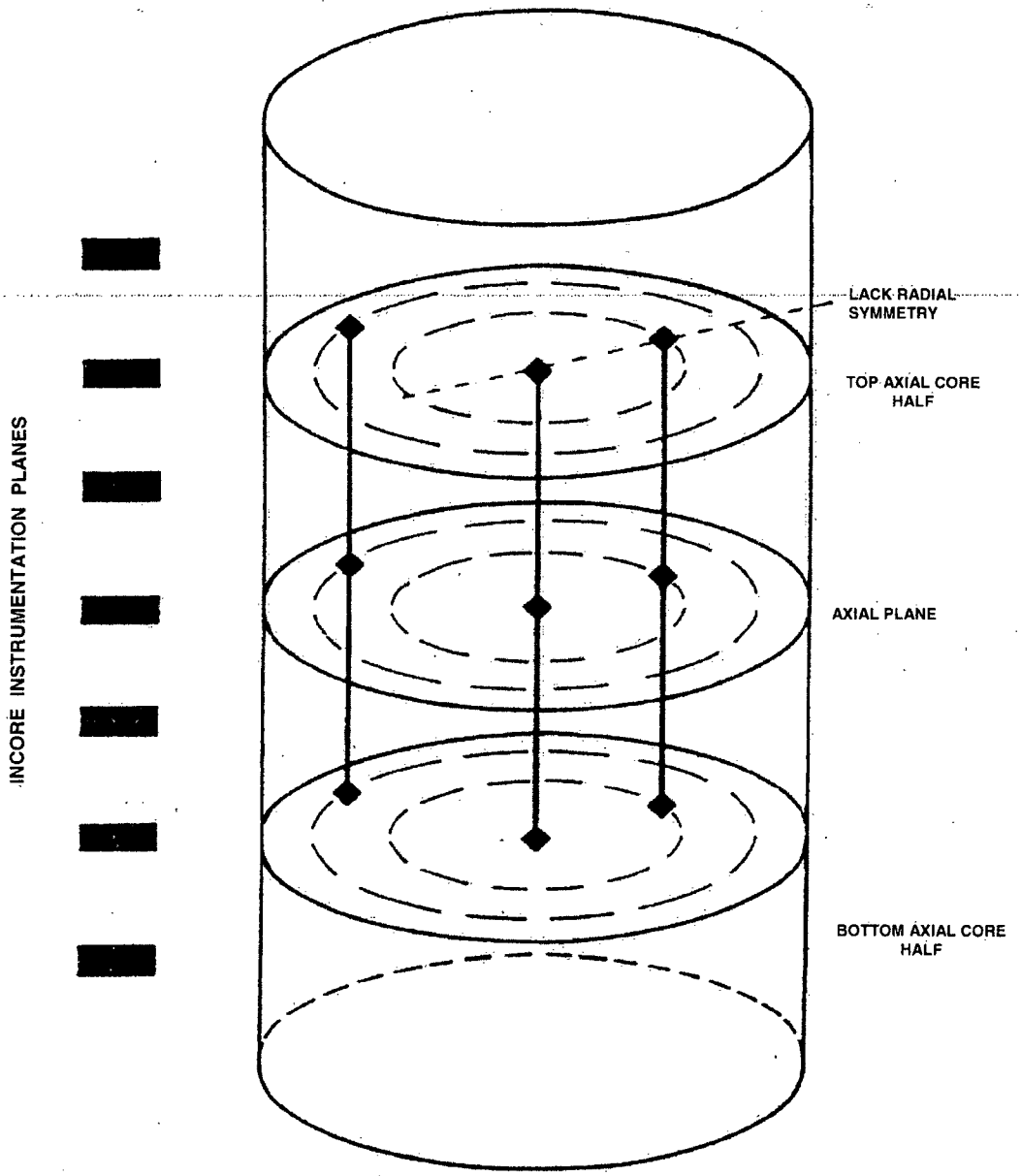


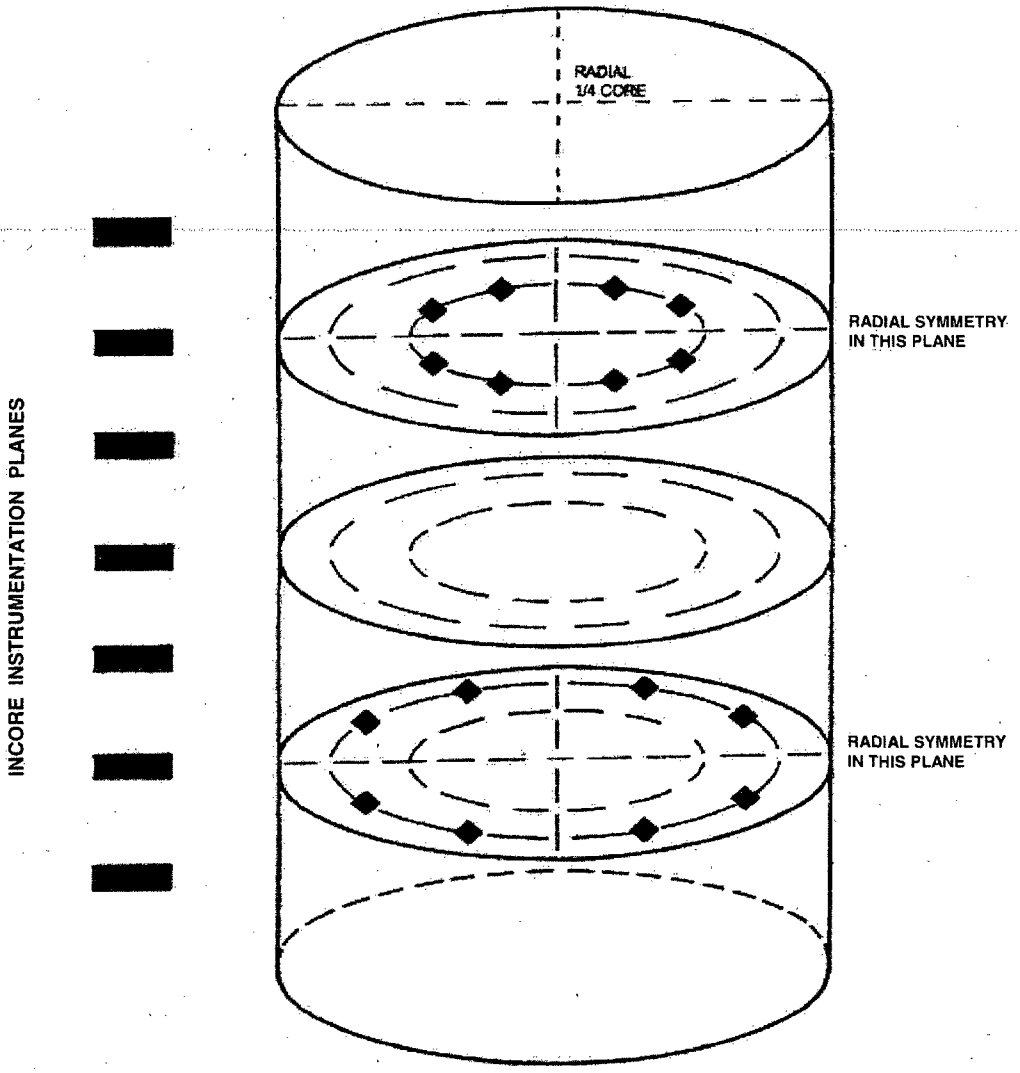
FIGURE 3.1-2a

Dose equivalent I-131 Primary Coolant Specific Activity Limit Versus Percent of RATED THERMAL POWER (with the Primary Coolant Specific Activity >0.35 µCi/gram Dose Equivalent I-131).



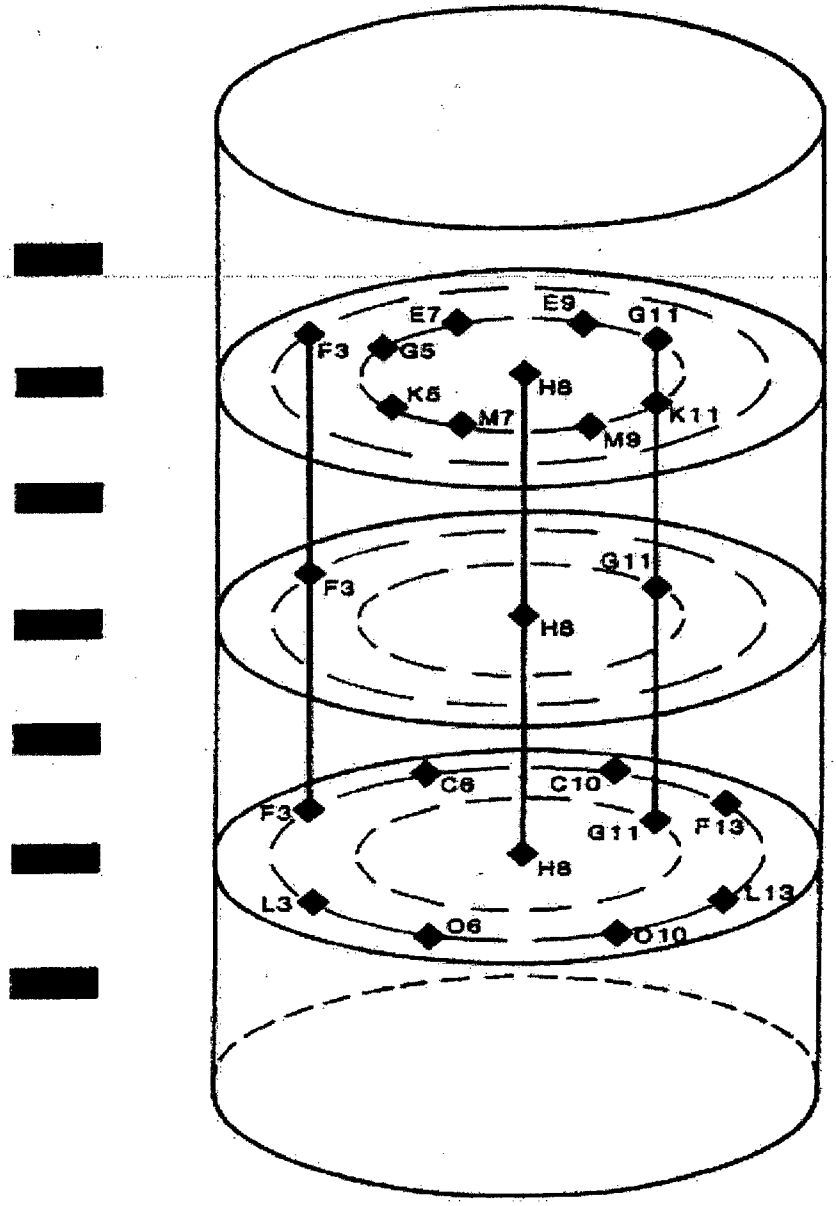
INCORE INSTRUMENTATION SPECIFICATION
AXIAL IMBALANCE INDICATION
THREE MILE ISLAND NUCLEAR STATION UNIT 1

FIGURE 3.5-1



INCORE INSTRUMENTATION SPECIFICATION
RADIAL FLUX INDICATION
THREE MILE ISLAND NUCLEAR STATION UNIT 1

FIGURE 3.5-2



INCORE INSTRUMENTATION SPECIFICATION

THREE MILE ISLAND NUCLEAR STATION UNIT 1

FIGURE 3.5-3

5.4.2 SPENT FUEL STORAGE (Reference 1)

a. Irradiated fuel assemblies will be stored, prior to offsite shipment, in the stainless steel lined spent fuel pools, which are located in the fuel handling building.

b. Whenever there is fuel in the pool except for initial fuel loading, the spent fuel pool is filled with water borated to the concentration used in the reactor cavity and fuel transfer canal.

c. Deleted.

d. The fuel assembly storage racks provided and the number of fuel elements each will store are listed by location below:

1062

	Spent Fuel Pool A North End of Fuel Handling Building	Spent Fuel Pool B South End of Fuel Handling Building	Dry New Fuel Storage Area Fuel Handling Building
Fuel Assys.	~~846~~ *	496	54
Cores	~~4.78~~	2.8	0.37

6.0

NOTE: * Includes three spaces for accommodating failed fuel containers. An additional ~~648~~ storage locations can be installed to provide a total of ~~1494~~ locations or 8.44 cores.

e. All of the fuel assembly storage racks provided are designed to Seismic Class 1 criteria to the accelerations indicated below:

432

	Fuel Handling Building Dry New Fuel Storage Area And Spend Fuel Pool A	Fuel Handling Building Spent Fuel Pool B
Horiz.	0.38 g	**
Vertical	0.25 g	**

NOTE: ** The "B" pool fuel storage racks are designed using the floor response spectra of the Fuel Handling Building.

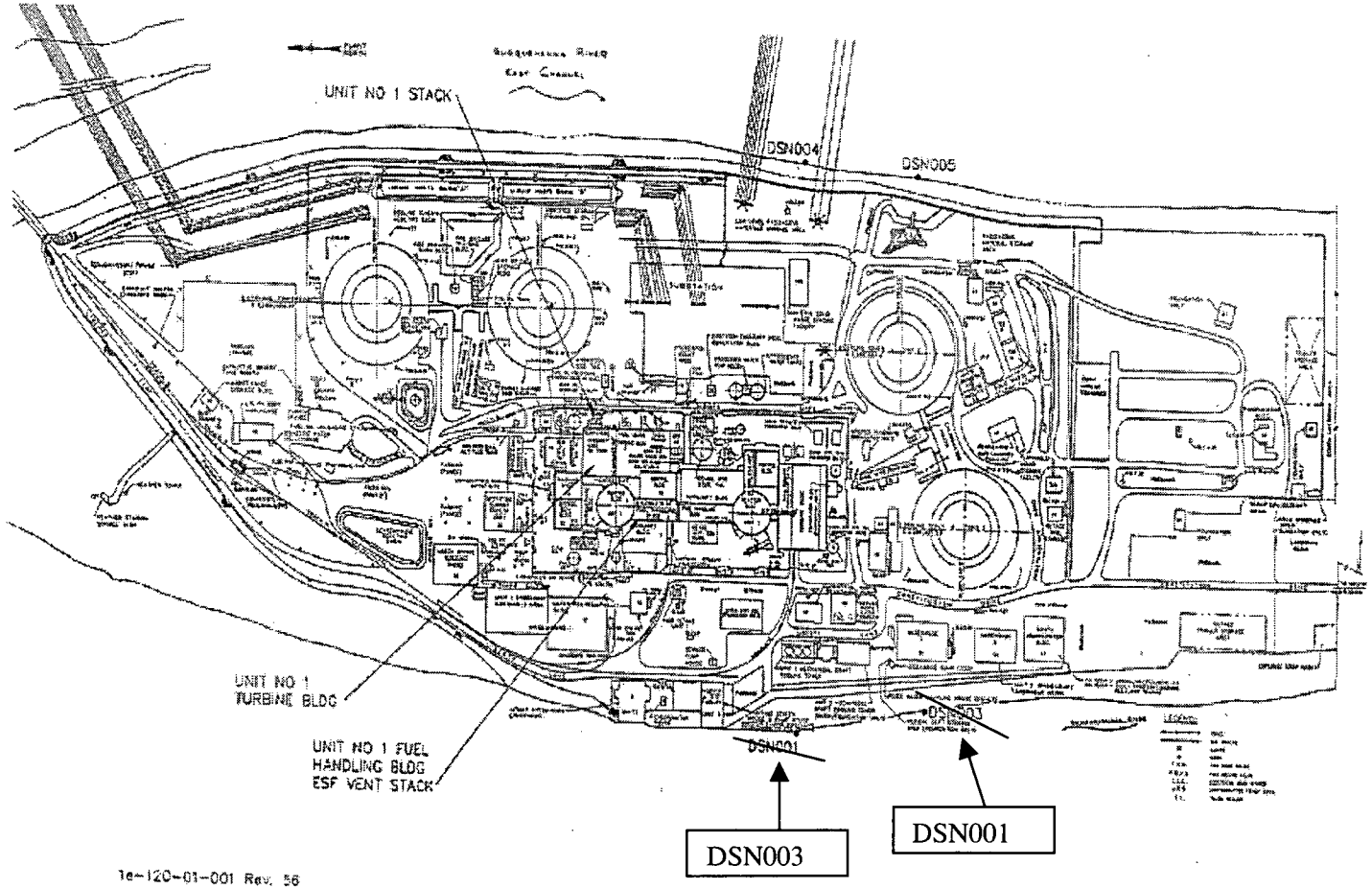
f. Deleted

g. When spent fuel assemblies are the combination of initial enrichment and cumulative burnup for spent fuel assemblies shall be within the acceptable area of Figure 5-4.

h. When spent fuel assemblies are stored in the Spent Fuel Pool "B", storage locations, the combination of initial enrichment and cumulative burnup for spent fuel assemblies shall be within the acceptable area of Figure 5-5.

REFERENCES

(1) UFSAR, Section 9.7 - "Fuel Handling System"



Amendment No. ~~140, 216~~, ~~246~~

AmerGen
Three Mile Island Nuclear Station

Gaseous Effluent Release Point and Liquid Effluent Outlet Locations

CAD FILE: 6716R15,DWG FIG 5-3

6.3 UNIT STAFF QUALIFICATIONS

6.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI/ANS 3.1 of 1978 for comparable positions unless otherwise noted in the Technical Specifications, with the following exceptions: 1) the education and experience eligibility requirements for operator license applicants (described in Exelon letter RS-02-100, dated June 19, 2002), and changes thereto, shall be approved by the NRC and described in an applicable station training procedure, and 2) individuals who do not meet ANSI/ANS 3.1 of 1978, Section 4.5, are not considered technicians or maintenance personnel for purposes of determining qualifications but are permitted to perform work for which qualification has been demonstrated.

6.3.2 The management position responsible for radiological controls shall meet or exceed the qualifications of Regulatory Guide 1.8 of 1977. Each radiological controls technician/supervisor shall meet or exceed the qualifications of ANSI-N 18.1-1971, paragraph 4.5.2/4.3.2, or be formally qualified through an NRC approved TMI-I Radiation Controls training program. All radiological controls technicians will be qualified through training and examination in each area or specific task related to their radiological controls functions prior to their performance of those tasks.

6.3.3 The Shift Technical Advisors shall have a bachelor's degree or equivalent in a scientific or engineering discipline with specific training in unit design, response and analysis of transients and accidents.

6.4 TRAINING

6.4.1 A training program for the Fire Brigade shall be maintained and shall meet or exceed the requirements of Section 600 of the NFPA Code.

6.5 DELETE ~~REVIEW AND AUDIT~~

~~6.5.1 TECHNICAL REVIEW AND CONTROL~~

~~The director of each department shall be responsible for ensuring the preparation, review, and approval of documents required by the activities described in 6.5.1.1 through 6.5.1.5 within his functional area of responsibility as assigned in the Review and Approval Matrix. Implementing approvals shall be performed at the cognizant manager level or above.~~

Amendment Nos. ~~11, 32, 55, 77, 92, 128, 131, 132, 139, 171, 207, 212, 218, 241~~,

~~ACTIVITIES~~

~~6.5.1.1 Each procedure required by Technical Specification 6.8 and other procedures which affect nuclear safety, and substantive changes thereto, shall be prepared by a designated individual(s)/group knowledgeable in the area affected by the procedure. Each such procedure, and substantive changes thereto shall be reviewed for adequacy by an individual(s)/group other than the preparer, but who may be from the same organization as the individual who prepared the procedure or change.~~

~~6.5.1.2 Proposed changes to the Appendix "A" Technical Specifications shall be reviewed by a knowledgeable individual(s)/group other than the individual(s) group who prepared the change.~~

~~6.5.1.3 Proposed modifications that affect nuclear safety to unit structures, systems and components shall be designed by an individual/organization knowledgeable in the areas affected by the proposed modification. Each such modification shall be reviewed by an individual/group other than the individual/group which designed the modification but may be from the same division as the individual who designed the modification.~~

~~6.5.1.4 Proposed tests and experiments that affect nuclear safety shall be reviewed by a knowledgeable individual(s)/group other than the preparer but who may be from the same division as the individual who prepared the tests and experiments.~~

~~6.5.1.5 Investigation of all violations of the Technical Specifications including the preparation and forwarding of reports covering evaluation and recommendations to prevent recurrence, shall be reviewed by a knowledgeable individual(s)/group other than the individual/group which performed the investigation.~~

~~6.5.1.6 All REPORTABLE EVENTS shall be reviewed by an individual/group other than the individual/group which prepared the report.~~

~~6.5.1.7 Special reviews, investigations or analyses and reports thereon as requested by the Vice President-TMI Unit 1 shall be performed by a knowledgeable individual(s)/group.~~

~~6.5.1.8 The Security Plan and implementing procedures shall be reviewed by a knowledgeable individual(s)/group other than the individual(s)/group which prepared them.~~

6.5.1.9 The Emergency Plan and implementing procedures shall be reviewed by a knowledgeable individual(s)/group other than the individual (s) /group which prepared them.

6.5.1.10 A knowledgeable individual(s)/group shall review every unplanned onsite release of radioactive material to the environs including the preparation and forwarding of reports to the Vice President-TMI Unit 1 covering evaluations, recommendations and disposition of the corrective action to prevent recurrence.

6.5.1.11 Major changes to radwaste systems shall be reviewed by a knowledgeable individual(s)/group other than the individuals(s)/group which prepared them.

6.5.1.12 Individuals responsible for reviews performed in accordance with 6.5.1.1 through 6.5.1.4 shall include a determination of whether or not additional cross-disciplinary review is necessary. If deemed necessary, such review shall be performed by the appropriate personnel. Individuals responsible for reviews considered under 6.5.1.1, 6.5.1.3, and 6.5.1.4 shall render determinations in writing with regard to whether or not NRC approval is required pursuant to 10CFR50.59.

RECORDS

6.5.1.13 Written records of activities performed under Specifications 6.5.1.1 through 6.5.1.11 shall be maintained.

QUALIFICATIONS

6.5.1.14 Responsible Technical Reviewers shall meet or exceed the qualifications of ANSI/ANS 3.1 of 1978 Section 4.6, or 4.4 for applicable disciplines, or have 7 years of appropriate experience in the field of his specialty. Credit toward experience will be given for advanced degrees on a one-to-one basis up to a maximum of two years. Responsible Technical Reviewers shall be designated in writing.

6.5.2 INDEPENDENT SAFETY REVIEW FUNCTION

6.5.2.1 The director of each department shall be responsible for ensuring the independent safety review of the subjects described in 6.5.2.5 within his assigned area of safety review responsibility, as assigned in the Review and Approval Matrix.

6.5.2.2 Independent safety review shall be completed by an individual/group not having direct responsibility for the performance of the activities under review, but who may be from the same functionally cognizant organization as the individual/group performing the original work.

6.5.2.3 The licensee shall collectively have or have access to the experience and competence required to independently review subjects in the following areas:

a. Nuclear power plant operations
b. Nuclear engineering
c. Chemistry and radiochemistry
d. Metallurgy
e. Nondestructive testing
f. Instrumentation and control
g. Radiological safety
h. Mechanical engineering
i. Electrical engineering
j. Administrative controls and quality assurance practices
k. Emergency plans and related organization, procedures and equipment
l. Other appropriate fields associated with the unique characteristics of TMI-1.

6.5.2.4 Consultants may be utilized as determined by the cognizant department director to provide expert advice.

RESPONSIBILITIES

6.5.2.5 The following subjects shall be independently reviewed by the functionally assigned divisions:

a. Written safety evaluations of changes in the facility as described in the Updated Final Safety Analysis Report (UFSAR), of changes in procedures as described in the UFSAR, and of tests or experiments not described in the UFSAR, which are completed without prior NRC approval under the provisions of 10CFR50.59(c)(1). This review is to verify that such changes, tests or experiments did not involve a change in the Technical Specifications or require NRC approval pursuant to 10CFR 50.59. Such reviews need not be performed prior to implementation.

b. Proposed changes in procedures, proposed changes in the facility, or proposed tests or experiments, any of which involves a change in the Technical Specifications or requires NRC approval pursuant to 10CFR 50.59. Matters of this kind shall be reviewed prior to submittal to the NRC.

c. Proposed changes to Technical Specifications or license amendments related to nuclear safety shall be reviewed prior to submittal to the NRC for approval.

d. Violations, deviations, and reportable events which require reporting to the NRC in writing. Such reviews are performed after the fact. Review of events covered under this subsection shall include results of any investigations made and the recommendations resulting from such investigations to prevent or reduce the probability of recurrence of the event.

e. Written summaries of audit reports in the areas specified in Section 6.5.3 and involving safety related functions.

f. Any other matters involving safe operation of the nuclear power plant which a reviewer deems appropriate for consideration, or which is referred to the independent reviewers.

6.5.2.6 QUALIFICATIONS

The independent reviewer(s) shall either have a Bachelor's Degree in Engineering or the Physical Sciences and five (5) years of professional level experience in the area being reviewed or have 9 years of appropriate experience in the field of his specialty. An individual performing reviews may possess competence in more than one specialty area. Credit toward experience will be given for advanced degrees on a one-for-one basis up to a maximum of two years.

RECORDS

6.5.2.7 Reports of reviews encompassed in Section 6.5.2.5 shall be prepared, maintained and transmitted to the cognizant department director and the Vice President-TMI Unit 1.

6.5.3 AUDITS

6.5.3.1 Audits of unit activities shall be performed in accordance with the Quality Assurance Topical Report (QATR). These audits shall encompass:

a. The conformance of unit operations to provisions contained within the Technical Specifications and applicable license conditions.

b. The performance, training and qualifications of the entire unit staff.

c. The verification of the non-conformances and corrective actions program to be properly implemented and documented as related to action taken to correct deficiencies occurring in unit equipment, structures, systems or methods of operation that affect nuclear safety.

d. The performance of activities required by the QATR to meet the criteria of Appendix "B" 10 CFR 50.

e. The Emergency Plan and Implementing procedures.

f. The Security Plan and implementing procedures.

g. The Fire Protection Program and implementing procedures.

h. The Offsite Dose Calculation Manual (ODCM) and implementing procedures.

~~i. The Process Control Program and implementing procedures for solidification of radioactive wastes.~~

~~j. The performance of activities required by the Quality Assurance Program to meet criteria of Regulatory Guide 4.15, December, 1977.~~

~~k. Any other area of unit operation considered appropriate by the Chief Nuclear Officer.~~

~~6.5.3.2 Audits of the following shall be performed under the cognizance of the department director responsible for technical support.~~

~~a. An independent fire protection and loss prevention program inspection and audit shall be performed utilizing either qualified licensee personnel or an outside fire protection firm.~~

~~b. An inspection and audit of the fire protection and loss prevention program, by an outside qualified fire consultant.~~

~~RECORDS~~

~~6.5.3.3 Audit reports encompassed by sections 6.5.3.1 and 6.5.3.2 shall be forwarded for action to the management positions responsible for the areas audited within 60 days after completion of the audit. Upper management shall be informed per the QATR.~~ ~~shall be distributed in accordance with the QATR.~~

~~6.5.3 DELETED~~

6.8 PROCEDURES AND PROGRAMS

6.8.1 Written procedures shall be established, implemented and maintained covering the items referenced below:

a. The applicable procedures recommended in Appendix "A" of Regulatory Guide 1.33, Revision 2, February 1978.

b. Surveillance and test activities of equipment that affects nuclear safety and radioactive waste management equipment.

c. Refueling Operations.

d. Security Plan Implementation.

e. Fire Protection Program Implementation.

f. Emergency Plan Implementation.

g. Process Control Program Implementation.

h. Offsite Dose Calculation Manual Implementation.

i. Quality Assurance Program for effluent and environmental monitoring using the guidance in Regulatory Guide 4.15, Revision 1.

j. Plant Staff Overtime, to limit the amount worked by staff performing safety-related functions in accordance with NRC Policy Statement on working hours (Generic Letter No. 82-12).

6.8.2 Further, each procedure required by 6.8.1 above, and substantive changes thereto, shall be reviewed and approved ~~as described in 6.5.1~~ prior to implementation and shall be reviewed periodically as set forth in administrative procedures.

6.8.3 Temporary changes to procedures of 6.8.1 above may be made provided:

a. The intent of the original procedure is not altered;

b. The change is approved by two members of the licensee's management staff ~~qualified in accordance with 6.5.1.14 and~~ knowledgeable in the area affected by the procedure. For changes which may affect the operational status of unit systems or equipment, at least one of these individuals shall be a member of unit management or supervision holding a Senior Reactor Operator's License on the unit.

c. The change is documented, reviewed and approved ~~as described in 6.5.1~~ within 14 days of implementation.

Attachment 4

Referenced Exelon/AmerGen Quality Assurance Topical Report, Rev 79 Chapters

Chapter 1
Chapter 2
Chapter 3
Chapter 5
Chapter 11
Chapter 16
Chapter 17
Chapter 18
Appendix A
Appendix B
Appendix C

Exelon Generation Company, LLC
AmerGen Energy Company, LLC

QUALITY ASSURANCE TOPICAL REPORT (QATR)
NO-AA-10

Revision 79

Exelon Nuclear

Corporate Headquarters

4300 Winfield Road
Warrenville, IL 60555

Standard Quality Assurance Topical Report (NO-AA-10) - Revision 79 Transmittal and Summary of Changes

To: All Site Document Control Centers

These changes are Effective: June 14, 2007, with implementation required 60 days after the effective date (8/13/07).

The Quality Assurance Topical Report (QATR) has been revised to

- reflect the realignment of Information Technologies and Supply organizational structure and reporting relationships,
- eliminate the requirement to audit Dresden Unit 1 and Peach Bottom Unit 1 de-fueled conditions,
- clarify the intent of the table used to reflect the graded approach to quality for the ISFSI Components at Dresden and Quad Cities,
- reflect the requirement to audit Fitness For Duty,
- add the requirement to audit Station Black Out at Three Mile Island,
- eliminate some of the Limerick and Peach Bottom programmatic exceptions to ANSI N45.2.2 and N45.2.13;
- delete the requirement for Quality Verification to review and concur with the qualification procedures for of ASME Section XI visual examiners at Oyster Creek and Three Mile Island.
- And make typographical / editorial corrections

These changes did not reduce our commitments previously approved by the NRC and consequently this is effective today. This revision to the QATR will be submitted to the NRC for post implementation as tracked by Action Tracking Number 95188-05.

Our review, in accordance with HU-AA-1101, determined that formal change management plans are not required.

The changes are described as follows:

Chapter 1 (Organization)

- Revised Section 2.2.3 to reflect the realigned business structure that no longer has Information Technologies reporting directly to the nuclear organization. Information Technologies is now a support organization for the entire Exelon Corporation. Supply Management receive direction from the management position responsible for operations support.

- Deleted the typographical error from Paragraph 2.3, which listed "The management position responsible for security" twice. It should have only been listed once.
- Eliminated the reference to the On-Site Safety Review Group (IOSRG) at Oyster Creek and Three Mile Island from Paragraph 2.3.7. This function was deleted from QATR Appendix C during Revision 78, but we overlooked the reference to IOSRG in Chapter 1.

Appendix A, Augmented Quality

- Deleted the requirement to audit the de-fueled conditions at Dresden Unit 1 and Peach Bottom Unit 1 from Paragraph 2.6. The commitment to audit these facilities until the termination of the license has been met, as neither of these Unit 1 facilities still maintain a license.
- Clarified that the intent of the table referenced in Paragraph 2.8.3 was to identify the graded approach to quality and the applicability of particular Chapters of the QA Program for the ISFSI installations at Dresden and Quad Cities stations.

Appendix B, Audit Frequency

- Deleted the Dresden Unit 1 audit from item "r". There are no longer any UFSAR or license requirements to audit Dresden Unit 1.
- Deleted item "s". Peach Bottom Unit 1 audit. There are no longer any UFSAR or license requirements to audit Peach Bottom Unit 1.
- Added Line new item "s". to identify the 10CFR26.80 required audit of Fitness For Duty (FFD) Program.
- Added Three Mile Island to the list of Stations that require a Station Black Out Audit in item "t".

Appendix C, Codes Standards, and Guides

- Deleted the redundant reference to Self Assessments as a justification for not performing periodic procedure reviews at Limerick and Peach Bottom as the current requirements specified in Chapter 6, Paragraph 2.1 suffice for assuring procedures remain current.
- Corrected the incorrect reference to ANSI N45.2 to ANSI N45.2.5 in Paragraph 1.3.1.7.A for Limerick and Peach Bottom.
- Deleted the reference to a previously deleted requirement for ANSI N45.2.13 from Paragraph 1.3.1.8.C for Limerick and Peach Bottom.

Standard Quality Assurance Topical Report (NO-AA-10) - Revision 79 Transmittal and Summary of Changes

- Updated the reference from an outdated organizational reference to "Nuclear Engineering Division" and replaced it with "Exelon Engineering" in Paragraph 1.3.1.11 for Limerick and Peach Bottom.
- Eliminated the exceptions that Limerick and Peach Bottom had taken to implementing the requirement for identifying and storing items in accordance with the four levels of quality defined in ANS N45.2.2 from paragraphs 1.3.1.5.A and C.
- Deleted the requirement for Quality Verification to review and concur with qualification procedures for of ASME Section XI visual examiners at Oyster Creek and Three Mile Island from paragraph 1.3.2.7.A, to make them consistent with the rest of the fleet.

Prepared By: 6/14/07
Michael Hayse / Date
Nuclear Oversight Evaluator

Approved By: 6/14/07
Dennis Hieggelke / Date
Nuclear Oversight Audit and Programs Director

1. POLICY STATEMENT

The Quality Assurance Topical Report (QATR), NO-AA-10, is the highest tiered document that assigns major functional responsibilities for either plants owned or operated by Exelon Generation Company, LLC and AmerGen Energy Company, LLC (AmerGen) collectively. Implementing documents assign more specific responsibilities and tasks and define the organizational interfaces involved in conducting activities and tasks within the scope of this Plan. These requirements apply to those organizations and positions, which manage and perform activities within its scope.

The Company organization is structured on the basis that the attainment of the objectives of this Plan relies on those who manage, perform, and support the performance of activities within the scope of this plan. Assurance of this attainment relies on those who have no direct responsibility for managing or performing the activity.

The Company will maintain and operate its nuclear plants in a manner that will ensure the health and safety of the public and our workers. All facilities shall be at a minimum compliance with the requirements on the Code of Federal Regulations, NRC Operating Licenses, and the applicable laws and regulations of the state and local governments.

2. APPLICABILITY

All Company personnel who work directly, or indirectly, for the Company are responsible for the achievement of quality in their work. Accordingly, all Company personnel and its contractors engaged in supporting nuclear generation activities shall comply with the requirements of our Quality Assurance Program (QAP).

1. SCOPE

This chapter identifies those portions of the Company organization as it applies to the Quality Assurance Program (QAP), and defines the responsibility and authority for establishing, executing, and verifying its implementation. The responsibility for the program is retained and executed by the Company exclusively.

Organizational responsibilities are described for assuring that activities affecting quality are prescribed and implemented by documented instructions, procedures, and drawings. The achievement of quality in the performance of quality related activities are the responsibility of each individual in support of nuclear operations.

The requirements and commitments contained in the QAP are mandatory and must be implemented, enforced, and adhered to by all individuals and organizations.

2. REQUIREMENTS

Note: Minor variations may occur between the titles contained herein and those used in practice. Equivalent AmerGen positions are described with brackets. Specific position descriptions may be contained in approved Company documents.

2.1. Organization

The organizational structure of the Company consists of corporate functions, and the nuclear facilities. Organizational titles for the quality assurance functions described are identified in Company policies and procedures.

Lines of authority and responsibility are established from the highest management level through intermediate levels to the implementing personnel. The responsibility, authority, and relationships of the various personnel and organizations are documented and maintained current.

The authority to accomplish the quality assurance functions described herein may be delegated to the incumbent's staff as necessary to fulfill the identified responsibilities.

2.2. Corporate Organization

2.2.1. Chairman and Chief Executive Officer

The Chairman and Chief Executive Officer (CEO), Exelon Corporation, is responsible for overall corporate policy and provides executive direction and guidance for the corporation as well as promulgates corporate policy through the Company 's senior management staff.

2.2.2. President, Exelon Generation Company [Exelon Corporation]

The President, Exelon Generation, is responsible for Exelon Generation policy and provides executive direction and guidance for Exelon Generation as well as promulgates corporate policy through Exelon Generation senior management staff. Overall responsibility for the implementation of the QAP is delegated to the President and Chief Nuclear Officer, Exelon Nuclear.

2.2.3. President and Chief Nuclear Officer [President & Chief Nuclear Officer - AmerGen]

The President and Chief Nuclear Officer (CNO) reports to the President of Exelon Generation and has overall responsibility for the safe and reliable operation of the Company's nuclear stations. This is the senior executive responsible for setting and implementing policies, objectives, expectations, and priorities to ensure activities are performed in accordance with QAP and other requirements. The following management positions and committees report to and / or receive direction from the CNO with respect to their assigned roles and responsibilities associated with the execution of the Exelon Nuclear Quality Assurance Program:

1. The Chief Operating Officer (COO) is responsible to provide management oversight and support of the day-to-day operations of the stations for the safe and efficient operation of the nuclear fleet in compliance with the QAP. The COO is responsible for planning, organizing, and directing and controlling the operations, maintenance and improvement of the nuclear facilities. This position participates in the formulation of nuclear group strategy and policy, and provides leadership and direction to implement industry best practices. The following management positions report to the COO:
   - A management position responsible for MidAtlantic operations provides management oversight and support of the day-to-day operations of the MidAtlantic stations. This position implements policies, goals, and objectives, in accordance with the QAP and other requirements, to assure the safe and reliable operation of the MidAtlantic nuclear stations This position participates in the formulation of nuclear group strategy and policy, and provides leadership and direction to implement industry best practices.
   - A management position responsible for MidWest operations provides management oversight and support of the day-to-day operations of the MidAtlantic stations. This position implements policies, goals, and

objectives, in accordance with the QAP and other requirements, to assure the safe and reliable operation of the MidAtlantic nuclear stations This position participates in the formulation of nuclear group strategy and policy, and provides leadership and direction to implement industry best practices.

- A management position for operations support who is accountable for defining standard programs and processes, delivering effective services and support, providing technical oversight of program implementation, and supporting the deployment and sharing of best practices throughout the nuclear organization in accordance with the QAP and other requirements, as applicable. Reporting to this position is a staff of management, administrative, and technical personnel. Functional areas of responsibilities include:
  - outages, training, security, chemistry, industrial safety, maintenance and work control, operations, radiation protection, radioactive waste, fuel handling.
  - information technology is no longer a functional area exclusively within the nuclear organizational structure but now supports the entire Exelon Corporation. The management position responsible for operations support will supply oversight and governance for the functional area of information systems as it applies to Exelon Nuclear. The oversight and governance of this functional area is performed to ensure that organizational and functional responsibilities and the reporting relationship to the management position responsible for all nuclear activities, the CNO, is maintained within the requirements stated within the QATR. This includes all regulatory requirements committed to by the QATR. Specifically, the management position responsible for operations support supplies oversight and governance for management and supervision of information systems related services and activities including the software quality assurance program (DTSQA). This includes the creation, acquisition, the enhancement of computer hardware, communication, and software systems to support operational requirements.

2. The management position responsible for engineering & technical services provides oversight and support and is accountable for defining standard programs, processes, policies, procedures, delivering effective services and support, providing technical oversight of program implementation, and supporting the deployment and sharing of best practices throughout the nuclear organization in accordance with the QAP, regulatory requirements, and the ASME Code. Reporting to this position is a staff of management, administrative, and technical personnel. Functional areas of responsibility include;
   - engineering that provides support to the nuclear stations, design authority under the ASME Code, configuration management programs, special processes, and generic programs for technical and regulatory issues. A support staff provides the necessary discipline and expert support for setting technical policy, developing design

standards, and performing engineering discipline reviews. This staff develops and supports common approaches for technical and regulatory engineering issues, as well as develops and coaches engineers. Corporate procurement engineering provides overall coordination and guidance of the nuclear organization's procurement engineering process and technical operations. This includes parts evaluation, upgrading of stock material, equivalent item evaluation, and examination and testing in accordance with the applicable ASME Code and Federal Regulations

- laboratory services for implementing metrology related programs including calibration and maintenance of measuring and test equipment, technical services.
- nuclear fuels management providing BWR/PWR nuclear fuel procurement and fabrication services, technical support to monitor fuel reliability and certain in-core components, design and licensing analyses for core reloads, safety analyses, and high level waste strategy. This position is responsible for reactivity management oversight and corporate support of reactor operations to ensure safe and reliable plant operations, as the manager of nuclear materials, and for controls and reports associated with special nuclear material accountability.
- project management

3. The management position responsible for Nuclear Oversight (NOS) activities is independent of production and assures that an appropriate QAP is established, maintained, and effectively executed throughout the nuclear organization. This position provides overall direction for the implementation of the QAP and for the effective implementation of quality assurance functions that verify activities affecting safety-related functions. The management position responsible for NOS must meet the educational and experience requirements of ANSI/ANS 3.1. A staff of supervisory, administrative, and technical personnel supports assessment and quality verification. Functional responsibilities include:
   - employee concern program activities.
   - establishing quality assurance practices and policies.
   - independent assessment and quality verification activities.
   - initiating stop work, ordering unit shutdown, or request any other actions deemed necessary to avoid unsafe plant conditions or a significant violation of the QAP.
   - initiating, trending, and recommending solutions for deficiencies identified by NOS.
   - maintaining a trained and qualified staff of personnel within the NOS organization.
   - maintenance and approval of revisions to the Quality Assurance Topical Report (QATR) and the program for employee concerns.
   - overseeing nuclear site NOS activities.

- participation in joint membership groups.
- periodic assessments to determine that the Quality Assurance Policy is being carried out.
- periodic review of the independent assessment program.
- periodically apprising the President and CNO and the Nuclear Safety Review Board of the status of the quality assurance aspects at Company facilities and immediately apprise them of significant problems affecting quality.
- settling disputes between NOS and other organizations.
- the certifying authority for NOS assessment personnel.
- the internal assessment program.
- the management assessment program.
- verifying implementation of solutions for significant conditions adverse to quality identified by NOS.

A. Reporting to the management position responsible for NOS is a management position responsible for performance assessment activities at the sites. This position is responsible to prioritize and communicate common quality issues to appropriate senior management including the resolution of these issues. A position responsible for implementation of site level NOS activities reports through this management position.

B. Also reporting to the management position responsible for NOS is a management position responsible for auditing and programs. Functional areas of responsibility include:
   - maintaining the regulatory required compliance auditing program.
   - managing the conduct of supplier assessments, audits, or surveys (including their sub-tier suppliers) as required. Verifies that supplier quality assurance programs comply with Company requirements and has the authority and responsibility for QA activities applicable to supplier evaluation including, stop work as deemed necessary when a violation of the QAP is identified.
   - establishing, maintaining, and interpreting Company quality assurance policies and procedures.
   - providing training on quality assurance subjects.
   - establishing the requirements for assessment/auditor and inspector certification.
   - controlling and maintaining the QATR.
   - provides an offsite point of contact for station Quality Verification personnel if assistance is necessary for quality verification activities.

- managing implementation of the program for employee concerns.

4. A management position responsible for licensing and regulatory affairs provides organizational support and management oversight of the stations to ensure prompt and proper disposition of regulatory issues, develops regulatory positions and advises senior management on priorities and activities affecting regulatory issues at the nuclear sites. Other responsibilities include developing policies and standardized processes and procedures for the maintenance of the licensing basis, the preparation of submittals to the NRC and other regulatory organizations, the dissemination of regulatory and operational experience information, NSRB, and the administration of the Corrective Action Program, periodically conducting an independent effectiveness review of NSRB activities (not to exceed 2 years) and providing overall direction and management oversight for environmental issues. Functional areas of responsibility include:
   - a management position for emergency planning is responsible for providing overall direction and management oversight.

5. The Nuclear Safety Review Board (NSRB) is an offsite committee that reports to and advises the President and CNO of the results of their independent oversight of plant operations related to safe operation of the station and the Company's nuclear program relative to nuclear safety. The NSRB is responsible for the independent safety review function and functions in accordance with written procedures and instructions which delineates committee composition, responsibility, authority, member qualifications, meeting frequency, subjects to be reviewed, reporting requirements, and administrative controls under which the board operates. The NSRB:
   - conducts independent reviews of station performance and operations to determine if the facility is being operated and maintained in a manner that promotes safety and provides feedback to the organization on suggested improvements.
   - focuses primarily in the areas of Operations, Maintenance, Engineering, Plant Support, Regulatory and Nuclear Oversight, or other matters relating to safety.
   - reviews station materials and activities and advises the CNO and management responsible for NOS on the following activities:
     - any issue potentially affecting the safe operation of the facility.
     - station nuclear safety performance determined by discussion and interviews with station and Exelon Nuclear individuals, plant tours, oversight of meetings, and review of documents distributed for NSRB review.
     - effectiveness of the station program for oversight including audits, assessments, and self-assessments.
     - corrective actions for degraded or non-conforming conditions involving violations of the NRC license requirements, plant

transients or forced shutdowns, or the submission of a Licensee Event Report (LER).

- oversight of activities of the on-site safety review function.

6. The management position responsible for business operations provides integrated support to senior management and the nuclear sites for all business functions. Reporting to this position is a staff of supervisory, administrative, and technical personnel. Functional areas of responsibility includes:
   - business planning and process improvement.
   - records management.
   - communications.
   - decommissioning activities that include the safe storage and handling of irradiated spent nuclear fuel including operations and maintenance.

   Supply is no longer functional areas exclusively within the nuclear organizational structure but now support the entire Exelon Corporation. The management position responsible for business operations no longer has direct responsibility for these functional areas; however, this management position will supply oversight and governance for the functional area of supply as it applies to Exelon Nuclear. The oversight and governance of this functional area is performed to ensure that organizational and functional responsibilities and the reporting relationship to the management position responsible for all nuclear activities, the CNO, is maintained within the requirements stated within the QATR. This includes all regulatory requirements committed to by the QATR. The management position responsible for business operations supplies oversight and governance for:
   - management and supervision of information systems related services and activities including the software quality assurance program (DTSQA). This includes the creation, acquisition, the enhancement of computer hardware, communication, and software systems to support operational requirements.
   - the Exelon Nuclear supply function including the establishment of priorities and providing operational control of the purchase of non-fuel goods and services required for nuclear operations. This organization is also responsible for the areas of material procurement, services procurement, supply programs, inventory management, and investment recovery. Supply establishes policies, common administrative controls and processes to ensure compliance with applicable requirements and effective use of resources.

7. A management position responsible for licensing projects including special projects and new technology.

8. A management position responsible for project development.

2.3. Site Organization

A management position for each nuclear site reports through the applicable management position responsible for each designated operating group including the MidAtlantic and the Midwest and is responsible for overall plant nuclear safety and the implementation of the Company's QAP. This position is also responsible for the station compliance with its NRC operating license, governmental regulations, and ASME Code requirements. Day to-day direction and management oversight of activities associated with the safe and reliable operation of a nuclear station is provided. The following site management positions report to this position:

- The management position responsible for plant operations.
- The management position for engineering and design.
- The management position responsible for regulatory assurance.
- The management position responsible for training.
- The management position(s) responsible for project management.
- The management position responsible for business operations and planning.
  - responsible for quality assurance records management
- The management position responsible for security.

2.3.1. The management position responsible for plant operations assures the safe, reliable, and efficient operation of the plant within the constraints of applicable regulatory requirements, operating license, and the QAP. Supervisory direction is provided for the Technical Review Program, including approval of individuals as technical reviewers, and the Plant Operations Review Committee (PORC). During periods that exceed three months, when unavailable, responsibility is designated in writing to an established alternate who satisfies the experience requirements of this position. Functional areas of responsibility include:

- Management position(s) for maintenance are responsible for the performance of corrective, predictive and preventive maintenance, cleanliness controls and modification installation of mechanical and electrical equipment and instrumentation in accordance with the QAP and other requirements. A staff of supervisory, technical, administrative, and contract personnel supports day-to-day maintenance of equipment within their functional area.
- Management position(s) responsible for control of work coordinate, administer, execute, and monitor daily and outage work schedules. This position is also responsible for material management and site supply, which coordinates parts requirements, specifies and evaluates parts, procures all materials for the site, ships and receives material, and

controls the onsite inventory. The site supply chain provides and coordinates scope and priority for station procurement engineering efforts.

- chemistry activities, laboratory and system processes, related procedures and programs.
  - environmental services.
  - radioactive waste.
  - radiological environmental monitoring
- health physics/radiological protection.
- operations and support including:
  - a management position responsible for safe, reliable, and efficient plant operations within the constraints of the operating license and regulatory requirements. This position is also responsible for the development and implementation of appropriate controls in accordance with the QAP and other requirements.
  - management position(s) responsible for operations shift crews and administration, direction and supervision of operating staff. This position is also responsible for routine plant operations activities and evolutions that are performed within the constraints of the operating license, the QAP, and other requirements. Typically this position is the senior individual on site who holds a Senior Reactor Operator license.
  - management position(s) responsible for the day-to-day operation of the nuclear unit(s)) including reactor engineering and overall command and control of shift activities including operations of the radioactive waste system.
  - management position(s) responsible for supervision for control of work and of the plant and field supervision that coordinates and/or assists in the control of shift operations. This position directs control room personnel, field operations, has the primary responsibility for authorizing removal and restoration of systems to support maintenance activities and holds a Senior Reactor Operator License.
  - a management position responsible for advisory technical support to shift management in the areas of thermal hydraulics, reactor engineering and plant analysis with regards to the safe operations of the facility. In addition, this position shall meet the qualifications as specified by the NRC.

2.3.2. The management position for engineering and design has the responsibility and authority for day-to-day engineering support activities, develops and maintains engineering programs, policies, procedures, and provides engineering services in accordance with the QAP. A staff of supervisory, technical, and administrative personnel supports maintenance activities. Functional areas of responsibility include:

- design engineering.

- document control.
- engineering administration.
- modifications and their implementation.
- plant configuration control.
- system engineering.
- system testing.
- technical support.

2.3.3. The management position responsible for regulatory assurance maintains an interface and liaison between the station and federal and state regulators and is also responsible for the overall administration of the station's corrective action program and associated activities. Functional responsibilities include:

- emergency preparedness

2.3.4. The management position responsible for training provides direction, control, and overall supervision of personnel as required by regulations and training for all site personnel as required. Functional areas of responsibility include:

- learning services.
- maintenance technical training.
- operations training.

2.3.5. The Plant Operations Review Committee (PORC) is a multi-disciplined committee responsible for review of activities that affect nuclear safety, reports to, and advises the management position responsible for plant operation on matters related to nuclear safety. The PORC shall ensure that plant activities are conducted safely and do not require NRC review and approval prior to implementation or changes to the Technical Specifications. The PORC functions in accordance with written instructions which delineate committee composition, responsibility, authority, member qualifications, meeting frequency, subjects to be reviewed, reporting requirements, and administrative controls under which the group operates.

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

2.3.6. The management position responsible for site NOS activities reports to the management position responsible for NOS through the NOS management position responsible for performance assessment. This position has the organizational freedom and authority to identify problems, has a reporting relationship with the senior management position responsible for overall plant nuclear safety, and ensures compliance with QAP and nuclear safety requirements.

Significant safety or quality issues requiring escalated action will be directed through the management position responsible for NOS to the President and CNO. Functional responsibilities include:

- authority and responsibility to escalate matters.
- approving the agenda, checklist, findings, and report of each assessment.
- conducting independent assessments of line and support activities and safety reviews.
- identify changes to the quality assurance program.
- initiate, trend and recommend solutions for deficiencies identified by NOS.
- maintain a suitably trained and qualified staff.
- monitoring day-to-day station activities.
- provide NOS management periodic reports on the status and adequacy of the QAP.
- quality verification inspections.
- promptly communicate significant issues to NOS and appropriate site management.
- stop work or request any other actions to avoid unsafe plant conditions.

2.3.7. The Company uses a three-tiered approach to accomplish the oversight of safety which are:

- A collection of program elements for implementing and/or reviewing areas of quality of plant operations and nuclear safety. These elements include system performance monitoring, review of operating experience information, operability evaluations, and reviews of changes to technical specifications and final safety analysis reports that affect design bases. Specific guidance is contained in applicable procedures and programs.
- A NOS staff who assesses and performs quality verification inspection aspects of Company activities within the scope of the QATR relating to safety. This provides for an overview of activities affecting or potentially affecting safety.
- A NSRB which is an off-site committee that reports to and advises the President and Chief Nuclear Officer, Exelon Nuclear, of the results of independent oversight of plant operation relative to nuclear safety.

2.4. Decommissioning Site Organization

Similar to the operating sites, the following positions are responsible for management oversight, directing, and implementing appropriate controls to maintain the site within the requirements and constraints applicable to a permanently shutdown station or unit (or those stations or units not under the control of an NRC approved decommissioning plan), and to ensure the safe storage of spent nuclear fuel.

2.4.1. Dresden Unit 1

The management position for Dresden Unit 1 has the day-to-day responsibility for decommissioning activities and for the operation and maintenance of structures and systems required for the safe storage of spent nuclear fuel. Activities of decommissioning work groups are managed and monitored to ensure that there is no adverse safety impact on the unit prior to execution. This position is also responsible for supporting the station in assuring that activities are performed within the constraints of the Decommissioning Technical Specifications (DTS) and in accordance with the QAP, as applicable.

2.4.2. Zion

The management position responsible for operations and engineering for Zion Station is responsible for engineering support and the operation of dedicated systems required for the safe storage of spent nuclear fuel. Activities of decommissioning work groups are managed and monitored to ensure that there is no adverse safety impact on the unit prior to execution. This position is also responsible for supporting the station in assuring that activities are performed within the constraints of the DTS and in accordance with the QAP, as applicable.

2.5. Responsibility

Each holder of position as identified in this Chapter, has the responsibility for the scope and effective implementation of the QAP and may delegate all or part of the activities of planning, establishing, and implementing the QAP to others, but retains the responsibility for the program's effectiveness.

The Company is responsible for ensuring that the applicable portion(s) of the QATR is properly documented, approved, and implemented before an activity within the scope of the QAP is undertaken by the Company or by others.

Personnel performing NOS assessment functions for the Company have the responsibility, authority, organizational freedom, and sufficient independence from cost and schedule to:

- assure that further processing, delivery, installation, or use is controlled until proper disposition of a nonconformance, deficiency, or unsatisfactory condition has occurred.
- identify quality problems.
- initiate, recommend, or provide solutions to quality problems through designated channels.
- initiate stop work, order unit shutdown, or request any other actions deemed necessary to avoid unsafe plant conditions or a significant violation of the QAP
- verify implementation of solutions for significant conditions adverse to quality.

The Company may delegate certain phases of the work to non-company labor and contracted services, which act as the Company's agents in assigned areas.

They shall work to a Company accepted quality program (or in accordance with the Company's program) under overall site direction and document their organization and any delegated responsibilities necessary to establish, execute, and verify their quality program. The Company may also assign the authority for certification and stamping in accordance with the ASME Code.

2.6. Authority

When the Company 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, the Company retains responsibility.

1. SCOPE

The purpose of this chapter is to define how the Company's QAP applies to those activities such as design, procurement, fabrication, installation, modification, maintenance, repair , refueling, operation, inspection, and tests related to systems, structures, and components. The QAP also applies to certain non-safety related structures, systems, components and activities to a degree consistent with their importance to safety. Policies, directives, procedures, guidelines, manuals, or instructions shall be reviewed, approved, distributed, and revised in accordance with administrative procedures.

2. REQUIREMENTS

2.1. General

The QAP comprises all those planned and systematic actions necessary to provide adequate confidence that structures, systems, and components will perform satisfactorily in service. Quality assurance includes quality verification, which comprises the examination of those physical characteristics of material, structure, component, or system which provide a means to control the quality of the material, structure, component, or system to predetermined requirements. All persons and organizations involved in activities in support of the nuclear sites and governed by this program are responsible for implementing the requirements of this manual.

The QAP is based upon 10CFR50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants." The requirements of 10CFR50.54, "Conditions of License," 10CFR50.55(a), "Codes and Standards," 10CFR50.59, "Changes, Test, and Experiments," 10CFR50 Appendix A, "General Design Criteria for Nuclear Power Plants," 10CFR50 Appendix R, "Fire Protection Programs for Nuclear Power Plants," are included in the basis for the QAP.

The requirements of 10CFR21, Reporting of Defects and Non-Compliance," 10CFR71, Subpart H, "Quality Assurance for Packaging and Transportation of Radioactive Material," and 10CFR72, Subpart G, "Quality Assurance for Licensing Requirements for the Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste," are also included. The Company is committed to carrying out the provisions of various NRC regulatory guides and industry standards which further define Quality Assurance Program requirements (see attached Appendix C).

2.2. Supplier's Quality Assurance Program

The applicable Quality Assurance requirements of 10CFR50, Appendix B, as noted in Appendix C, are invoked on vendors, suppliers, or contractors through procurement document requirements.

2.3. Planning

Planning establishes the systematic, sequential progression of actions to meet the defined requirements. The Company documents these plans in appropriate communications, approvals, instructions, and procedures. Activities described in the QAP are accomplished under controlled conditions that include appropriate equipment, qualified personnel, suitable environment, and use of appropriate procedures.

2.4. Program Description

The Company's total program for providing administrative controls and quality assurance is incorporated in many diverse documents. The Company's nuclear document hierarchy describes the implementation of the QAP. Approved implementing procedures and instructions are written to the extent necessary to implement the quality requirements of 10CFR50 Appendix B. Line, staff, administrative, and quality oversight organizations issue and control these implementing procedures. All activities affecting quality are described in sufficient detail to assure quality.

2.5. Indoctrination & Training

Formal indoctrination and training programs for personnel performing or verifying activities within the scope of this Plan are established and maintained. A training organizational element is established and staffed with qualified instructors and is responsible for planning, scheduling, developing and providing training to Company personnel. The indoctrination and training programs are established by on-site and by off-site organizational units responsible for the performance or verification of activities within the scope of the QAP. Indoctrination, training, and qualification programs are established such that:

- personnel responsible for performing quality-affected activities are instructed as to the purpose, scope, and implementation of the quality-related manuals, instructions, and procedures.
- personnel verifying activities affecting quality are trained and qualified in the principles, techniques, and requirements of the activity being performed.
- formal training and qualification programs documentation includes the objective, content of the program, attendees, and date of attendance.
- proficiency tests are given to those personnel performing and verifying activities affecting quality, and the acceptance criteria are developed to determine if individuals are properly trained and qualified.
- certificate of qualification clearly delineates the specific functions personnel are qualified to perform and the criteria used to qualify personnel in each function.
- proficiency of personnel performing and verifying activities affecting quality is maintained by re-training, re-examining, re-qualifying, and/or re-certifying as determined by management or program commitment.

2.6. Program Review

The effectiveness of the QAP and its implementation is periodically reviewed by various organizations at various levels. The results of these reviews are documented in reports to senior management for evaluation and corrective action is initiated as required. The effectiveness of the QAP is evaluated and reported by NOS through the monitoring, assessment, and inspection functions. Other organizational elements provide additional information/ evaluations as requested.

2.7. Quality Assurance Manual

This Quality Assurance Manual (QAM) contains the Company's QAP. The QAM is made available to NRC, Company personnel, the Authorized Nuclear Inspector, and other regulatory authorities. The Company submits revisions to the QAP document (as a topical report) to the NRC for acceptance.

1. SCOPE

The purpose of this chapter is to establish the requirements and control measures for assuring design bases and regulatory requirements are correctly translated into design documents. The scope of design control covers all phases of engineering design, including: identification of design inputs (criteria and bases); identification and control of design interfaces; production of design documents, calculations and analyses; procurement related engineering and design verification.

2. REQUIREMENTS

2.1. General

The Company has overall responsibility for design and design control activities including, preparing, reviewing, approving, and verifying design documents related to the plant's structures, systems, and components within the scope of the QAP. Additionally, the Company is responsible for reactor core design analysis, core design specifications and design reviews, for nuclear fuel and in-core components.

Qualified personnel perform detailed design activities or review and control design work involving electrical, mechanical, structural, and instrumentation and control designs. Design activities are conducted to written procedures that include consideration of quality standards, quality assurance requirements, suitability of material parts, equipment, and processes, control of design interfaces, analytical or testing requirements, design basis, and configuration management.

2.2. Design Input

The Company has the responsibility to properly translate applicable safety analysis reports, regulatory requirements, ASME Code requirements, and design bases into specifications, drawings, procedures and instructions. The Company is responsible for electrical, mechanical, structural, instrumentation and control; nuclear engineering activities involved in nuclear station modifications, and also maintains a configuration management program.

Design inputs, such as design bases, performance requirements, regulatory requirements, codes, and standards shall be identified and documented. Their selection shall be reviewed and approved by the responsible design organization. The design input shall be specified and approved in a timely manner and be to the level of detail necessary to provide a consistent basis for making design decisions, accomplishing design verification, and evaluating design changes. Changes from approved design inputs, including the reason for the changes shall be identified, approved, documented, and controlled.

2.3. Design Process

The Company is responsible for design changes, performs detailed design activities, and issues design documents in accordance with approved procedures. The responsible design organization shall prescribe and document design activities in a timely manner and to the level of detail necessary to permit verification that the design meets requirements.

Included in this scope of activities are considerations for field design engineering, fire hazards, human factors, physics, seismic, stress, compatibility of materials, application of special process, associated computer programs, thermal, hydraulic, ALARA and radiation factors, the safety analysis accident scenarios, and accessibility for in-service inspection, maintenance and repairs, and quality standards. Design documents shall be adequate to support facility design, construction, and operation. Selection of the appropriate quality standards shall be documented, reviewed and approved.

Reasons for changes from specified quality standards, shall be identified, documented, approved and controlled. Design methods, materials, parts, equipment, and processes that are essential to the function of the structure, system, or component shall be selected and reviewed for suitability of application. Applicable industry experience, as set forth in reports or other documentation, shall be made available to cognizant design personnel.

The final design output documents and approved changes thereto shall be relatable to the design input by documentation in sufficient detail to permit design verification. The final design shall identify assemblies and/or components that are part of the item being designed. If materials, parts, equipment, or processes are different from the published supplier information, these differences shall be documented.

Commercially standard (catalog items) materials, parts, or equipment, which have been previously approved for different applications, are reviewed for suitability in the design process.

2.4. Design Analyses

Design analyses shall be performed in a planned, controlled, and documented manner. Design analysis documents shall be legible and suitable for reproduction, filing, and retrieval. They shall be sufficiently detailed as to purpose, method, assumptions, design input, references, and units such that a person technically qualified in the subject can review, understand the analysis, and verify the adequacy of the results without recourse to the originator. Calculations shall be identified for retrievability by subject including structure, system, component, originator, reviewer, and date or by other unique identifiers.

Computer programs shall be controlled to assure that changes are documented and approved. Verification shall be required for changes to previously verified computer programs including evaluation of the effects of these changes as specified below.

Computer programs may be utilized for design analysis without individual verification of the program for each application provided:

- the computer program has been verified to show that it produces correct solutions for the encoded mathematical model within defined limits for each parameter employed.
- the encoded mathematical model has been shown to produce a valid solution to the physical problem associated with the particular application.

2.5. Design Verification

Design control measures shall be applied to verify the adequacy of design, such as by one or more of the following:

- performance of design reviews.
- use of alternate calculations.
- performance of qualification tests.

The results of design verification shall be documented including the identification of the verifier. Design verification shall be performed by competent individual(s) other than those who performed the original design but may be from the same organization. This verification may be performed by the originator's supervisor, provided the supervisor did not specify a singular design approach, rule out certain design considerations, did not establish the design inputs used in the design, or the supervisor is the only individual in the organization competent to perform the verification. Cursory supervisory reviews do not satisfy the intent of design verification.

Verification shall be performed in a timely manner. Design verification, for the stage of design activity accomplished, shall be performed prior to release for procurement, manufacture, construction, or release to another organization for use in other design activities provided sufficient data exists. Any unverified portion of the design shall be identified and controlled. In all cases the design verification shall be completed prior to relying upon the component, system, structure, or computer program to perform its function.

2.5.1. Extent of Design Verification

The extent of the design verification required is a function of the importance to safety, the complexity of the design, the degree of standardization, the state of the art, and the similarity with previously proven designs.

Where the design has been subjected to a verification process, the process need not be duplicated for identical designs. For each application the applicability of standardized or previously proven designs for design inputs shall be verified.

Known problems affecting the standard or previously proven designs and their effects on other features shall be considered. The original design and associated verification shall be adequately documented and referenced in subsequent applications.

Design verification shall be required for changes to previously verified designs. This includes evaluation of the effects of those changes on the overall design and on any affected design analyses.

2.5.2. Design Reviews

Verification consists of a check of design adequacy by such methods as design reviews, use of alternate calculations or methods, or performance of verification or qualification testing. The method, or combination of methods, used to verify a design will be selected on a case-by-case basis

Acceptable verification methods include one or more of the following items:

- alternate calculations using alternate methods that verify the correctness of original calculations or analyses.
- critical design reviews providing assurance that the final design is correct and satisfactory.
- where design adequacy is to be verified by qualification tests, the tests are dentified.

2.6. Change Control

Changes to final designs, field changes, modifications to operating facilities, and nonconforming items dispositioned use-as-is or repair shall be justified and subject to design control measures commensurate with those applied to the original design.

These measures shall include assurance that the design analyses for the structure, system, or components are still valid. A 10CFR50.59/72.48 review is performed for changes to the facility.

Changes shall be approved by the same affected groups or organizations, which reviewed and approved the original design documents. In the case where the original organization is no longer responsible for design approval, then a new responsible design organization shall be designated. The designated organization shall have demonstrated competence in the specific design area of interest and have an adequate understanding of the requirements and intent of the original design.

When a design change is approved, other than by revision to the affected design documents, measures shall be established to incorporate, where appropriate the change into these documents. Plant personnel will be made aware of design changes/modifications, which may affect the performance of their duties. Where a significant design change is necessary because of an incorrect design, the design process and verification procedure shall be reviewed and modified as necessary.

2.7. Design Errors

The Company detects deficiencies or errors in design or in the design quality assurance program by:

- actual failure during operation.
- assessments.
- design verification measures.
- other means.
- personnel using the design documents.
- tests conducted.

2.8. Interface Control

Design interfaces shall be identified and controlled. The Company shall coordinate design efforts among the participating organizations. Interface controls shall include the assignment of responsibility and the establishment of procedures among participating design organizations. Controls shall be for the review, approval, release, distribution and revision of documents involving design interfaces. Design information transmitted across interfaces shall be documented and controlled.

2.9. Vendor Design Control

The Company reviews and accepts the specifications and drawings for electrical, mechanical, instrumentation, nuclear and structural material, equipment, and erection work, prepared by the Architect Engineer and NSSS Supplier. The purpose of these reviews is to verify inclusion of inspection, testing and acceptance criteria.

The Architect Engineer's evaluation of fabricator and erector's detailed designs, drawings, and work instructions are reviewed for reasonableness and completeness. Audits are conducted by the company for design review systems of architect engineers, nuclear fuel, and NSSS suppliers.

The Company assures that:

- personnel certifying ASME Section III design activities are qualified Registered Professional Engineers in accordance with ASME Section III, Appendix XXIII.
- architect engineers and NSSS suppliers maintain procedures to assure that their personnel certifying ASME Section III design activities are qualified Registered Professional Engineers in accordance with ASME Section III, Appendix XXIII.

The Company provides qualified personnel to review and approve the resolution of non-conformances relating to electrical, mechanical, instrumentation and structural portions of the plant and to evaluate discrepant modification test results for operating plants.

2.10. Modifications

The Company performs modifications that may affect the function of safety-related structures, systems, or components in a manner to assure quality at least equivalent to that specified in original design bases and requirements, materials specifications, and inspection requirements.

2.11. Documentation and Records

The Company notifies jurisdictional authorities of the location of ASME Code related permanent records. Design documentation and records which provide evidence that the design and design verification process were performed in accordance with the requirements of this chapter, shall be stored and maintained.

Documentation of design analyses shall include the following:

- statement of the objective of the analyses.
- list of design inputs and their sources.
- results of literature searches or other applicable background data.
- list of assumptions and indication of those that must be verified as the design proceeds.
- list of any computer calculation and the bases for its use.
- review and approval.

1. SCOPE

Activities governed by the Company's QAP shall be performed as directed by documented instructions, procedures, and drawings appropriate for the activity. The requirements for the use of these procedures shall also be prescribed in writing. These instructions, procedures, and drawings shall include responsibilities and acceptance criteria as applicable or appropriate for the activity.

Those participating in any activity shall be aware of and use the proper and current revision of instructions, procedures, drawings, and engineering requirements for performing the activity. Procedures may include reference to vendor equipment manuals, design drawings and specifications, prerequisites, special precautions, and the delineation of work to be performed. Equipment Manuals and manufacturers instructions shall be readily available for use.

2. REQUIREMENTS

2.1. General

Operation, maintenance, or modification of equipment shall be preplanned and performed in accordance with written procedures that are appropriate to the circumstances and that conform to applicable codes, standards, specifications, and criteria. Documents identify and specify the content of records to be generated in conducting the activity. The establishment and execution of quality procedures shall be used by the station staff or those under their direction, for operating, maintenance, modifications, in-service inspection, refueling, and stores activities.

Temporary procedures may be issued to provide guidance in unusual situations that are not within the scope of the normal procedures. Temporary procedures shall be subject to review and approval, and shall include designation of the time period during which they may be used. In the event of an emergency not covered by an approved procedure, authorized personnel shall provide appropriate direction to minimize personnel injury and damage to the facility and to protect the health and safety of plant personnel and the general public.

2.2. Preparation and Review

Procedures shall be prepared, reviewed, approved, and used as prescribed in writing, and shall contain step by step instructions in the degree of detail necessary for qualified individuals to perform the required function or task. Where appropriate, these procedures will include checklists containing the necessary attributes to be observed or measured.

These documents shall include or reference appropriate quantitative or qualitative acceptance criteria for determining that prescribed activities have been satisfactorily accomplished.

The procedures will be independently reviewed and evaluated by other involved company organizations with interface responsibilities and the comments forwarded to the issuing department.

2.3. Procedures and Programs

Review and approval of site procedures are performed in accordance with technical specification requirements as delineated in the Technical Review or Station Qualified Review (SQR) programs.

2.3.1. Technical Review and Control

1. Procedures required by a station's Technical Specifications and other procedures which affect nuclear safety, as determined by the manager responsible for station operation, and changes thereto, other than editorial or typographical changes, shall be reviewed as follows prior to implementation, except as noted in item 5 (below).
   - Each procedure or procedure change shall be independently reviewed by a qualified individual knowledgeable in the area affected other than the individual who prepared the procedure or procedure change. This review shall include a determination of whether or not additional cross-disciplinary reviews are necessary. If deemed necessary, the reviews shall be performed by the qualified review personnel of the appropriate discipline(s).
   - Applicable Administrative Procedures recommended by Regulatory Guide 1.33 shall be submitted to the Plant Operations Review Committee (PORC) as applicable, for review prior to implementation. The PORC shall recommend approval or disapproval based on their review.
   - Review of procedures or procedure changes to those procedures, that describe the means for controlling or operating structure, systems, and/or components as described in the UFSAR, will include a review to determine if NRC review and approval is necessary prior to the implementation of the procedure activity. This review is based on the review of a written 10CFR50.59/72.48 review and evaluation prepared by qualified individual(s), or documentation that a 10CFR50.59/72.48 evaluation is not required. The PORC shall review and recommend approval of items requiring NRC review and approval prior to station approval for implementation. NRC approval shall also be obtained prior to station approval for implementation.

- Department head approval authority shall be as specified in station procedures.
- Written records of reviews performed in accordance with this specification shall be prepared and maintained.
- Editorial and typographical changes shall be made in accordance with station procedures.

2. Technical reviewers shall advise their supervisors and/or PORC on all matters related to nuclear safety that are identified during reviews. The reviewer shall be other than the originator. The reviewer shall determine if additional cross-disciplinary reviews are required to ensure all applicable technical disciplines are included. This review shall ensure technical accuracy, compliance with regulatory requirements, and shall verify the originator's determination of whether items reviewed constitutes a change to the Technical Specifications, Operating License, or if NRC review and approval is required prior to implementation.

3. Technical reviewers shall be qualified to perform technical reviews based on the individual's training, experience, and knowledge level. Technical reviewers, assigned the responsibility for reviewing 10CFR50.59/72.48 reviews and evaluations, shall receive training in this process. Technical reviewers shall be qualified to perform this function and meet the experience requirements per applicable standards. Personnel shall have expertise in one or more of the following disciplines as appropriate, for the subject or subjects being reviewed:

- chemistry
- instrumentation and controls
- mechanical and electrical systems
- nuclear power plant technology
- radiological controls
- reactor engineering
- reactor operations

4. Technical reviews shall be documented and records maintained.

5. Temporary Changes

Temporary changes to procedures required by 2.3.1.1 (above) may be made provided:

- the intent of the original procedure is not altered.
- the change is approved by two members of the plant management staff knowledgeable in the areas affected by the procedures, at least one of whom holds a Senior Reactor Operator's License on the unit affected.

- the change is documented, reviewed, and approved in accordance with 2.3.1 (above) within 14 days of implementation.

2.3.2. On-site Qualified Technical Review (Dresden Unit 1)

A Qualified Technical Reviewer shall conduct thorough reviews of the documents specified below. Persons performing these reviews shall be knowledgeable in the subject area being reviewed. Qualified technical reviews must be completed prior to implementation of proposed activities.

1. Qualified Technical Reviewers shall be individuals without direct responsibility for the document under review; these reviewers may be from the same functionally cognizant organization as the individual or group performing the original work.

2. Qualified Technical Reviewers shall have at least 5 years of professional experience and either a Bachelor's degree in Engineering or the Physical Sciences or shall have equivalent qualifications evaluated on a case by case basis and approved by the manager responsible for decommissioning activities. The appointment of Qualified Technical Reviewers shall be documented.

3. A Qualified Technical Reviewer shall independently review the following subjects:
   - Proposed changes to the license, technical specifications, or bases.
   - Proposed changes to the programs required by the Technical Specifications to verify that such changes do not involve a change to the Technical Specifications and will not require NRC review and approval as defined in 10CFR50.59/72.48.
   - 10CFR50.59 evaluations for changes in the facility as described in the De-fueled Safety Analysis Report (DSAR), changes in procedures as described in the DSAR, and tests or experiments not described in the DSAR to verify that such actions do not involve a change to the Technical Specifications or will not require NRC review and approval as defined in 10CFR50.59.

2.4 Deleted

1. SCOPE

A documented test program shall be established in accordance with applicable technical specifications, license conditions, and design documents to assure that all testing required demonstrating that the structures, systems, or components within the scope of this QAP will perform satisfactorily in service.

2. REQUIREMENTS

2.1. General

2.1.1. Testing Program

The Company establishes and controls a test program to assure that design and performance criteria have been satisfied and assures that testing does not adversely affect the safe operation of the plant. The test program includes, as appropriate, procedures to ensure those structures, systems, subsystems, and components will perform in service. Testing is conducted by appropriately trained and qualified personnel. The extent of testing shall be based on the complexity of the modification, replacement, or repair. The test program covers all required tests including:

- operational tests.
- production tests.
- prototype qualification tests.
- tests during design.
- tests during fabrication.
- the demonstration of satisfactory performance following plant maintenance and modifications or procedural changes.
- those tests required by plant maintenance or modifications.

2.1.2. Test Procedures

The program uses written test procedures which include the requirements and acceptance limits from applicable design documents. The Company reviews and approves test procedures and changes to test procedures, including changes that alter test sequence, in a similar manner to the original.

The organization responsible for the design of the item to be tested establishes the test requirements and acceptance criteria. Test requirements and acceptance criteria are based upon specified requirements contained in applicable design or other pertinent documents. Test requirements include specific characteristics to be tested.

The Company specifies specific test methods when they must be employed, uses written procedures or checklists, and documents the status of equipment both before and after testing.

The Company may use appropriate sections of related documents, such as ASTM methods, supplier manuals, equipment maintenance instructions, or approved drawings or travelers with acceptance criteria in lieu of specially prepared written test procedures. Such documents must include adequate instructions to assure the required quality of work. Test and inspection procedures contain:

- a description of objectives.
- acceptance criteria or limits contained in applicable design or other source documents, such as vendor's literature, engineering drawings or plant specifications that will be used to evaluate results.
- any special equipment or calibrations required to conduct the test or inspection.
- responsibilities.
- instructions or checklists used to verify or document that affected plant systems are arranged in their correct lineup and for restoring the system to the condition consistent with the normal operating status.
- limiting conditions.
- prerequisites for, or checks to be made prior to performing the tests or inspections including any special conditions to be used to simulate normal or abnormal operating conditions.
  - data documentation is in compliance with test procedures.
  - equipment to be tested is properly released for testing.
  - inspections and tests are done under suitable environmental conditions.
  - proper calibrated inspection and test instruments are used.
  - retention control of test data documentation is adequate.
- test or inspection requirements contained in applicable design documents.

Where tests and inspections are to be witnessed, the procedure identifies hold points or witness points in the testing sequence to permit witnessing. The procedure requires appropriate approval for the test to continue beyond the designated hold point.

1. Prerequisites

Prerequisites include the following, as applicable:

- appropriate test equipment.
- calibrated instrumentation in accordance with Chapter 12, "Control of Measuring and Test Equipment."
- condition of test equipment and the item to be tested.
- provisions for data acquisition.
- suitable environmental conditions.
- trained personnel.

Procedures ensure that prerequisite steps for equipment testing have been or will be performed. Such steps include:

- completion of necessary construction maintenance and modification activities.
- formal release for testing.
- measures to preserve equipment status.
- prior testing.
- safety precautions.

A detailed prescribed physical inspection of equipment components and facilities is performed to ensure readiness for operation. Typical inspection items include:

- calibration of instruments.
- cleanliness.
- lubrication.
- presence of safety devices.
- setting of limit switches.

2. Schedule

Schedules are provided to assure that all necessary tests are performed and properly evaluated on a timely basis. Testing is scheduled so that the safety of the plant is never dependent on the performance of an untested system.

3. Test Results and Records

Appropriate Company personnel evaluate test results to assure conformance with design and performance requirements. Inspection and test results are documented in a test report or data sheet. Each report identifies the following:

- acceptability of the test.
- actions taken to correct the deviations noted.
- any deviation of test results from acceptance criteria (nonconformance).
- as-found condition.

- as-left condition.
- completion date and other significant dates and times.
- data sheets completed during the tests.
- documents that provide acceptance criteria.
- identification of the conditions encountered which were not anticipated.
- identity of inspector or tester.
- item to which it applies.
- location where testing was performed or where test samples were taken.
- measuring and test equipment used.
- person evaluating test results.
- procedures or instructions followed in performing the task.
- test procedures.
- test results.

2.2. Instrumentation and Control

The Company tests instrumentation and control channels to assure that they are properly calibrated. In addition, specific tests are performed at critical levels such as "set points" in a manner simulating the approach toward the set point. These calibrations are made with the devices in their normal positions if the calibration is dependent upon location or attitude.

Testing determines that a proper response is obtained over the operating range of the device. It gives particular attention to verifying independence and dependence, as appropriate, of the elements of the systems. Calibration documentation includes indicating the date and identity of the person that performed the calibration.

The Company prepares and documents installation, inspection and test procedures and work instructions for instrumentation and electrical equipment. These documents are kept current and revised as necessary to assure that installation, inspections and tests are performed in accordance with latest information. They include as appropriate:

- approvals.
- data report forms.
- frequency of inspection or test.
- identification of test equipment and date for required re-calibration where required for interpretation of test results.
- inspection and test acceptance limits.
- inspection and test equipment required.
- inspection and test objectives.
- installation specifications.

- precautions to avoid component or system damage during testing or inspection.
- prerequisites.
- sequence of tests (if applicable).
- sequential actions to be performed.

2.3. Electrical Tests

Electrical tests include as appropriate:

- continuity tests, short circuit tests, polarity and rotational tests
- control system tests including indicating meters, recorders, transducers, targets and lamps, annunciators and alarms, controls and interlocks
- insulation resistance measurements as specified
- over potential (HIPOT) tests as specified. Overpotential tests conform to the applicable codes and standards. The manufacturer's recommendations are considered.
- voltage breakdown tests on liquid insulation

2.4. Mechanical Tests

The Company performs mechanical tests to ascertain that electric and/or instrumentation components or systems can withstand system pressure ratings. As a minimum, the Company applies such tests to pressure sensing and transmitting devices operating in steam, hydraulic, and vacuum systems and their hydraulic or pneumatic interconnecting piping or tubing and associated instruments.

Pressurized equipment that is part of electrical apparatus such as heat exchangers, circulating systems, actuating systems, and electric and instrumentation containment penetrations are likewise tested if site assembled or fabricated. Tests are conducted after the assembly is complete even though the components may have been tested previously. These tests are performed in accordance with the applicable codes and standards.

2.5. Physical and Chemical Tests

Physical and chemical tests, in accordance with the applicable codes, include, as appropriate:

- chemical analysis of fluids for oxygen or moisture content and purity.
- radiation sensitivity testing to confirm that radiation sensor and controlling devices is properly functioning.

2.6. Surveillance Tests

The Company's test program covers surveillance testing during the operational phase to provide assurances that failures or substandard performance do not remain undetected and that the required reliability of safety related systems is maintained.

2.7. Maintenance or Major Procedure Change

The Company performs tests following plant modification or significant changes in operating procedures to confirm that the modification or changes produce expected results. These tests also demonstrate that the change does not produce an unsafe operating condition.

1. SCOPE

This Chapter describes the Company program to identify and correct conditions adverse to quality.

2. REQUIREMENTS

2.1. General

The Company implements a Corrective Action Program to promptly identify and correct items or occurrences that are adverse to quality or might adversely affect the safe operation of a nuclear generating station. These items or occurrences are screened for reportability, operability, Part 21, etc. The Company makes a thorough investigation of occurrences and identifies corrective action to prevent recurrence of an event, as appropriate. Events may include reactor trips, failed equipment, personnel errors, and procedural infractions. Measures are taken to assure that the cause of any significant condition adverse to quality is determined and takes corrective action to prevent recurrence.

2.2. Conditions Adverse to Quality

Measures are established to assure that conditions adverse to quality are identified and corrected. Examples of conditions adverse to quality are provided in procedures. Examples include failures, malfunctions, adverse trends, deficiencies (including programmatic), deviations, defective material, design errors, equipment, and nonconformance to specified requirements.

An independent review body reviews violations, deviations and reportable events that require a report to the NRC in accordance with regulatory requirements and company procedures. This includes the review of results of any investigations made and the recommendations resulting from such investigations. These include items such as:

- events, as defined in applicable site technical specifications.
- significant operating abnormalities or deviations from normal or expected performance of plant safety-related structures, systems, or components.
- violations of applicable codes, regulations, orders, technical specifications, license requirements or internal procedures or instructions having safety significance.

2.2.1. Significant Conditions Adverse to Quality

In cases of significant conditions adverse to quality the cause of the condition is determined and documented, resolution determined and documented, and corrective action taken and documented to preclude recurrence.

1. Procurement

The Company uses procedures that include methods for the identification of conditions adverse to quality and for timely corrective action. The Company requires individual vendors and their contractors to include corrective action measures in their quality assurance programs. In cases of significant conditions adverse to quality that arise during the procurement process, the Company uses procedures to describe the method used to:

- identify and document deviations and non-conformances.
- review and evaluate the conditions to determine the cause, extent and measures needed to correct and prevent recurrence.
- report the conditions and corrective action to the appropriate levels of management.
- implement and maintain required corrective action.

2. Plant Hardware Malfunctions

The causes of malfunctions are determined, evaluated, and recorded, as appropriate. Experience with the malfunctioning equipment and similar components are reviewed and evaluated to determine if a replacement component of the same type can be expected to perform the function reliably. If evidence indicates that common components in safety-related systems have performed unsatisfactorily, corrective measures are planned prior to replacement or repair of all such components. Appropriate procedures are revised in a timely manner to prevent recurrence of equipment malfunction or abnormal operation.

3. Incorrect Design

When a significant design change is necessary because of an incorrect design, the Company reviews and modifies the design process and verification procedures, as appropriate. In cases of significant or recurring deficiencies (or errors), the Company follows written procedures to correct the deficiency (or error), determine the cause and make changes in the design process and the QAP to prevent similar types of deficiencies (or errors) from recurring.

2.3. Verification and Follow-up

The Company verifies completion of corrective actions for maintenance, repair, refueling, operation activities, completion of corrective action taken for assessment deficiencies (including programmatic), and performs assessments of site corrective action. The Company tracks and verifies completion of corrective action taken for independent assessment findings and approves the completion of corrective actions.

Trending and assessment results are evaluated to assure that corrective measures are implemented effectively and that actions to prevent recurrence are effective as appropriate. The Company also requires contractors and vendors to follow-up on corrective action commitments within their quality programs.

The Company regularly reviews and analyzes records to:

- assure that the causes of a nonconformance and the corrective action have been clearly described.
- assure that authorized Company personnel have evaluated the overall effect resulting from the use of nonconforming items.
- determine whether corrective measures will preclude recurrence.

2.4. Evaluation and Qualification

Personnel performing the evaluation function are responsible for considering the cause and the feasibility of corrective action to assure that the necessary quality of an item is not deteriorated. Where it is determined that the cause cannot be corrected immediately, the due date of corrective action will be determined during the review and evaluation. Evaluation may indicate the need for investigations to assure that corrective measures are considered complete and may also indicate that the nature of the deficient condition is minor and does not require corrective action.

Qualified personnel are responsible for determining the root cause(s) of an event and developing recommendations to preclude recurrence. These personnel report the results of their determination to appropriate station personnel and Company management.

2.5. Documentation and Reporting

The Company documents the identification of significant conditions adverse to quality, the cause of the condition, the corrective action taken, and reports these items to the appropriate levels of management, NSRB, and as applicable, PORC, If the identified issue is not an indication of a significant failure in any portion of the QAP, the Company does not require reporting to management.

Reports are made immediately if prompt corrective action is required. Formal reports are filed with the appropriate regulatory agency, when required. Reports of investigations include a detailed description of the occurrence, the findings of the investigation, and the recommended corrective measures. The Company notifies the rest of the nuclear industry of significant events with generic implications and its circumstances to help preclude a similar event occurring at another plant.

The Company keeps records to identify incidents (e.g., major damage, personal injury, major schedule delays.), non-conforming items, unfavorable conditions, programmatic deficiencies identified in assessment reports, significant equipment failures, and malfunctions that occur during station operation.

The Company tracks the completion of corrective actions for conditions adverse to quality and maintains records of their resolution. Parts or all of this system may be electronically monitored and electronic records may be used as the sole record of such a system.

1. SCOPE

The Company establishes and implements a program, which defines requirements and responsibilities for identification, generation, collection, compilation, storage, maintenance, retention, and retrieval of records necessary to provide evidence of quality in design, fabrication, installation, inspection, testing, and operating activities.

2. REQUIREMENTS

2.1. Program

The records program provides for:

- administration.
- receipt and transmittal.
- storage and preservation (includes temporary and permanent records)
- safekeeping and classification.
- retention and disposition.

2.2. Administration

Authority and responsibility for record control activities are delineated in procedures. Records are administered through a system, which includes an index of record type, retention period, and storage location. Distribution of records shall be controlled in accordance with written procedures. Measures are established for replacement, restoration, or substitution of lost or damaged records.

Records are legible, accurate, complete, identifiable, and retrievable. Records are considered valid and complete when dated and stamped, initialed, signed, or otherwise authenticated. Corrections, revisions, or supplements to completed records are reviewed and approved by an authorized individual in the originating organization. Such changes are dated and stamped, initialed, signed, or otherwise authenticated including the use of electronic approval and authorization.

Records may be stored in electronic media provided that the process for managing and storing data is documented in procedures that comply with applicable regulations. Media used for the retention of records include (but are not limited to): microform, compact disk-recordable (CD-R), and magnetic media including videotape, computer tape, optical disks, and hard disk storage. Electronic records retention must be an integral component of the Corporate Records Management Program, approved by the management position responsible for Nuclear Generation records. The format used must be capable of producing legible, accurate, and complete documents during the required retention period. Electronic approval and authorization procedures are

established to assure that only those persons authorized grant the required approvals.

2.3. Receipt and Transmittal

A system for receipt control of records is established. Receipt control is required for records transferred between Company locations, vendors and the Company, and from Company department files to final storage locations. Systems are established to transfer records between Company locations and between vendors and the Company. Records transferred from Company department files to a final storage location are also under such systems. The system of receipt control of records for permanent or temporary storage includes inventory of transmitted records, receipt acknowledgment, and control of records during receipt.

2.4. Storage and Preservation

Record storage facilities are established and maintained in a manner that minimizes the risk of damage or destruction. Interim storage provisions shall be established to properly maintain and protect records until they are permanently transferred to record storage facilities for retention. Records may be kept by suppliers and maintained on an available basis for a specified period of time. Storage and Preservation systems provide for:

- assignment of responsibilities.
- attachment in binders, folders, or envelopes for storage in steel file cabinets or on shelving in containers.
- control and accountability of records removed.
- damage from natural disasters such as winds, floods, and fires.
- following manufacturer recommendations for special recording media.
- protection from environmental conditions such as high and low temperatures and humidity.
- protection from infestation of insects, mold, or rodents etc.
- special processed records such as radiographs, photographs, negatives, microfilm, and magnetic media to prevent damage from excessive light, stacking, electromagnetic fields, temperature and humidity.

2.4.1. Temporary Storage

Measures are established for temporary storage of records when required by an organization's procedures for activities such as; for processing, review, or use. These measures require that these records are stored in a 1-hour fire rated container and that a maximum allowable storage time limit is specified.

2.5. Safekeeping and Classification

Measures are established to prevent access to records by unauthorized personnel. These measures guard against theft and vandalism. Records are classified and retained in accordance with applicable regulations.

2.6. Retention and Disposition

Record retention periods are established to meet regulatory, UFSAR, and License requirements. The most stringent retention period is implemented when multiple requirements exist. Records are dispositioned at the end of the prescribed retention period.

2.7. Plant Operating Records

2.7.1. Records and/or Logs, 5-Year Retention

Records and/or logs relative to the following items shall be kept in a manner convenient for review and shall be retained for at least 5 years. These items apply to Braidwood, Byron, Clinton, Dresden, LaSalle, Limerick, Peach Bottom (including the Independent Spent Fuel Storage Installation), and Quad Cities Stations unless otherwise noted:

- records of normal plant operation, including power levels and periods of operation at each power level.
- records and periodic checks, inspection and/or calibrations performed to verify that the surveillance requirements of the Technical Specifications (and Fire Protection Program at Clinton) are being met. All equipment failing to meet surveillance requirements and the corrective action taken shall be recorded.
- records of physics tests and other tests pertaining to nuclear safety. (Braidwood, Byron, Dresden, LaSalle, Peach Bottom, Quad Cities)
- records of changes to procedures required by a station's Technical Specifications and other procedures, which affect nuclear safety, as determined by the management position holder responsible for plant operation.
- shift manager/engineers' logs (Braidwood, Byron, Dresden, LaSalle, Quad Cities)
- records of principal maintenance activities, including inspection and repair, (and replacement for Braidwood, Byron, Limerick and Peach Bottom) regarding principal items of equipment pertaining to nuclear safety.
- by-product material inventory records and records of sealed source and fission detector leak tests and results (Braidwood, Byron, Clinton, Limerick, Peach Bottom and Zion).
- by-product material inventory records and source leak test results (Dresden, Clinton, and Quad Cities).
- records of changes made to the equipment or reviews of tests and experiments to comply with 10CFR50.59 (Dresden and Quad Cities).
- records of changes made to the procedures as required by Technical Specifications and the Operational Requirements Manual (Clinton).
- reportable events required by 10CFR50.73 and 10CFR72.216 as applicable (Clinton 10CFR50.73 only, Limerick and Peach Bottom).

- records of radioactive shipments (Limerick)

2.7.2. Lifetime Records

Lifetime records are those that are specified by applicable regulations, standards, codes, and licensing basis documents.

2.8 Deleted (Record Retention - Limerick Specific Only)

1. SCOPE

A documented, comprehensive system consisting of regulatory audits and performance assessments of the Company and its vendors are conducted to verify QAP compliance, adequacy, and effectiveness. Audits and assessments are conducted in accordance with written procedures and to the requirements of ASME NQA-1 to evaluate the assessed organization and to assure completion of required corrective actions, commitments, or improvements and determine effectiveness in meeting program objectives.

2. REQUIREMENTS

2.1. Assessments and Audits - General

2.1.1. Scheduling

The internal audit program is conducted on a performance driven frequency that is commensurate with the status and importance of the activity to be completed but does not exceed 24-months. Internal audit frequencies required by regulation that are different than the 24-month period are indicated within Appendix B, "Audit Frequency." Audit frequencies are determined based on a consideration of the risk and consequences with respect to the activities being assessed.

Audits may be extended beyond their originally scheduled due date based on the following criteria:

A. Audits shall be performed at the intervals designated in Appendix B, "Audit Frequency". Schedules are based on the month in which the audit starts.

B. A maximum extension not to exceed 25 percent of the audit interval is allowed. That is to say that, for audits on a 24-month frequency, the maximum time between specific audits does not exceed 30 months. Likewise, audits on an annual (12 month) frequency do not extend beyond 15 months.

C. When an audit interval extension greater than one month 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.

D. Item B applies to supplier audits and evaluations except that a total combined interval for any three consecutive inspection or audit intervals does not exceed 3.25 times the specified inspection or audit interval.

Planned and comprehensive performance assessment activities are conducted to assure that safety related functions are fully evaluated. Internal assessment activities are performed to a schedule that includes assessment areas and frequencies. The management position responsible for NOS, or designated staff

member(s), approves them. Schedules are reviewed semi-annually and revised accordingly to assure that coverage is maintained current.

2.1.2. Preparation

A documented plan or an agenda identifies an audit or assessment scope, requirements, audit and/or assessment personnel, activities to be evaluated, organizations to be notified, applicable documents, and schedule. An approved checklist or procedure for each scheduled audit and/or assessment identifies the quality and technical elements of the area or items to be evaluated. Audit/Assessment plans, agendas, checklists, and procedures as applicable are prepared in advance under the direction of an Audit/Assessment Team Leader (ATL).

2.1.3. Personnel

Experienced and qualified personnel perform assessments and audits and are familiar with written procedures, standards, and processes applicable to the area being evaluated. Assessment and audit personnel shall have sufficient authority and organizational freedom to make the assessment and audit process meaningful and effective and shall not have direct responsibilities in the areas to be assessed. They shall have access to the plant records necessary to fulfill their function.

The Assessment/Audit Team Leader shall organize and direct audits/assessments and ensure the team collectively has the required experience or training for the activities to be evaluated. Technical Specialists may supplement the team to provide additional experience and competence.

2.1.4. Performance

Performance assessments are conducted to assess specific activities, processes, and records on the basis of their impact and importance relative to safety, reliability, and functionality with respect to risks and consequences. Assessments can be focussed on areas most in need of improvement.

Audits and assessments are initiated early to assure effective quality assurance during design, procurement, manufacturing, construction, installation, inspection, testing, and operations. Additional unscheduled audits and assessments may also be performed at various stages of activities, based on the nature and safety significance of the work being done; to verify continued adherence to and effectiveness of the quality systems. Objective evidence shall be examined to the extent necessary to determine that a quality program is being effectively implemented.

2.1.5. Reporting and Follow-up

An audit report includes the description of the audit scope, identification of the team and personnel contacted during audit activities, a summary of results (including a statement on effectiveness of the QAP elements), and a description

of each finding. The ATL shall sign the audit report for which he or she is responsible.

Audit and Assessment results are documented and distributed to the management position responsible for NOS, and to the appropriate managerial level of the organization having responsibility for the area or activity assessed. Findings or deficiencies requiring prompt corrective action are reported immediately to the management of the assessed organization.

Findings, deficiencies and recommendations of each audit and assessment shall be reported to appropriate site management and the management position responsible for NOS. All findings of noncompliance with NRC requirements, and any significant nuclear safety or quality issues requiring escalated action, will be directed through the management position responsible for NOS to the President and CNO in accordance with procedural requirements.

Responsible management shall take the necessary actions to correct findings identified in the assessment/audit. They will identify the corrective action to be taken, actions that will prevent recurrence, and a schedule for implementing these actions. Responses to audit and assessment findings are reviewed for adequacy.

Follow-up verification of the completion of scheduled corrective action commitments are performed by NOS to assure findings or adverse conditions are corrected in accordance with procedural requirements. Follow-up action of previous deficient areas or adverse conditions (including re-audit) is taken to verify that corrective action has been completed, is effective, implementation continues, and is properly documented, when indicated.

2.1.6. Records

Audit and Assessment results are documented and reports are generated and retained. Associated documentation is on file at the appropriate location. Personnel qualification records for assessment and audit team members are established, maintained, and reviewed.

2.2. Vendor Audits

Assessments, audits, or surveys of vendors and their sub-tier suppliers are performed to a pre-established schedule. Audits are performed on a triennial basis. Documented supplier performance monitoring is performed in accordance with approved procedures as an acceptable alternate to the performance of the annual evaluation of suppliers. The management position responsible for audits and programs or his designee, shall review and approve the assessment/audit/survey schedule and checklists, and sign reports. Schedules are reviewed semi-annually and revised accordingly to assure that suppliers are assessed, audited, or surveyed as required.

Assessment program requirements are imposed on suppliers by appropriate contract or procurement documents. The Company's active participation in

nuclear industry assessments provides an alternative means to fulfilling its responsibility for examining supplier activities.

2.3. Independent Management Assessment

A periodic assessment (not to exceed 24 months) of the status and adequacy of the QAP is performed by an independent organization to assure that assessments are being accomplished to program requirements. The management position responsible for NOS submits the results of this assessment to the President and CNO.

1. SCOPE

It is the Company's policy to assure a high degree of availability and reliability for its nuclear plants while ensuring the health and safety of the public and its workers. Therefore, the Quality Assurance Program is applied in a graded manner to certain areas and activities that are not clearly defined as safety related. The Company calls this application Augmented Quality. Augmented Quality includes systems and components that are subject to the requirements of ASME Code Sections: I "Power Boilers," IV "Hot Water Heaters," and VIII "Non-fired Pressure Vessels" (see sub-section 2.7. below). This appendix applies to all sites unless otherwise noted below or in Appendices B through G.

2. REQUIREMENTS

The Company applies the following augmented quality requirements to certain systems, structures, components (SSC), and activities that are not safety related to a degree consistent with their importance to safety. Unless otherwise noted:

- routine audits are performed of the program's content and implementation.
- deficiencies are addressed in accordance with the corrective action program.
- program records of audits and reviews are maintained as required.

2.1. Health Physics and ALARA (As Low As Reasonably Achievable)

The Company develops, documents, and implements a radiation protection program sufficient to ensure compliance with the provisions of 10CFR20. The Company uses, to the extent practical, procedures and engineering controls based on sound radiation protection principles to achieve occupational doses and doses to the public that are as low as reasonably achievable.

2.2. Transport of Radioactive Waste

When the Company contracts with vendors to transport radioactive waste in NRC approved shipping packages, it meets the requirements of 10CFR71, Subpart H. The Company assures that this service is procured from an organization with a QA program and if applicable, includes a NRC licensed transport system. Loading, surveying, closure, placarding, and inspections are conducted in accordance with written procedures and instructions.

Transport casks and trailers are inspected before release in accordance with Department of Transportation (DOT) 49CFR.

Shipping manifests, including final radiation surveys, are completed and retained. Radioactive waste shipments not meeting the requirements for NRC approved packaging, shall meet the requirements of DOT 49CFR.

2.3. Services

The Company procures services from qualified suppliers. It is not necessary that these suppliers have a quality assurance program approved by the licensee, however, suppliers should provide a quality assurance program that includes the quality assurance program elements presented in Reg. Guide 4.15, and routinely provide program data summaries sufficiently detailed to permit evaluation of the program for the following areas:

- meteorology.
- Offsite Dose Calculation Manual.
- radiological environmental monitoring.

2.4. Fire Protection

10CFR50 Appendix A, General Design Criteria (GDC) 3 requires that the Company's nuclear facilities have an established fire protection program that provides fire protection features such that the adverse effect of fires on structures, systems and components important to safety is minimized. The quality assurance program established for these fire protection SSCs ensures that design, procurement, instruction, procedures, drawings, inspection, installation, testing, maintenance, operations, nonconforming Items, corrective Action, records, audits and administrative controls meet the applicable Quality Assurance guidelines as described in the applicable edition of Branch Technical Position (BTP) 9.5-1 for each Exelon site. Engineering determines what fire protection SSCs protect Structures, Systems, and Components important to safety. Engineering also establishes the requirements for the design, procurement, fabrication, installation and/or modification of these fire protection SSCs. Routine testing of fire protection systems assures reliability. All other fire protection equipment and supplies will be of commercial quality, in accordance with National Fire Protection Association (NFPA) guidelines.

2.5. Station Blackout (Regulatory Guide 1.155)

Dresden, LaSalle, Limerick, Oyster Creek, Quad Cities and Three Mile Island stations rely on non-safety related equipment to achieve the redundancy required by 10CFR50.63. Quality Assurance requirements for Dresden, LaSalle, Limerick, Oyster Creek, Quad Cities and Three Mile Island are implemented in accordance with Regulatory Guide 1.155 (Station Blackout), Appendix A and B. Replacement and consumable parts and supplies are classified non-safety related in accordance with original specifications and are procured as commercial items. Routine testing of Station Blackout (SBO) SSCs assures the necessary redundancy is maintained. SBO SSC reliability is monitored in accordance with the Station's Maintenance Rule program.

2.6. Augmented Quality Requirements for Dresden 1, Peach Bottom 1, Zion

Dresden 1, Peach Bottom 1, and Zion 1 & 2 have ceased commercial operation and will ultimately be decommissioned. Staffing, qualification of personnel, and

organization will be in accordance with the Dresden 1 and Zion De-fueled Technical Specifications (DTS) and De-fueled Safety Analysis Reports (DSAR), and the Peach Bottom 1 Updated Final Safety Analysis Report (UFSAR) and Technical Specifications.

Select SSCs at Zion are considered non-safety related but "Important-to-De-fueled-Condition (ITDC)" as defined in the DSAR. Procurement of parts and components will be in accordance with this non-safety related but ITDC classification. Changes, tests, and experiments require the application of the design control measures that assure that applicable regulatory requirements, licensing and design bases, and codes and standards are correctly translated into specifications, procedures and instructions. These design control measures will include a review and evaluation in accordance with 10CFR50.59/72.48, except design verification. The originator's supervisor, providing the supervisor did not specify a singular design approach or rule out certain design considerations, may perform design verifications.

Except for inspections or examinations required for ASME repairs and replacements, station personnel may perform inspections provided they are experienced, task-qualified journeymen or supervisors who did not supervise the activity being inspected. Nuclear Oversight will monitor this activity through periodic overview.

Timeliness of corrective actions is prioritized commensurate with the safety significance. Sufficient records of maintenance and modification activities will be maintained to evaluate failures, perform root cause analysis, if applicable, and determine appropriate corrective actions and to meet the requirements of the applicable DSAR or Peach Bottom Unit 1 UFSAR.

Audits are conducted of the Zion maintenance of shutdown facility and decommissioning activities at least annually until the termination of license.

2.6.1 Augmented Quality Requirements for Zion Station's Important to the Defueled Condition Structure, Systems, Components, and activities

The following augmented quality requirements will be applied to non-safety related Important to Defueled Condition (ITDC) Structure, Systems, Components (SSCs), and activities as defined in the Defueled Safety Analysis Report (DSAR), and as shown in the following Zion Station Augmented Quality Matrix.

2.6.1.1 **Design, Procurement, and Document Control** – Measures will be established to assure that applicable regulatory requirements, licensing and design bases, and standards are correctly translated into specification, drawings, procedures, and instructions. Deviations from these requirements and standards will be controlled. Design changes, including field changes, will be subjected to these measures.

2.6.1.2 **Instructions, Procedures, and Drawings** – Activities affecting ITDC SSCs and activities will be prescribed by documented instructions, procedures, and drawings and will be accomplished in accordance with these documents.

Instructions, procedures, and drawings will include qualitative and quantitative acceptance criteria for determing that activities, processes, and personnel qualifications have been satisfactorily accomplished.

2.6.1.3 **Control of Purchased Material, Equipment, Services, and Nonconforming Items**-Measures will be established to ensure that purchased material, equipment, and services conform to procurement documents and that items that do not conform to specified requirements are prevented from inadvertent use or installation.

2.6.1.4 **Inspections** – Inspections of activities affecting quality will be established and executed to verify conformance with the documented instructions, procedures, and drawings for accomplishing the activity.

2.6.1.5 **Test Control** – Surveillance testing will be established to ensure the SSCs perform satisfactory and commensurate with the importance of its intended function.

2.6.1.6 **Control of Measuring and Test Equipment** – Measuring and testing devices will be controlled, calibrated and adjusted at specified periods to maintain accuracy.

2.6.1.7 **Corrective Action Program –** A corrective action program will be maintained to assure that adverse conditions are promptly identified and corrected. For significant adverse conditions, the causes will be determined and corrective action implemented to preclude reoccurrence.

2.6.1.8 **Records** – Measures will be implemented to maintain records for activities affecting ITDC SSCs and the storage of nuclear fuel per established record retention periods.

2.6.1.9 **Audits** – A documented audit will be conducted on a frequency not to exceed 12 months to verify compliance with the requirements of this section and other applicable requirements. Audits will include a review of freeze protection, as appropriate.

2.6.1.10 Zion Station Augmented Quality Matrix

Section	Section Title	IDTC SSCs & Activities per the DSAR	Health Physics & ALARA	Emergency Planning	Security per the DSAR	Training per PDTS	Rad Environmental Monitoring & ODCM per PDTS	Meteorology	Fire Protection per DSAR
2.6.1.1	Design Control	X	X						X
2.6.1.1	Procurement	X	X			X	X	X	X
2.6.1.1	Document Control	X	X	X	X	X			X
2.6.1.2	Instructions, Procedures, and Drawings	X	X	X		X			X
2.6.1.3	Control of Purchase Material, Equipment & Services	X							X
2.6.1.3	Nonconforming Materials, Parts, or Components	X	X						X
2.6.1.4	Inspections	X							X
2.6.1.5	Test Control	X							X
2.6.1.6	Control of Measuring & Test Equipment	X							
2.6.1.7	Corrective Action	X	X	X	X	X			X
2.6.1.8	Quality Assurance Records	X	X	X		X	X	X	X
2.6.1.9	Audits	X	X	X	X	X	X	X	X

2.7. Repairs and Alterations

The requirements of ASME Code Sections II, V and IX shall be imposed as applicable for the repair or alteration job specific work scope.

2.7.1. State of Illinois

Welded repairs and all alterations to non-ISI boilers and pressure vessels, as described in Section 505.2500 of the rules contained in the Illinois Emergency Management Agency (IEMA) Safe Operation of Nuclear Facility Boilers and Pressure Vessels (Part 505), and the repair of pressure relief valves, as described in Section 505.2500(b) are conducted in accordance with Section 505.2500(a)(1)(A) of these rules.

Section 505.2500(a)(1)(A) requires that the Company apply an approved Quality Assurance (QA) Program to such repairs and alterations and describe how it is applied. The following describes the Company's application of these rules.

- The Company has a QA Program that is reviewed and accepted by the NRC. In addition, the QA Program is reviewed and accepted by an accredited Authorized Inspection Agency. Authorized Inspectors are present at each of the Company's plants while ASME Code work is in progress.
- Chapter 1 of this QA Program describes the authority and responsibilities of the organization. It also describes the retention of responsibility by the Company when repair and modification activities are subcontracted.
- Chapter 3 requires that design and changes to designs be defined, documented, and controlled.
- Chapter 5 requires that all work be accomplished in accordance with documented instructions and procedures and be subject to appropriate process controls. Specifically, the Company uses the Nuclear Work Request (NWR) to authorize, track, and control work in the plant. The NWR system includes provisions for specifying when work is ASME Code related and is not limited to any particular section of the ASME Code. It further provides for detailed instructions to accomplish the work. This includes the need for qualified inspectors, qualified welders, qualified procedures, special processes, required documentation, approved drawings, and post-maintenance/post-modification testing. NWRs marked as ASME Code work is offered to the Authorized Inspector for the insertion of hold and witness points.
- Chapters 4, 7, 8, and 13 address the procurement, receiving, handling, storage, disbursement, and marking of materials. Implementing procedures establish traceability of materials to the procurement and receiving processes and provide assurance that only ASME Code acceptable materials are utilized. Any specific requirements for heat traceability will be in accordance with the applicable sections of the ASME Code being used.
- Chapter 9 details the controls for special processes while Chapter 10 details those for inspection. This includes the requirement for the use of independent, qualified inspectors and examiners when required by the ASME Code, and invokes the Company's Special Processes and Procedures Manual (SPPM). The SPPM is also reviewed and accepted by the Authorized Inspection Agency.

- Chapters 6 and 17 require that documents and records be generated and maintained to satisfy the requirements of the ASME Code and the Jurisdiction.
- Chapter 18 provides for overview and audit of ASME Code activities.

Repairs and alterations performed as described above meet the requirements of the approved QA Program and meet the requirements of the IEMA B&PV rules; regardless of the safety classification of the boiler or pressure vessel or pressure relief valve being repaired.

2.8. Dry Cask Storage System

2.8.1. Peach Bottom Atomic Power Station (PBAPS)

Peach Bottom quality assurance program requirements are performed in accordance with the applicable 10CFR72.212 report which invokes the NRC approved 10CFR50 Appendix B quality assurance program as described in this QATR.

2.8.2. Oyster Creek Nuclear Generating Station (OCNGS)

The OCNGS quality assurance program requirements are performed in accordance with the applicable 10CFR72.212 report which invokes the NRC approved 10CFR50 Appendix B quality assurance program as described in this QATR.

2.8.3. Dresden / Quad Cities Station(s)

The ISFSI SSCs that are important to safety are categorized as Category A, B, or C in accordance with NUREG/CR-6407, "Classification of Transportation Packaging and Dry Spent Fuel Storage System Components According to Importance to Safety." Per 10CFR72, Subpart G, the QATR applies to the ISFSI SSCs and activities consistent with their importance to safety as follows:

The classification table on next page identifies the graded approach and applicability of the Exelon QA Program Chapters based on the safety categories that are defined in NUREG/CR-6407.

2.9. Emergency Planning

Requirements with respect to audits and records for Emergency Preparedness are described in an Emergency Plan that meets the requirements of 10CFR50.47.

2.10. Security

Requirements with respect to audits and records for Security are controlled for each station by an NRC approved Station Security Plan that is prepared and implemented in accordance with the requirements contained in 10CFR73.55.

ISFSI REQUIREMENTS				
Chapter	Title	Important to Safety SSCs Category		
		A	B	C
1	Organization (Roles and Responsibilities)	M	M	R
2	Quality Assurance Program (Paragraphs 2.1, 2.4, 2.5, and 2.6)	M	M	NR
3	Design Control	M	M	R
4	Procurement Document Control	M	R	NR
5	Instructions, Procedures, and Drawings	M	M	R
6	Document Control	M	M	R
7	Control of Purchase Material, Equipment, and Services	M	R	R
8	Identification and Control of Materials, Parts, and Components	M	R	R
9	Control of Special Processes	M	M	R
10	Inspections	M	M	R
11	Test Control (Design, Fabrication, Installation, and Maintenance)	M	M	R
12	Control of Measuring, and Test Equipment	M	M	R
13	Handling, Storage, and Shipping	M	R	NR
14	Inspection, Test, and Operating Status	M	M	NR
15	Nonconforming Materials, Parts, or Components	M	M	R
16	Corrective Action	M	M	R
17	Quality Assurance Records	M	M	R
18	Audits	M	M	R

(M) Mandatory = Indicates the Appendix B QA Program shall be used.

(R) Recommended = Indicates application of the applicable quality assurance criterion may benefit the user. The Engineering organization shall determine the extent of application required for the SSCs in question.

(NR) Not Required = Indicates that little benefit has been identified or no regulatory basis has been found to require application of applicable QA criteria. Imprudent use of this criterion may add unnecessary burden.

Internal audits shall be conducted on a performance driven frequency, not to exceed 24 months or at the frequencies indicated below, in accordance with the Company's QAP. Audits shall include the following safety-related functions as applicable:

AUDIT	FREQUENCY
a. The conformance of unit operation to provisions contained within the technical specifications and applicable license conditions.	24 Months
b. The adherence to procedures, training, and qualification of the station staff.	24 Months
c. The results of actions taken to correct deficiencies occurring in facility equipment, structures, systems, components, or method of operation that affect nuclear safety (CAP).	24 Months
d. The performance of activities required by the Quality Assurance Program to meet the criteria of Appendix B of 10CFR50. • Chemistry • Engineering – Design Control, • Engineering – Programs • Procurement / Materials Management • Maintenance • Nuclear Fuels • Operations • Quality Assurance Functions (internal and vendor audit\ assessment activities are evaluated by NIEP.)	24 Months
e. The fire protection programmatic controls including the implementing procedures (by qualified Nuclear Oversight personnel).	24 Months
f. The fire protection equipment and program implementation, including loss prevention, utilizing either a qualified offsite licensee fire protection engineer or an outside, independent fire protection consultant. An outside, independent fire protection consultant shall be used at least every second year.	24 Months
g. The Radiological Environmental Monitoring Program (REMP) and its results.	24 Months
h. The Offsite Dose Calculation Manual (ODCM) and implementing procedures.	24 Months

AUDIT	FREQUENCY
i. The Process Control Program (PCP) and implementing procedures for the solidification of radioactive wastes.	24 Months
j. The non-radiological environmental monitoring activities required by the Appendix B of the Facility Operating Licenses. (Note: Dresden and TMI do not have an Environmental Appendix to their Facility Operating Licenses.)	24 Months
k. Randomly selected procedures to ensure that the programmatic control processes used to assure that procedures are technically and administratively correct prior to use are resulting in timely and accurate procedure revisions.	24 Months
l. The Security Plan and implementing procedures per 10CFR73.55 (Reference 10CFR50.54(p)(3)(ii) for lesser frequency requirements).	12 Months
m. The Emergency Plan and implementing procedures (Reference 10CFR50.54(t)(1)(ii) for lesser frequency requirements).	12 Months
n. NSRB activities at a frequency not to exceed 5-years.	60 Months
o. The conformance of Spent Fuel Storage Installation operation to provisions contained within the technical specifications and applicable license conditions and results of actions taken to correct deficiencies occurring in facility equipment, structures, systems, components, or methods of operation affecting nuclear safety (Reference NUREG/CR-6407, and 10CFR72, Subpart G) (ISFSI sites only).	24 Months
p. Access Authorization Program (10CFR73.56) (Initial Audit frequency is 12 months and at least 24 months thereafter)	24 Months
q. Personnel Access Data System (PADS) (10CFR73.56) (Initial Audit frequency is 12 months and at least 24 months thereafter)	24 Months
r. Zion per the Defueled Safety Analysis Report (DSAR), maintenance of shutdown facilities and decommissioning activities and freeze protection.	12 Months
s. Fitness For Duty (FFD) Program (10CFR26.80)	12 Months

AUDIT	FREQUENCY
t. Station Black Out (Reg. Guide 1.155, Appendix A) Audits should be conducted and documented to verify compliance with design and procurement documents, instructions, procedures, drawings, and inspection and test activities developed to comply with 10CFR50.63. (Dresden, LaSalle, Limerick, Oyster Creek, Quad Cities, and Three Mile Island Only)	24 Months
u. Radiation Protection activities as defined in 10CFR20.	24 Months

1.1. Codes and Standards

The QAP takes into account the need for special controls, processes, test equipment, tools, and skills necessary to attain the required quality and the need for the verification of quality by inspection and test. The Codes and Standards listed below represent a listing of quality assurance codes and standards used to define the quality assurance program. A general listing of quality assurance related codes and standards, such as: ASME B&PV, ANSI, AWS, and IEEE used throughout Exelon/AmerGen at each nuclear site can be found in the applicable site specific Updated Final Safety Analysis Reports (UFSARs). The UFSAR should be referenced to identify site-specific commitments (including dates and/or addendas) with respect to these codes and standards. This Quality Assurance Program (QAP) complies with the quality requirements of the following codes and standards as indicated in site specific UFSARs unless otherwise noted in sub-section 1.3 (the UFSAR may address position specific exceptions or clarifications on a site by site basis).

- ANSI N18.1 – 1971, "Selection and Training of Nuclear Power Plant Personnel"
- ANSI / ANS 3.1 –1978, "American National Standard for Selection and Training of Nuclear Power Plant Personnel"
- ANSI / ANS 3.1 –1981, " Selection, Qualification and Training of personnel for Nuclear Power Plants"
- ANSI N18.7-1976 /ANS 3.2, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants."
  (Applicable to Limerick, Oyster Creek, TMI, and Clinton Only)
- ANSI N18.7-1972 "Administrative Controls for Nuclear Power Plants during the Operational Phase"
  (Applicable to Peach Bottom Only)
- ANSI / ANS 3.2 – 1988, ""Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants."
  (Applicable to Braidwood, Byron, Dresden, LaSalle, and Quad Cities Only)
- ASME NQA-1 (1994) (Revision and Consolidation of ASME NQA-1-1989 and ASME NQA-2-1989 Editions) "Quality Assurance Requirements for Nuclear Facility Applications" Part I, "Basic Requirements and Supplementary Requirements for Nuclear Facilities, and the Nonmandatory Guidance on Quality Assurance Records, Appendix 17A-1"

As noted above, the plants in the Exelon and AmerGen Fleet comply with the ANSI standards associated with administrative controls and quality assurance for the operational phase of nuclear power plant operation. Each plant complies with their specific standards with the following exception:

The independent review of Technical Specification changes, license amendments, or Emergency Plan changes shall be performed by the PORC. NSRB review and approval of Technical Specification changes, license amendments, or Emergency Plan changes is not required.

Note: Seven ANSI Standards that were superceded by NQA-1-1979. NQA-1-1994 incorporates not only the original seven standards (N45.2.6, 2.9, 2.10, 2.11, 2.12, 2.13, & 2.23), but also N45.2.1, 2.2, 2.3, 2.5, 2.8, 2.15, and 2.20.

1.2. Regulatory Guides

The applicable site specific Updated Final Safety Analysis Report (UFSAR) should be referenced to identify site-specific commitments with respect to the Regulatory Guides listed in this section. The QAP also complies with the regulatory positions of the following Regulatory Guides and additional programmatic quality requirements unless otherwise noted in sub-section 1.3.

- 1.8 , "Personnel Qualification and Training."
- 1.26 , "Quality Group Classification and Standards for Nuclear Power Plants."
- 1.28 , "Quality Assurance Program Requirements for Design and Construction."
- 1.29 , "Seismic Design Classification."
- 1.30, "Quality Assurance Requirements for the Installation, Inspection, and Testing of Instrumentation and Electric Equipment."
- 1.31 , "Control of Ferrite Content in Stainless Steel Weld Material"
- 1.33 , "Quality Assurance Program Requirements."
  Exception: The audits will be at the frequency defined in Appendix B of this QATR
- 1.37 , "Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants."
- 1.38 , "Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage, and Handling of Items for Water-Cooled Nuclear Power Plants."
- 1.39 , "Housekeeping Requirements for Water Cooled Nuclear Power Plants."
- 1.68 , "Pre-Operational and Initial Start-Up Test Programs for Water Cooled Reactors."
- 1.94 , "Quality Assurance Requirements for Installation, Inspection, and Testing of Structural Steel during the Construction Phase of Nuclear Power Plants."
- 1.116 , "Quality Assurance Requirements for Installation, Inspection, and Testing of Mechanical Equipment and Systems."
- 1.142 , "Safety Related Concrete Structures for Nuclear Power Plants."
- 1.143 , "Design Guidance for Radioactive Waste Management SSCs Installed in Light Water-Cooled Nuclear Power Plants."
- 4.15 , "quality Assurance for Radiological Monitoring Programs (Normal Operations) - Effluent Streams and the Environment."

1.3. Site Specific Clarifications and Exceptions

1.3.1. Limerick (LGS) and Peach Bottom Atomic Power Station (PBAPS)

1. Regulatory Guide 1.28, Revision 3, August 1985, "Quality Assurance Program Requirements – Design and Construction". Endorses ANSI/ASME NQA-1-1983.

   LGS/PBAPS shall comply with Regulatory Guide 1.28, August 1985 and ANSI/ASME NQA-1-1994, except for the following alternatives.

   A. NQA-1, Supplement 2S-3, Supplementary Requirements for the Qualification of Quality Assurance Program Audit Personnel, Sub-section 3.3, Audit Participation.

      NQA-1, Supplement 2S-3, Sub-section 3.3 (ANSI N45.2.23, Sub-section 2.3.4), Prospective Lead Auditors shall demonstrate their ability to effectively implement the audit process and effectively lead an audit team. This process is described in written procedures that provide for evaluation and documentation of the results of this demonstration. A prospective Lead Auditor shall have participated in at least one nuclear oversight audit within the year preceding the individual's effective date of qualification. Upon successful demonstration of the ability to effectively implement the audit process and effectively lead audits, and having met the provisions of NQA-1, Supplement 2S-3, the individual may be certified as being qualified to lead audits. LGS/PBAPS was granted this alternative by NRC SER dated 6/26/97, to this requirement. (ANSI N45.2.23 section 2.3.4, "Audit Participation" was replaced by NQA-1-1994, Supplement 2S-3, Sub-section 3.3,"Audit Participation").

2. Regulatory Guide 1.30, August 1972, "Quality Assurance Requirements for the Installation, Inspection, and Testing of Instrumentation and Electrical Equipment." Endorses ANSI N45.2.4-1972.

   LGS/PBAPS shall comply with Regulatory Guide 1.30, August 1972, and ANSI N45.2.4-1972, except for the following alternatives.

   A. ANSI N45.2.4, Section 1.1, Scope – An alternate to classification of Class I and IE electric power, instrumentation, and control equipment is to apply the requirements of this standard to LGS safety-related items (those instruments, equipment, and systems that prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public).

   B. ANSI N45.2.4, Section 3, Pre-construction Verification - Subsection (3) requires the checking of records of protective measures maintained during storage for conformance to storage requirements. ANSI N45.2.2-1978, Section 6.4, Control of Items in Storage, requires inspection and examination during the storage period. The

responsibility for these inspections rests with Materials Management. Compliance with these requirements for checking of records is assured through the auditing and quality verification programs conducted NOS Department personnel along with the monitoring of Materials Management activities by Materials Management supervision.

C. ANSI N45.2.4, Section 7, Data Analysis and Evaluation - A program for processing, reviewing, and analyzing electrical equipment and instrumentation inspection and test data for acceptability is provided in the administrative procedures which govern the repair, maintenance, and testing of electrical equipment and instrumentation. Maintenance is controlled through the use of a work request form that has provisions for cognizant personnel sign-off after completion of the work. Functional testing and calibration procedures include provisions for review, analysis of data, and approval by signature of cognizant personnel.

D. ANSI N45.2.4, Section 6.2.1, Equipment Tests - Installed items requiring calibration are controlled through the preventive maintenance computer tracking system. Tags or labels are not affixed to the item to indicate calibration status.

E. ANSI N45.2, Section 9, Item 6, ANSI B31.7-1969, PBAPS follows USAS B31.1.0-1967 since PBAPS Units 2 and 3 were constructed to USAS B31.0.0-1967. (This item applies to PBAPS ONLY).

3. Regulatory Guide 1.33," Quality Assurance Program Requirements, (Operations)," endorses ANSI N18.7.

LGS shall comply with Regulatory Guide 1.33, Revision 2, February 1978, and ANSI N18.7-1976/ANS-3.2, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants"' during the operational phase except for the following clarifications or alternatives.

A. ANSI N18.7-1976/ANS-3.2, Section 5.2.2, Procedure Adherence - The term "supervisor in charge of the shift" means either the Shift Manager or Shift Supervisor.

B. ANSI N18.7-1976/ANS-3.2, Section 5.2.7.1, Maintenance Programs:

1. Emergency maintenance to safety-related equipment (work which must proceed immediately to correct a degraded condition) may be performed concurrent with procedure preparation and documentation of steps actually taken. Such maintenance may be performed with the authorization of designated personnel and subsequent procedure review by the PORC and/or SQR, per Technical Specification requirements.

2. The cause of repetitive malfunctions should be determined; however, it is not practical, and may not be possible, to determine the cause of every malfunction.

C. ANSI N18.7-1976/ANS-3.2, Section 5.2.10, "Housekeeping and Cleanliness Control".

1. Control measures to prevent contamination with foreign materials will be specified in administrative procedures and will include, as appropriate, access control.

2. Second paragraph, first and second sentences are taken to mean: "Where needed to prevent contamination...."

D. ANSI N18.7-1976/ANS-3.2, Section 5.2.13, "Procurement and Materials Control" - Item (1) - Administrative procedures shall specify the means for control of procurement of commercially "off-the-shelf" items. The administrative procedures shall describe the receipt inspection, storage, and handling prior to installation and operation. Off-the-shelf (catalog) items are evaluated by qualified personnel for their intended use. The administrative procedures restrict the use of catalog items for only these evaluated applications. The purchase order shall require the vendor to notify the requisitioning organization of a change in an item described in the catalog.

E. ANSI N18.7-1976/ANS-3.2, Section 5.2.13.1, "Procurement Document Control," (second sentence) - QA Program requirements or alternate approved methods will be used to ensure quality. Examples of alternates for suppliers without QA programs include material analysis, sample testing, in-process inspection and monitoring, and design review by LGS/PBAPS.

F. ANSI N18.7-1976/ANS-3.2, Section 5.2.15, "Review, Approval and Control of Procedures" - The frequency of review of plant procedures is discussed in UFSAR Section 13.5, except for the following alternative.

1. Programmatic controls and processes described in UFSAR Section 13.5 are used to assure that procedures are current. These controls take the place of scheduled periodic reviews.

PBAPS shall comply with Regulatory Guide 1.33, November 1972, and ANSI N18.7-1972,"Administrative Controls for Nuclear Power Plants"' during the operational phase.

4. Regulatory Guide 1.37, March 1973, "Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants." Endorses ANSI N45.2.1-1973.

Decontamination and cleanup of radioactively contaminated systems and components are not included in the scope of this response.

LGS/PBAPS shall comply with Regulatory Guide 1.37, March 1973, and ANSI N45.2.1-1973, except for the following alternatives.

A. ANSI N45.2.1, Section 3.2, Water Quality Requirements - pH measurements are not required for conductivity values less than or equal to 1 micromho/cm. LGS/PBAPS utilized pH limits of 5.2 to 8.6 at 25 degrees centigrade, uncorrected for CO_2, and may apply conductivity measurements in place of total dissolved solids.

B. ANSI N45.2.1, Section 3.1.2, Class B - The flushing velocity may be as specified in other approved documents associated with the maintenance or modification, as well as procurement documents. . (This item applies to LGS ONLY).

5. 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." Endorses ANSI/ASME N45.2.2-1972.

LGS/PBAPS shall comply with Regulatory Guide 1.38, Revision 2, May 1977, and ANSI/ASME N45.2.2-1978), with for the following clarifications.

A. ANSI/ASME N45.2.2, Section 3, Packaging, and Section 4, Shipping – LGS/PBAPS utilizes the packaging and shipping requirements delineated in the original equipment specifications as part of our procurement requirements to suppliers or manufacturers. Those requirements and recommendations of Section 3 and 4 are included in the original specifications as appropriate for the item being procured. Receipt inspection activities are in accordance with Section 5 of this standard and are sufficient to identify packaging and shipping nonconformances.

B. ANSI/ASME N45.2.2, Section 6.4.2 (7), Care of Items - The rotating of certain electrical motors in storage, which must be energized to release an electrical brake, will be stored and maintained in accordance with manufacturers' recommendations. Other motors, which can be rotated without energizing, will be maintained in accordance with the requirements of Section 6.4.2 (7) of the standard.

C. ANSI N45.2.2, Paragraph 6.4.2(5), Care of Items - Space Heaters will be energized on electrical equipment in storage based on the cost/benefit of repairing electrical equipment versus use of heaters. Predictive maintenance (insulation resistance checks) will be used to identify degraded insulation conditions on electrical equipment in storage where heaters are not utilized.

Additionally PBAPS has the following clarifications and alternatives.

D. ANSI N45.2.2, Paragraph 6.6, Storage Records - Written records shall be prepared that include such pertinent information as storage location, inspection results, and protection (care of items). Personnel access is controlled and limited to Stores Division personnel and visitors who are escorted by Stores Division personnel. (This item applies to PBAPS Only).

G. With regard to Paragraph 7.4, Inspections of Equipment and Rigging, load testing will be performed when feasible. (This item applies to PBAPS Only).

6. Regulatory Guide 1.39, Revision 2, September 1977, "Housekeeping Requirements for Water-Cooled Nuclear Power Plants." Endorses ANSI N45.2.3-1973.

LGS/PBAPS shall comply with Regulatory Guide 1.39, September 1977, and ANSI N45.2.3-1973, except for the following alternatives.

A. ANSI N45.2.3, Section 2.1, Planning - Zone II requirements for clean gloves, shoe covers, and head coverings will be determined by health physics personnel under the radiation protection program and specific requirements listed on the Radiation Work Permit for entry in Zone II areas.

B. ANSI N45.2.3, Section 2.1, Planning - Material accountability for Zones II and III shall be controlled by procedural requirements, periodic inspections, and surveillance of areas for acceptable housekeeping practices. Implementing procedures for activities such as maintenance and modifications require housekeeping and cleanliness inspections of areas and equipment to eliminate foreign materials that may have a detrimental effect. Post maintenance or modification inspections for housekeeping and cleanliness shall be conducted and documented in accordance with administrative controls.

C. ANSI N45.2.3, Section 2.1, Planning - Personnel accountability for Zone III will be controlled as determined by the administrative controls for locked doors and radiation work permit requirements in lieu of specific access registers.

7. Regulatory Guide 1.94, Revision 1, April 1976, "Quality Assurance Requirements for Installation, Inspection, and Testing of Structural Concrete and Structure Steel during the Construction Phase of Nuclear Power Plants." Endorses ANSI N45.2.5-1974.

LGS shall comply with Regulatory Guide 1.94, Revision 1, April 1976, and ANSI N45.2.5-1974, except for the following clarification.

A. ANSI N45.2.5-1974 will be implemented by LGS by initiating a procedure, prior to any work, that will assure satisfactory installation, inspection, and testing of structural concrete or structural steel.

PBAPS does not commit to this Regulatory Guide but shall comply with ANSI N45.2.5-1974, except for the following clarification.

B. ANSI N45.2.5-1974, exclusive of other documents referenced therein, will be implemented through alternate equivalent means prior to placement of any structural steel or concrete at PBAPS Units 2 and 3.

8. Regulatory Guide 1.116, Revision 0-R, May 1977, "Quality Assurance Requirements for Installation, Inspection, and Testing of Mechanical Equipment and Systems." Endorses ANSI N45.2.8-1975.

LGS/PBAPS shall comply with Regulatory Guide 1.116, Revision 0-R, May 1977, and ANSI N45.2.8-1975, except for the following alternative:

A. ANSI N45.2.8, Section 2.2, Procedures and Instructions – LGS UFSAR section 13.5 addresses compliance with ANSI N18.7-1976/ANS3.2 and Reg. Guide 1.33, PBAPS Technical Specifications require compliance with Reg. Guide 1.33, Appendix A along with PBAPS commitment to ANSI N18.7-1972. These commitments provide adequate controls for procedures and instructions addressed in this paragraph.

B. ANSI N45.2.8, Section 2.3, Results - LGS commitment to ANSI N18.7-1976/ANS3.2 and PBAPS commitment to ANSI N18.7-1972 provide adequate guidance for the documentation and review of results of inspection and tests.

C. ANSI N45.2.8, Section 3.4, Physical Condition – LGS/PBAPS responses to ANSI N45.2.1 and N45.2.2 provide adequate guidance and control for the requirement that mechanical items are in accordance with specified requirements and that the quality has been maintained.

9. Regulatory Guide 1.143, Revision 1, October 1979, "Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants."

LGS shall comply with Regulatory Guide 1.143, Revision 1, October 1979, for major modifications, subject to the exceptions and clarifications listed in LGS UFSAR Table 3.2-1, Note 18.

10. ASTM D3843-93, "Standard Practice for Quality Assurance for Protective Coatings applied to Nuclear Facilities."

LGS/PBAPS shall comply with ASTM D3843-93 for safety-related protective coating work in service level 1 areas during operation with the following additional clarification, exception, and requirement.

A. For coating formulations developed prior to issuance of ASTM D3843-93, service level 1 qualification based on ANSI N5.9 (Revised as ANSI N512-1974) and ANSI N101.2 remains valid.

B. Section 10.1, last sentence - instead of references to ANSI 45.2 and NQA-1, inspections will be documented for record purposes as required by 10CFR50, Appendix B, and by this QA program description.

C. Limitations on use of coatings and cleaning materials which contain elements which could contribute to corrosion, inter-granular cracking, or stress corrosion cracking of safety-related stainless steel will be followed as described in Section C.4 of regulatory Guide 1.54, June 1973.

11. Branch Technical Position (BTP) CMEB 9.5-1:

For modification work performed by Exelon Engineering during the operations phase, Exelon Engineering will maintain compliance with the requirements of CMEB 9.5-1 in accordance with Section 9.5.1.

12. ASME Boiler and Pressure Vessel Code Section III – The code year for the Section III B&PV Design Code is found in the applicable site UFSAR.

13. ASME Boiler and Pressure Vessel Code Section XI – The code year for the Section XI B&PV Inspection Code is found in the applicable site UFSAR.

1.3.2. Oyster Creek (OCNGS) and Three Mile Island (TMI) Stations

1. Regulatory Guide 1.30, August 1972, "Quality Assurance Requirements for the Installation, Inspection and Testing of Instrumentation and Electric Equipment."

A. The Company shall comply with the Regulatory Position established in this Regulatory Guide in that QA programmatic/administrative requirements included therein shall apply to maintenance and modification activities even though such requirements were not in effect originally. Technical requirements associated with maintenance and modifications shall be the original technical requirements or better (e.g., code requirements, material properties, design margins, manufacturing processes, and inspection requirements).

B. Sections 5.2 and 6.2 of ANSI N45.2.4 list tests which are to be conducted during the construction phase. In lieu of this, the Company utilizes its Engineering and/or Maintenance organizations to establish the need for specific tests or test procedures during the operational phase.

2. Regulatory Guide 1.33, Rev. 2, February 1978, "Quality Assurance Program Requirements (Operation)."

The stations comply with the Regulatory Position of this Guide with the following clarifications:

A. Paragraph 5.2.2 of ANSI N18.7-1976, titled "Procedure Adherence." In accordance with Section 6.8.3 of the OCNGS and TMI Technical Specifications, temporary changes shall be approved by two members of the Company's management staff qualified as a 50.59 Evaluator/Reviewer who meets the qualification criteria of Technical Specification 6.5.1.14 and knowledgeable in the area affected by the procedure. For changes, which may affect the operational status of facility systems or equipment, at least one of these individuals shall be a member of facility management or supervision holding a Senior Reactor Operator's License on the facility.

B. Paragraph 5.2.15 of ANSI N18.7 - 1976, titled "Review, Approval and Control of Procedures." The third sentence of the third paragraph is interpreted to mean that applicable procedures shall be reviewed following a reportable incident such as an accident, an unexpected transient, significant operator error, or equipment malfunction. In addition, the fourth paragraph is modified to state that the periodic review of procedures shall include the following four elements;

a) At least every two years, Nuclear Oversight will assess a representative sample of plant procedures that are used more frequently than every two years.

b) All applicable plant procedures will be reviewed as described in paragraph no. 5.2.15 of ANSI N18.7-1976 as per the noted clarification described for the third sentence of the third paragraph.

c) Plant procedures that have been used at least biennially receive scrutiny by individuals knowledgeable in procedures and are updated as necessary to ensure adequacy during suitable controlled activities.

d) Plant procedures that have not been used for two years will be reviewed before use or biennially to determine if changes are necessary or desirable.

3. Regulatory Guide 1.37, March 16, 1973, "Quality Assurance Requirements for Cleaning Fluids Systems and Associated Components of Water Cooled Nuclear Power Plants. "

The OCNGS and TMI QAP complies with the Regulatory Position of this Guide with the following clarifications:

A. Section 2.1 of ANSI N45.2.1-1973 states that required planning is frequently performed on a generic basis for application to many installations on one or more projects. This results in standard procedures or plans for installation and inspection and testing which

meet the requirements of the Standard. Individual plans for each item or system are not normally prepared unless the work operations are unique. However, standard procedures or plans will be reviewed for applicability in each case. Installation plans or procedures are also limited in scope to those actions or activities, which are essential to maintain or achieve the required quality. This is consistent with Section 11, Paragraphs 2 and 3, of ANSI N45.2-1977, which provides for examination, measurement, or testing to assure quality or indirect control by monitoring of processing methods. However, final cleaning or flushing activities will be performed in accordance with procedures specific to the system.

B. Section 3.1.2.1 of ANSI N45.2.1-1973 states that surfaces shall be examined without magnification under a lighting level (background plus supplementary lighting) of at least 100 foot candles. The Company intends to permit the use of neutral 18% gray card with a 1/32" black line for determining acceptability of illumination in lieu of the 100 foot candles.

4. Regulatory Guide 1.38, Rev. 2, May 1977, "Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage and Handling of Items for Water Cooled Nuclear Power Plants."

The OCNGS and TMI QAP complies with the Regulatory Position of this Guide with the following modifications or clarifications to ANSI N45.2.2-1972 :

A. Section 2.7, Classification of Items. The four-level classification system for storage of items will be followed, however, the designated classification level may not be explicitly identified on the item. The classification level will, however, be traceable through the procurement documents. Classification differing from Section 2.7 will be considered acceptable provided no degradation is assured; for example, electric motors designed for outside service may be stored in a level C area rather than a level B.

B. Section 3.2, Levels of Packaging. The four level classification system for packaging of items may not be explicitly used. Standard commercial grade packaging requirements may be specified for commercial grade items.

C. Section 3.6 concerns prevention of halogenated materials from contacting stainless steel or nickel alloy materials. The clarifications applicable to Regulatory Guide 1.37, identified previously, also apply to this section of ANSI N45.2.2.

D. Section 3.7.1 Cleated, sheathed boxes will be used up to 1000 lbs. rather than 500 lbs. as specified. This type of box is safe for, and has been tested for, loads up to 1000 lbs. Other material standards (i.e.,

FED Spec. PPP-8-601) allow this. Special qualification testing shall be required for loads in excess of 1000 lbs.

E. Section 7.4 states that a system should be established to indicate acceptability of all equipment and rigging after each inspection, specify control of non-conforming lifting equipment, and supplement periodic inspections with special visual and nondestructive examinations and dynamic load tests. In lieu of this, the Company does perform dynamic load tests on new equipment, preventive maintenance on cranes, nondestructive examination of lifting hooks annually, and a visual inspection of lifting equipment prior to use.

F. Appendix A 3.4.2, Inert Gas Blankets. There may be cases involving large or complex shapes for which an inert or dry air purge flow is provided rather than static gas blanket in order to provide adequate protection due to difficulty of providing a leak proof barrier. In these cases a positive pressure purge flow may be utilized as an alternate to a leak proof barrier.

G. Appendix A.3.5.2, Tapes will meet a sulfur limit of 0.30% by weight instead of 0.10% as specified in A.3.5.2 (1)(a). This limit is reasonable based upon the chemical content of commercially available tapes. Tapes will be of a contrasting color rather than "Brightly Colored" as required by A.3.5.1 (3).

5. Regulatory Guide 1.39, Rev. 2, September 1977, "Housekeeping Requirements for Water Cooled Nuclear Power Plants." Endorses ANSI N45.2.3 – 1973.

The OCNGS and TMI QAP complies with this Guide with the following exception to ANSI N45.2.3-1973.

A. Sections 2.1 and 3.2, OCNGS will not utilize the five level zone designation system referenced in ANSI N45.2.3, but will utilize standard janitorial and work practices to maintain a level of cleanliness commensurate with company policy in the areas of housekeeping, plant and personnel safety, and fire protection. Cleanliness will be maintained consistent with the work being performed, so as to prevent the entry of foreign material into systems within the scope of this Plan. This will include, as a minimum, documented cleanliness inspections performed immediately prior to system closure. Control of personnel, tools, equipment, and supplies will be established when major portions of the reactor system are opened for inspection, maintenance or repair. Additional housekeeping requirements will be implemented as required for control of radioactive contamination.

B. Section 3.2.3 discusses fire protection. Except for the quality assurance aspects of fire protection, no specific commitments are made in the QATR. As part of other activities, the Company has

established positions or commitments relating to fire safety or protection.

6. Regulatory Guide 1.54, June 1973, "Quality Assurance Requirements for Protective Coatings Applied to Water Cooled Nuclear Power Plants."

The OCNGS and TMI QAP complies with this Guide with the following clarifications:

A. The Company will comply with the Regulatory Position established in this Regulatory Guide in that programmatic/administrative quality assurance requirements included therein shall apply to maintenance and modification activities, even though such requirements were not in effect originally. Technical requirements associated with maintenance and modifications (e.g., code requirements, material properties, design margins, manufacturing processes, and inspection requirements) shall be the original requirements or better.

B. The quality assurance program for protective coatings includes the planned and systematic actions necessary to provide adequate confidence that shop or field coating work for nuclear facilities will perform satisfactorily in service.

C. All protective coatings applied to surfaces within containment, except those noted in 3 below, are tested to demonstrate that they can withstand LOCA conditions. These tests are performed in accordance with Section 4 of ANSI N101.2, "Protective Coatings (Paints) for Light Water Nuclear Reactor Containment Facilities," under LOCA conditions, which equal or exceed those described in the FSAR.

D. The quality assurance program is applied to protective coatings consistent with the nature and scope of work specified in the Technical Specifications. The following elements are included:

1. Preparation of coatings specifications and procedures for generic coating materials/systems.

2. Review and evaluation of coating manufacturers' demonstration test data and quality assurance measures for control of manufacture, identification, and performance verification of applied coating systems.

3. Review and evaluation of supplier quality assurance measures to control storage and handling, surface preparation, application, touch-up, repair, curing and inspection of the coating systems.

4. Training and qualification of inspection personnel in coatings inspection requirements.

5. Supplier surveillance inspection.

E. The coatings qualification program and the associated quality assurance requirements are necessary only for coatings whose failure or failure mechanism would have a significant effect on safety.

F. Regulatory Guide 1.54 is not imposed for:

1. Surfaces to be insulated.

2. Surfaces "contained" within a cabinet or enclosure (for example, the interior surfaces of ducts).

3. Field repair on any Q-class coated item of less than 30 square inches surface area, such as; cut ends or otherwise damaged galvanizing; bolt heads, nuts, and miscellaneous fasteners; and damage resulting from spot, tack, or stud welding.

4. Field touch-up and repair of larger areas shall be in accordance with item A.

5. Small "production line" items such as small motors, hand wheels, electrical cabinets, control panels, loudspeakers, etc., where special painting requirements would be impracticable.

6. Stainless steel or galvanized surfaces.

7. Coating used for the banding of piping.

8. Strippable coatings used for cleanup.

G. Quality assurance documentation may not be similar to records and documents listed in Sections 7.4 through 7.8 of ANSI N101.4, but will be evaluated to assure that they provide at least the same degree of documentation as required by this standard.

7. Regulatory Guide 1.58, Rev. 1, September 1980, "Qualifications of Nuclear Power Plant Inspection, Examination, and Testing Personnel."

The OCNGS and TMI QAP complies with this Guide with the following clarifications:

A. Plant operation personnel may be utilized to perform the visual leakage examinations required by the edition of ASME Section XI and related codes currently committed to for the conduct of in-service inspections. Such personnel shall be qualified consistent with these ASME Code requirements. The selection and qualification of such personnel shall be prescribed by a procedure(s).

B. Not all personnel who review and approve inspection and testing procedures, evaluate the adequacy of activities to accomplish the inspection and test objectives, evaluate the adequacy of specific programs used to train and test inspection and test personnel, or certify

Level III individuals in specific categories or classes, will be certified as meeting the Level III capability requirements of ANSI N45.2.6-1978 (NQA-1). Rather, these personnel will be determined by management to be fully qualified and competent to perform these functions through, evaluation of their education, experience and training. The basis for the determination will be documented.

8. NRC Regulatory Guide 1.94, Rev. 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."

The OCNGS and TMI QAP complies with this Guide with the following clarifications:

A. Programmatic/administrative quality assurance requirements included in the Regulatory Guide shall apply to maintenance and modification activities even though such requirements were not in effect originally. Technical requirements associated with maintenance and modifications shall be the original requirements or better (e.g., code requirements, material properties, design margins, manufacturing processes, and inspection requirements).

B. Section 5.4 of ANSI N45.2.5-1974 specifies the frequency and method of calibration of automatic cut-off impact wrenches used to make up and inspect high strength bolted connections; and the frequency of calibration of hand held torque wrenches used to inspect high strength bolted connections. Section 5.2.6 of ANSI 18.7 as well as Chapter 12 of the QATR also specify controls for measuring and test equipment. Sections 5.2.16 of ANSI 18.7-1976, in conjunction with Chapter 12 of the QATR, shall be used in lieu of Section 5.4 of ANSI N45.2.5 to control the frequency of calibration of automatic cut-off impact wrenches and hand held torque wrenches used to make up and/or inspect high strength bolted connections. The method of calibration will be consistent with the manufacturer's recommendation(s).

9. Regulatory Guide 1.123, Rev. 1, July 1977, "Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants."

The OCNGS and TMI QAP complies with this Guide with the following clarifications:

A. Section 4.2.a of ANSI N45.2.13-1976. When evaluation of a supplier is based solely on historical supplier data, these data will primarily include records that have been accumulated in connection with previous procurement actions. Data that includes experience of users of identical or similar products of the prospective supplier and product operating experience will be used if available.

B. Section 10.2.1, Verification of the Validity of Supplier Certificates and the Effectiveness of the Certification System, is as follows: The verification of the validity of supplier certificates and the effectiveness of the certification system are accomplished as an integral part of the total supplier control and product acceptance program, and no separate Company system exists that addresses itself solely to such verification. The degree of verification required will depend upon the type of item or service and their safety importance. The means of verification may include source witness/hold points, source audits, and document reviews; independent inspections at the time of material receipt; user tests on selected commodities, such as concrete components; and tests on selected components and systems after installation. All of these means verify whether or not a supplier has fulfilled procurement document requirements and whether or not a certification system is effective.

10. Regulatory Guide 1.142, October 1981, "Safety-Related Concrete Structures for Nuclear Power Plants (Other Than Reactor Vessels and Containments)."

A. The Company shall comply with the Regulatory Position established in this Regulatory Guide as augmented by ANSI N45.2.5, ANSI/ANS 6.4-1977, and ANSI/ACI 318-77 for the design and construction of new Safety Related or Augmented Quality structures, and additions to existing Safety Related or Augmented Quality structures. Inspectors will be qualified according to either ANSI N45.2.6 or Appendix VII of Section III, Division 2, of the ASME Boiler and Pressure Vessel Code.

11. Regulatory Guide 1.143, October 1979, "Design Guidance for Radioactive Waste Management Systems, Structures and Components Installed in Light-Water-Cooled Nuclear Power Plants."

Since OCNGS and TMI were originally designed and constructed to different classification criteria than those contained in this Guide; the Company will comply with the Regulatory Position of this Guide with the following clarifications:

A. For modifications to existing plant systems, items will be classified by Site Engineering according to the original design basis, or this Guide. This classification will not degrade the safety of the system being modified.

B. Additions to existing plant systems will be designed and constructed to the same codes, standards, and technical requirements which were originally applied to the system to which the addition is to be made, or more recent versions of these codes, standards, and technical requirements. The addition will not degrade the safety of the system being added to.

C. For new construction, the latest applicable codes will be utilized, unless such utilization would result in hardship or unusual difficulty without providing an equivalent level of safety.

D. Hose may be used in lieu of pipe where the connections are temporary. The anticipated applications of hose would normally be (1) connections to contractor owned skid mounted radioactive waste processing equipment, (2) connections to a non-mounted, frequently-changed component such as a burial liner/HIC, or (3) connections to non-mounted pieces of radioactive waste processing or collection equipment which must be readily removable (e.g., items placed on equipment hatches). The pressure rating of such hoses and connections shall equal or exceed those of the systems or components to which they are connected.

1. Prior to use, the hoses shall be hydro-tested to the appropriate pressure for the system or component to which they will be connected. After installation, they will receive regular hydro-testing or in-service inspections.

2. A 50.59 evaluation is required to justify the use of such hose connections.

12. ASME Boiler and Pressure Vessel Code Section III – The code year for the Section III B&PV Design Code is found in the applicable site UFSAR.

13. ASME Boiler and Pressure Vessel Code Section XI – The code year for the Section XI B&PV Inspection Code is found in the applicable site UFSAR.

1.3.3. Clinton Power Station (CPS)

1. The CPS QAPD also includes the following sections of the Operations Requirements Manual (ORM) and the Updated Safety Analysis Report (USAR). The specific sections are as follows:

A. ORM Section 6.8.2, Procedures and Programs – Review and Approval

B. ORM Section 6.8.3, Procedures and Programs – Temporary Changes

C. ORM Section 6.10, Record Retention

D. USAR Section 13.4

E. USAR Table 3.2-1

2. Site specific clarifications and exceptions applicable to Clinton Power Station include:

A. ASME Boiler and Pressure Vessel Code Section III – The code year for the Section III B&PV Design Code is found in the CPS USAR.

B. ASME Boiler and Pressure Vessel Code Section XI – The code year for the Section XI B&PV Inspection Code is found in the CPS USAR.

C. ASME NQA-1 (1994), "Quality Requirements for Nuclear Facility Applications (Revision and Consolidation of ASME NQA-1-1989 and ASME NQA-2-1989 Editions)."

D. AWS D.1.1: The code year utilized for AWS D.1.1 applications is found in the CPS USAR.

E. IEEE-Standard 323 (1974): CPS complies with the 1974 Standard with some code year differences, which are found in the CPS USAR.

F. CPS complies with ANS 3.1 (1978), "Selection, Qualification, and Training of Personnel for Nuclear Power Plants." (Member of the Independent Safety Engineering Group (ISEG) are qualified in accordance with ANS 3.1 (1981).) Specifics for compliance, exceptions and clarifications are found in the CPS USAR.

G. The CPS USAR Section 1.8, "Conformance to NRC Regulatory Guides", which provides the CPS project position for implementation of regulatory guides, includes additional clarifications and exceptions to the regulatory guides.

H. CPS complies with RG 1.8 (Proposed Rev 2), "Personnel Qualification and Training." (Also reference USAR Section 1.8.)

I. CPS complies with Regulatory Guide 1.33, Rev. 2 (February 1978); "Quality Assurance Program Requirements (Operation)." CPS complies with this guide and with the following additional exception:

   1. ANSI N18.7-1976/ANS-3.2, Section 5.2.17 Inspections: During plant operations emergencies, inspections may be performed under the direction of the duty shift manager.

Attachment 5

Referenced AmerGen/Exelon Procedures

AD-AA-102	Station Qualified Review
HU-AA-1212	Technical Task Risk/Rigor Assessment. Pre-Job Brief, Independent Third Party Review, and Post-job Brief
LS-AA-101	License and Technical Specification Amendment Process
LS-AA-106	Plant Operations Review Committee
NO-AA-200-002	Nuclear Oversight Regulatory Audit Procedure
SY-AA-101-104	Revision, Control, and Distribution of Security Plans and Implementing Procedures/T&RM

STATION QUALIFIED REVIEW

1. PURPOSE

1.1. This procedure establishes the requirements for the site review and approval of procedures and other documents using the Station Qualified Reviewer (SQR) and Site Functional Area Manager (SFAM)/Plant Manager.

1.1.1. This procedure by means of this statement, transitions all individuals qualified under the Independent Technical Review (ITR) program or Responsible Technical Reviewer (RTR) program to comparable qualifications in the Station Qualified Reviewer (SQR) program.

1.1.2. This procedure replaces the Independent Technical Review and Responsible Technical Review programs and shall be used in lieu of either review when ITR or RTR is specifically called for.

1.2. This procedure applies to:

1.2.1. Technical Review of administrative and implementing procedures at the stations.

1.2.2. The review of the Offsite Dose Calculation Manual (ODCM), Core Operating Limits Report (COLR) and the Technical Requirements Manual (TRM).

1.2.3. Proposed changes to the Technical Specifications, their Bases, and the Operating License.

1.3. This procedure does **not** apply to procedures within the Human Resources (HR), Business Operations (BO) categories, or technical welding procedures approved by the corporate welding engineer.

2. TERMS AND DEFINITIONS

2.1 **SQR Review:** A review performed by the SQR that is separate from the preparer that ensures that the document is technically and functionally accurate.

2.2 **Cross-Disciplinary Review:** A review of a document performed by one or more qualified individuals that have technical expertise in the areas addressed by the procedure. The intent of this review is to identify impacts on other organizations and ensure that the document is technically and functionally accurate relative to the Cross Disciplinary Reviewer's area of expertise.

2.3 **Document:** Generic terminology used throughout this procedure to refer to Procedures and other documents (TS, COLR, TRM, etc.) that are subject to SQR review.

3. RESPONSIBILITIES

3.1. Licensing SFAM

- Certifies SQR candidates.

3.2. Plant Manager

- Approves the appointment and designates qualified SQRs.

3.3. Site Functional Area Manager (SFAM)

- Authorizes documents reviewed and approved by the SQR unless PORC and / or Plant Manager authorization is required.
- Ensures an adequate complement of SQRs exist within functional area.
- Ensures that the change documentation package includes necessary elements (e.g. 50.59 / 50.54 / 72.48 reviews, documentation of cross-disciplinary reviews, etc).
- Approves/Authorizes editorial procedure changes.

3.4. Station Qualified Reviewer

- Performs the SQR review of new or revised documents and approves them if appropriate.
- Specifies the required reviews.
- Ensures that an appropriate cross-disciplinary review(s) of the procedure is performed by qualified individual(s).
- Determines who is qualified to perform cross-disciplinary review.
- Reviews the documentation package.
- Notifies the Licensing SFAM upon a job transfer to a new functional area in order to re-apply for SQR qualification for the new area.

Exelon NDE Level III
Functions as SQR Reviewer for technical procedures in area of certification. Performs the SQR review of new or revised NDE documents in area of certification and approves them if appropriate. Ensures that an appropriate cross-disciplinary review of the procedure is performed as necessary.

4. **MAIN BODY**

4.1. Station Qualified Review (SQR) Qualification Requirements

4.1.1. **MEET** the requirements of the appropriate sections of ANSI/ANS-3.1 (or equivalent ANS/ANSI qualification requirements: e.g. ANSI N18.1-1971) that is committed to for the site.

Clinton

MAINTAIN Logic System Functional/System Functional review qualifications for Operation, Instrumentation and Control, and Electrical disciplines. **(CM-1)**

1. **COMPLETE** a Station Qualified Reviewer Candidate Qualification Application (AD-AA-102-1002, Station Qualified Reviewer Qualifications).

4.1.2. **If** an SQR transfers into a different Functional Area Group, **then** the SQR shall **NOTIFY** the Licensing SFAM.

1. **COMPLETE** a Station Qualified Reviewer Candidate Qualification Transfer Application (AD-AA-102-1002, Station Qualified Reviewer Qualifications).

4.1.3. Licensing SFAM shall **ENSURE** that appropriate qualification re-evaluations are performed prior to reassigning the SQR to a different functional area.

4.2. Station Qualified Review Scope

4.2.1. The SQR shall only approve documents that they are qualified to review/approve.

4.2.2. The following items require Station Qualified Review:

- Administrative and implementing procedures for the station required by the stations' Technical Specifications and Quality Assurance Program.
- Offsite Dose Calculation Manual (ODCM), Core Operating Limits Report (COLR) and the Technical Requirements Manual (TRM).
- Proposed changes to the Technical Specifications, their Bases, and the Operating License

1. **If** a procedure is determined to require PORC review in accordance with the current approved PORC procedure, **then** the SQR shall **APPROVE** the document, however, PORC shall review / recommend the document for approval as appropriate.

4.2.3. Editorial changes to procedures do **not** require SQR review/approval.

4.3. SQR Review

4.3.1. The SQR shall not be the same individual as the preparer of the document.

4.3.2. The SQR and the SFAM may be the same individual.

4.3.3. **PROVIDE** the review, confirmation, and/or substantiation of the appropriateness of a proposed document change activity including adherence to regulatory, quality, and Exelon Nuclear requirements.

4.3.4. **RENDER** a determination of whether or not a cross-disciplinary review(s) of the document change activity is necessary.

1. **ENSURE** that adequate cross-disciplinary review(s) have been performed by qualified individual(s), to ensure that the document is appropriate for the intended application.

2. The cross-disciplinary reviewer(s) should inform the SQR of any previous involvement with the document change activity under review so that the SQR can knowledgably use the cross-disciplinary review to support approval or require a different cross-disciplinary reviewer.

4.3.5. **When** revisions involve interpretation, changes in technical specifications, or are complicated changes, **CONSIDER** consulting with a peer.

4.4. Site Functional Area Manager (SFAM) Authorization

4.4.1. **ENSURE** that the documentation package for the activity is complete including appropriate regulatory reviews (e.g. 10CFR50.59 / 10CFR 72.48 / 10CFR 50.54) and other review documentation.

5. DOCUMENTATION

5.1. Completed change documentation package is a quality record.

5.2. Completed SQR qualifications are placed in the candidates training record until such time as those training records are archived by Records Management.

6. REFERENCES

6.1. Commitments

6.1.1. Clinton

CM -1, Licensee Event Report 1997-031, Condition Reports 1-97-12-304, and 1-99-07-064 (Clinton Station Specific portion of step 4.1.1.)

6.2. User References

6.2.1. LGS / PBAPS UFSAR section 13

6.2.2. Quality Assurance Program

6.2.3. TVA plants, SER Tac Nos, 5105, 5106, 5107, 5054, 5055, and 5056, dated August 26, 1999

6.2.4. Procedures:

1. AD-AA-101, Processing of Procedures
2. LS-AA-104, Exelon 50.59 Review Process

6.2.5. Training & Reference Material:

1. AD-AA-102-1001, SQR Reviewers Guide
2. AD-AA-102-1002, SQR Qualifications

6.3. Writer's Reference

6.3.1. ANSI/ANS-3.1

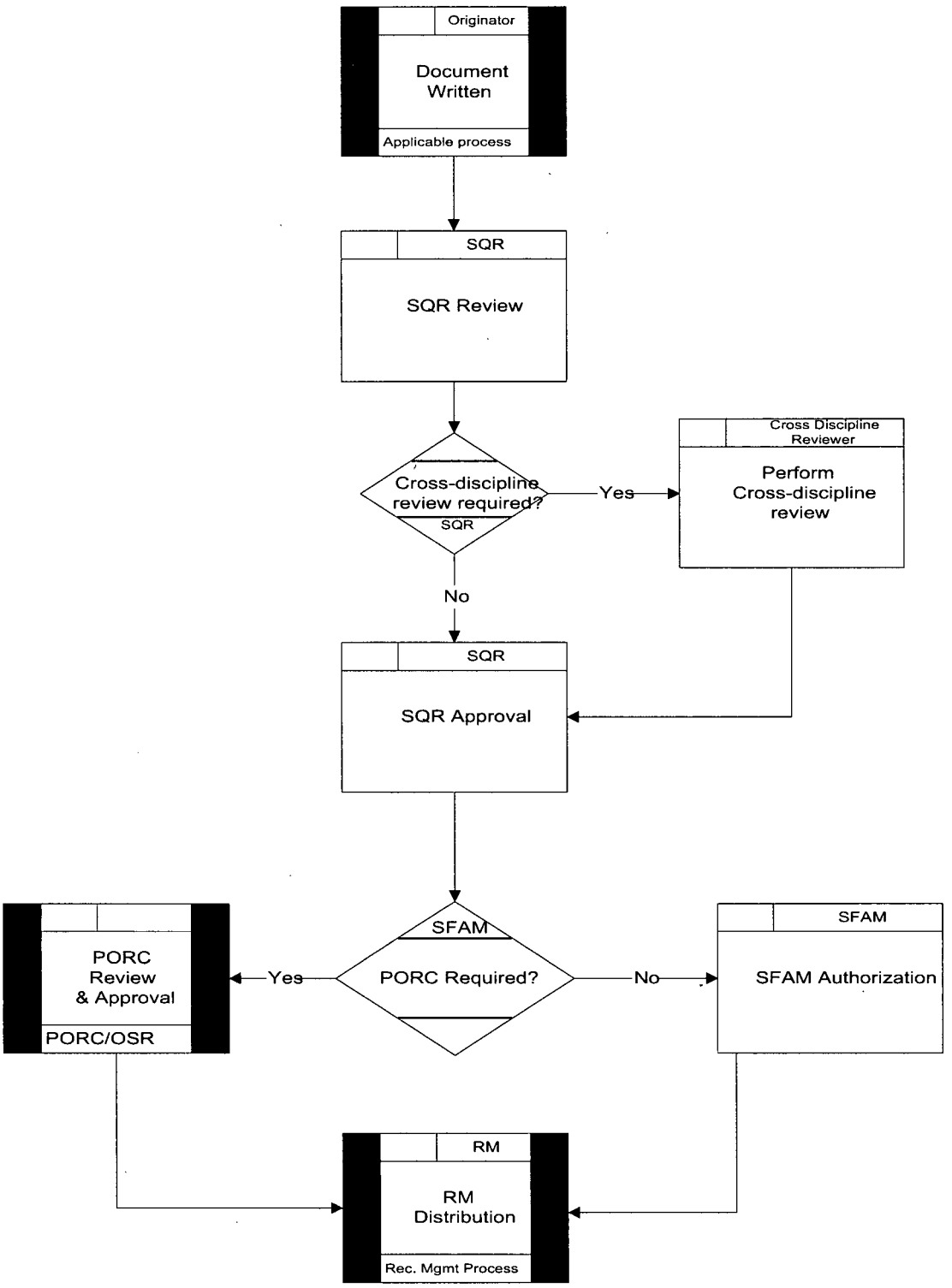
6.3.2. Regulatory Guide 1.33

6.3.3. ANSI N18.1-1971

7. ATTACHMENTS

7.1 Attachment 1, SQR Process Flowchart

ATTACHMENT 1
SQR Process Flowchart
Page 1 of 1



TECHNICAL TASK RISK/RIGOR ASSESSMENT, PRE-JOB BRIEF, INDEPENDENT THIRD PARTY REVIEW, AND POST-JOB BRIEF

1. PURPOSE

1.1. The purpose of this document is to provide direction for the performance of Technical Task Risk/Rigor assessments, Pre-job briefings, Independent Third Party Reviews, and Post-job briefings to capture lessons learned.

1.2. This T&RM applies to all Exelon Nuclear Departments and Non Station Personnel performing technical work for Exelon Nuclear. Technical work is work that produces some tangible product (usually a document).

1.3. This document is used to brief technical tasks but not to brief physical work performed in the plant. HU-AA-1211 is required for the field portion of the work.

2. TERMS AND DEFINITIONS

2.1. **Augmented Review** – Reviews which are specified by this procedure to be performed in addition to the review(s) specified in the approved process being utilized for development of the Technical Product. This level of Augmented Review is a primary output of this procedure, meant to mitigate the level of risk associated with a credible error in the Technical Product.

2.2. **Compensating Action** – A real commitment of effort or material to reduce the probability or consequence of a credible risk factor in the form of a tool, barrier, or action.

2.3. **Consequence Risk Factor** –Adverse result from a technical task being performed incorrectly.

2.4. **Critical Parameters** – Assumptions, inputs, or requirements that if allowed to be untrue or **not** met, would affect the technical product in a manner that is unacceptable to site standards. Examples: assumed physical properties, knowledge of design, operation, construction or maintenance of a component, or system design basis knowledge.

2.5. **Human Performance Risk Factor** – Human conditions that increase the likelihood of an individual to make a technical error.

2.6. **Independent Collegial/Challenge Review Board (CRB)** – A panel of experts selected to perform an Independent Third Party Review of a product.

2.7. **Independent Third Party Review (ITPR)** – A discretionary review of the task by one or more reviewers due to the risk and content of the task. Attachment 5 contains instruction for determining the recommended type of Independent Third Party Reviews.

2.8. **Monitoring Plan** – A compensating action to actively look for an identified risk factor and initiate contingency actions when needed.

2.9. **Process Risk Factor** – Process conditions that increase the likelihood of an error in the Technical Product. These may include process complications that invite individual errors, or challenges such as work scope or technical deliverables miscommunications.

2.10. **Reverse Pre-job Brief** – A technique that can be used in which the lead worker conducts the briefing. The supervisor functions in an oversight and facilitative role. The supervisor must still be present and participate. This technique minimizes the supervisor's assumptions on the knowledge and skill level of the workers performing the task.

2.11. **Risk/Rigor Assessment** – An analysis of risk factors for a technical task and the identification of associated risk compensating actions.

2.12. **Senior Manager** – Manager responsible for the product and resources for Technical Personnel performing the associated Technical Task.

2.13. **Technical Personnel** – Individuals who prepare or review technical products or decisions. Technical personnel can reside in any functional area.

2.14. **Technical Supervisor** – Supervisors who approve technical products or decisions made by technical personnel. Technical Supervisors can reside in any functional area.

2.14.1. For the purposes of this T&RM, the term "Technical Supervisor" means the direct supervisor of the technical personnel performing the task, the supervisor's designee, or manager.

2.14.2. **Technical Task** – Technical task is the work that produces some tangible technical product (usually a document) and is **not** physical work performed in the Plant. Note that a project which requires multiple tasks which are significantly different in nature or risk factors will have separate Pre-Job Briefings for the different tasks.

2.15. **Technical Task Pre-job Briefing** – A Technical Task Pre-job brief consists of an assessment and communication regarding a Technical Task, with the following objectives:

2.15.1. Assess the potential challenges to producing an error-free Technical Product.

2.15.2. Perform a two-way communication of the specific scope of the Technical Task, resources, and processes to be used for the Task. The discussion is conducted between the Supervisor and the individual(s) performing the Task.

2.15.3. Determine and Initiate specific actions to be taken as Compensatory Actions to mitigate identified Risk Factors applicable to the Task.

2.15.4. Determination of the appropriate level of Augmented Review for the Technical Product.

2.15.5. The Technical Task Pre-job brief is conducted using a graded approach; a simple brief for less complicated, lower risk tasks, more detailed for complex, higher risk tasks.

The Technical Task Pre-job brief is fundamentally different than a brief performed for physical plant component manipulations or maintenance. This is because the challenges to producing an error-free Technical Product are fundamentally different than those for error-free manipulation of plant equipment.

2.16. **Technical Task Post-job Review** – Post-job review is a meeting intended to capture observations and lessons learned regarding whether the Pre-Job Brief adequately identified and mitigated challenges to error-free performance. Capture of these observations will enhance the performance of both the task and the pre-job brief for the next time the task is performed. The Post-job review is **not** a critique of product quality. This information should be fed back into the process through the supervisor or Corrective Action Process in order for improvements to be incorporated into the activity.

2.17. **Technical Task Briefing Tools**: Several tools have been developed to improve the effectiveness of this process. These are optional for use as aids, and include:

2.17.1. An HU-AA-1212 Briefing Database to automate the generation of Pre-job Briefings and Post-Job Reviews, and retain previous Briefings for future reference

2.17.2. Exelon Shared Web Site resources, including other sites' reviews, briefs, and Industry Experience data

2.17.3. Site copies of similar products, to maximize the benefits from previous work products.

3. RESPONSIBILITIES

3.1. Senior Manager

3.1.1. The Senior Manager accountable for the technical product is responsible for assigning an individual to conduct augmented reviews and approving the scope of the review. Personnel performing augmented reviews are selected based on their expertise for the targeted topical coverage to perform the reviews.

3.1.2. The Senior Manager shall decide if the project/task is "fast track".

3.2. CRB members

3.2.1. The CRB members shall not perform CRB function(s) for any segment of the work which they performed or independently reviewed, or for which they specified the methodology used in the Task.

3.2.2. The CRB should work as a unit in a predetermined location to promote synergy. It is preferable, but not required, to have the team dedicated to the product on a continuous basis.

3.3. Independent Third Party Reviewer (ITPR)

3.3.1. The Independent Third Party Reviewer shall not have performed any function for any segment of the work which they review, or determined the methods used.

3.4. Technical Supervisor (All Functional Areas)

3.4.1. Technical Supervisor determines the risk factors associated with the task. These factors are used to identify risk compensating actions and points of discussion for the Pre-Job Brief.

3.4.2. The Technical Supervisor identifies the personnel required to participate in the briefing.

3.4.3. Technical Supervisor uses the pre-job brief prior to an individual starting a new assignment or as recommended by management. Technical Supervisors are responsible for leading the pre-job brief and utilizing the technical task pre-job brief form or equivalent.

3.4.4. The Technical Supervisor determines the severity level (high, medium, or low) of the consequence risk factors for input to the Risk Ranking. Attachment 2 specifies the severity level for these factors. If the specific circumstances warrant a change in this pre-specified level, the Supervisor may change the Severity Level, if the basis is clearly described and at least a peer level concurrence is obtained. This is allowable to account for the wide range of tasks and circumstances that the process is applied to.

3.4.5. The Technical Supervisor determines which tasks will have a post-job brief. This will be specified at the time of the Pre-Job Brief.

3.4.6. The Technical Supervisor evaluates and reviews post-job brief for improvement opportunities.

3.5. Technical Personnel (All Functional Areas)

3.5.1. Technical personnel participate in the pre-job brief as engaged parties to ensure that the Scope, Roles and Responsibilities, Risks and Mitigating Actions are clearly established and performed.

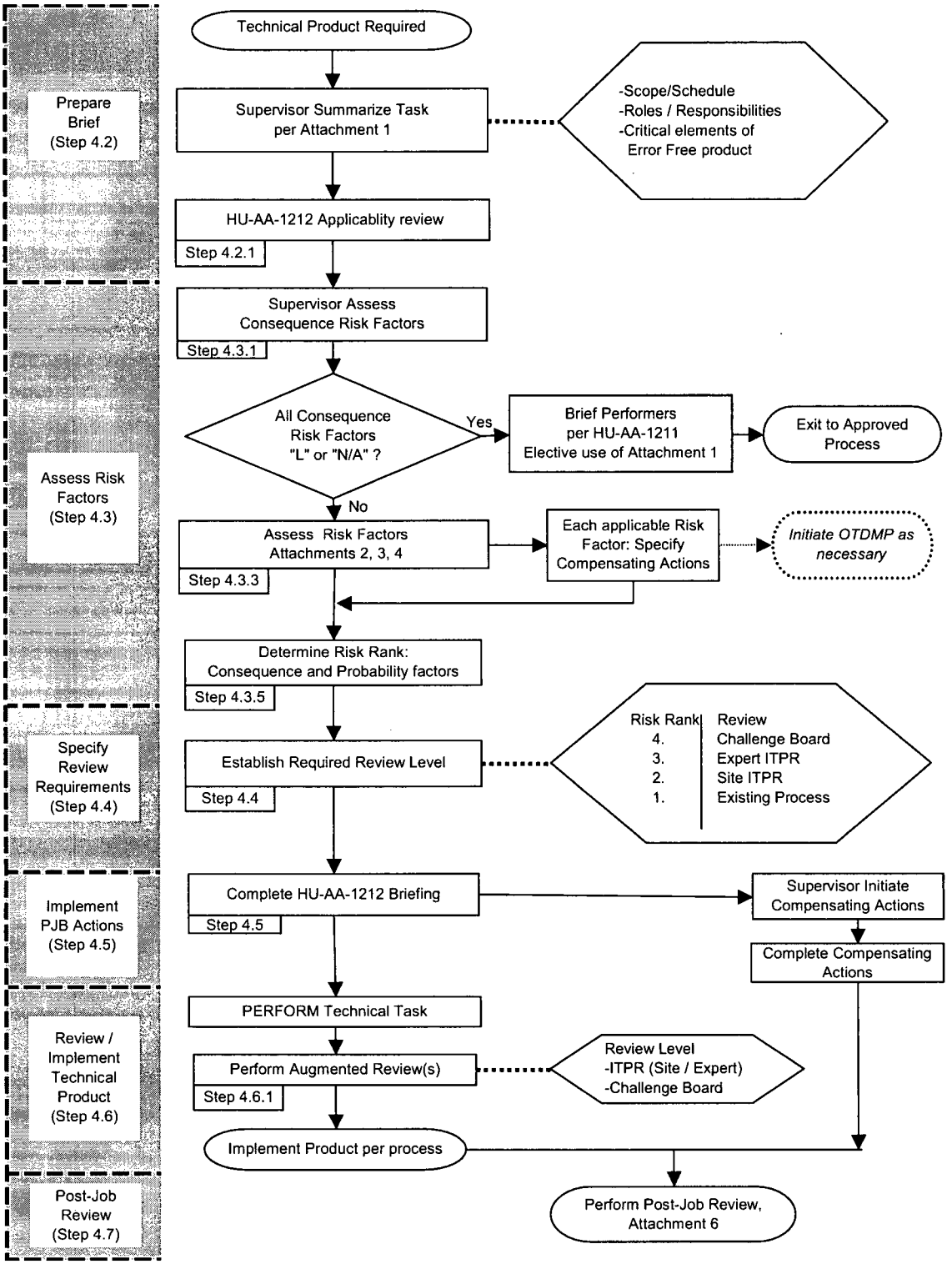
3.5.2. The individuals performing the Technical Task should maintain a copy of the Pre-Job Briefing points (Attachment 1) for reference during the technical work. The Human Performance benefit of this is that reference to the specifically identified Risk Factors and the agreed means for these Risks' mitigation are kept readily accessible.

3.5.3. Conduct post-job review for learning opportunities when assigned and review with the Technical Supervisor.

3.5.4. Provide the documentation and a short presentation of the product to the Independent Third Party Reviewer or CRB.

3.6. Process flow Diagram
The following flow chart provides an overview of the performance of HU-AA-1212 Pre-Job Briefings.

Process Flowchart



4. MAIN BODY

4.1. General Discussion

In this T&RM, the term "PJB" refers to the Technical Task Pre-Job Briefing
This T&RM has the following sections:

Section 4.2 Initial Preparation of PJB

Section 4.3 Assessment of Risk Factors

Section 4.4 Determination of Augmented Review requirements

Section 4.5 Performance of Pre-Job Briefing and Compensating Actions

Section 4.6 Technical Product Review and Implementation

Section 4.7 Post-Job Reviews

NOTE:
It is acceptable to utilize electronic copies of the forms and Attachments to this T&RM, including automated tools which manage the overall process. The critical objectives of the process are met by the Risk Assessment and Briefing / Communication between the Supervisor and the Technical Personnel performing the associated task.

4.2. Preparation of Technical Task PJB:

NOTE: If the governing process procedure has a risk assessment or briefing requirement, then that procedure's risk assessment or brief may be used in lieu of those contained in this T&RM. For example, if the process procedure has a technical risk/rigor assessment but no brief requirement, the process procedure's risk assessment may be used but the briefing would be performed using this T&RM.

4.2.1. The assigned Technical Supervisor will **ASSESS** technical tasks (initial performance and revisions) for consequence risk factors using Attachment 2, Consequences Risk Factors. The following is a list of examples of technical tasks which should utilize this T&RM. Other comparable technical tasks may warrant use of this T&RM. **If** the supervisor or individual are unsure whether a task should be assessed, **then USE** this T&RM.

- Operability Determinations
- Complex Troubleshooting Plan Development
- Documented Technical Evaluations
- Apparent Cause, Common Cause and Root Cause Evaluations

- Temporary Configuration Changes
- Permanent Configuration Changes
- Documented Responses to Regulatory Requests
- Development of or revision to equipment operating or test procedures, including modification tests (Other than editorial changes)
- Item Equivalencies, Commercial Grade Dedications, and Part Evaluations
- Nuclear Fuels or Reactor Engineering deliverables to shift operations
- Preparation of Chemical Addition Sheets
- Liquid and Gas Batch Release Packages
- Preparation of License Amendment or Technical Specification Change Requests
- Calculations (formal, which become part of design basis)
- Mod Planning Packages
- Non-routine clearances
- Complex, Non-routine corrective or preventative maintenance
- Other comparable technical tasks

4.2.2. The Technical Supervisor decides whether a risk factor applies to the task by assessing the probability of an error occurring as a result of the risk factor. When considering revisions to approved technical products (such as a calculation or evaluation), just consider the scope of the revision, not the entire product.
Risk factors with a negligible probability of occurring need **not** be considered, and it is intended that only the primary effect of a risk factor will be evaluated. The process of Risk Factor assessment relies heavily on the judgment and experience of the Supervisor and individuals preparing the PJB.

4.2.3. **If** the Technical Task is a configuration change, **then** the risk review should initially occur at the conceptual design phase, and might have to recur at the design-scoping phase after enough detail is known.

4.2.4. INPUT the initial Task description and issues information onto Attachment 1, Technical Task Pre-Job Briefing Form. This information will be supplemented as the Assessment and Risk Evaluations proceed through the Process.

4.2.5. **If** an individual is assigned repetitive tasks where the process employed is the same, **then** the briefing need **not** be repeated for every subsequent task. For example, an engineer is to perform the same breaker setting calculation for many motor operated valves. The individual is briefed prior to the first calculation in accordance with this T&RM but need **not** be briefed for subsequent calculations. The supervisor should consider performing another brief if the tasks continue a long time.

4.3. Assessment of Risk Factors

Refer to the Process Flow chart in step 3.6.
This step will assess the potential risk of a credible error in the Technical Product.
Since Risk = Probability x Consequences, this assessment is performed as follows:

1. Evaluate the expected Consequences of a credible error, by review of Attachment 2.
   IF all of the potential Consequences are "Low" or "N/A", **THEN** no further assessment of Risk is necessary, and the controls and reviews of the established process are adequate without additional Compensatory measures or Augmented Reviews.

   This T&RM may be exited if all identified consequences of credible error(s) are "Low" or "N/A".

2. (If necessary), Evaluate the Probability of an error being present in the Technical Product.
   Potential challenges to obtaining an error-free Technical Product are presented for review in Attachments 3 and 4.

3. (If necessary) Determine the Risk Ranking for the Technical Task. This Risk Rank will then be used to specify what level of Augmented Review(s) are necessary.

4.3.2. **IF** there are one or more Consequence risk factors identified as greater than "Low" or "N/A", **THEN** the Technical Supervisor will also **IDENTIFY** applicable risk factors using Attachment 3, Human Performance Risk Factors, and Attachment 4, Process Risk Factors (as described in 4.2.2).

4.3.3. For every risk factor identified in the Attachments 2, 3, and 4, the Technical Supervisor **MUST** also specify some Compensating Action to mitigate the identified risk factors.

1. This can be one of the listed Compensating Methods, or another means described by the Supervisor. The selected Compensating Action can be a barrier, tool, or other Action as deemed appropriate by the Supervisor, or verification incorporated into the existing process review(s).
   The critical point of this step is to remember (and discuss in the Briefing) that the particular Risk Factor was deemed to be present ("Applicable") and therefore is important to have some deliberate mitigation. Even if the highest Consequence Risk Factors (Attachment 2) are "Low", if this procedure was not exited in step 4.3.1 above, the review should discuss the existing process control(s) which mitigate that risk.

2. A single Compensating Action might serve as adequate mitigation for several Risk Factors. However, if 2 Risk Factors have a fundamentally different nature, it is unusual for one Compensating Action to mitigate both factors.
Similarly, multiple compensating actions may be needed to mitigate a single risk factor.

3. ALL of the Applicable Risk Factors and their selected Compensating Action(s) will be listed on Attachment 1, and discussed during the Pre-Job Briefing.

4. The Technical Supervisor **ADJUSTS** the robustness of the tool, barrier, or action chosen for each risk factor commensurate with the severity of the potential consequence risk factors chosen for the task.

4.3.4. When all of the required Consequence and Probability (HU and Process) Risk Factors have been assessed, and ALL "Applicable" Risk Factors have had Compensating Actions specified, PROCEED to the Risk Ranking below to determine what level of Augmented Review is appropriate.

4.3.5. Risk Ranking Determination:
Refer to Attachment 5, "Risk Ranking Determination"

1. Select the overall Consequence Level (highest Consequence Risk Factor), and the overall Probability Level as shown on Attachment 5, and obtain the Risk Ranking from Table 1 on Attachment 5.
This Risk Ranking level specifies the level of Augmented Review that is to be performed for the Technical Product.
The Risk Ranking is a number from 1 to 4, in order of higher overall Risk. A Ranking of 1 indicates a low overall risk, indicating that the controls and reviews of the approved process should be adequate. Higher Risk Ranking numbers indicate higher risk levels, warranting additional levels of Augmented Review, as well as the specific Compensating Actions selected.

NOTE:
This is a review requirement that is in addition to the review(s) specified by the approved process for the Technical Product.

4.4. Augmented Review Requirements
IF the Technical Supervisor concludes that the level of Augmented Review determined on Attachment 5 is not appropriate for the specific conditions and Task, **THEN** document the basis for changing or eliminating the review(s), including Senior Manager concurrence. This should be documented on Attachment 1.
This reasoning may include credit for the Compensating Action(s) as fully or partially resolving the Risk Factor(s).

4.4.1. Using Attachment 5, select the appropriate (graded) level of Augmented Review that the Technical Product should receive, based on the Risk Ranking determined in Step 4.3.

4.5. Performance of Pre-Job Briefing and Compensating Actions

4.5.1. The pre-job briefing should include all individuals contributing to the development of the technical product, including users who can add insight to the necessary task scope or special constraints. The format of the briefing should encourage active participation by all attendees, thereby stimulating questioning attitudes.

4.5.2. The Technical Supervisor may elect to conduct a reverse pre-job brief. The Technical Supervisor must be present and participate in a reverse pre-job brief.

4.5.3. Based on the severity of the potential consequences and the number of other risk factors involved, the supervisor should consider having the department senior manager or director attend the brief. The supervisor should consider rescheduling the brief if all the necessary personnel are **not** present. Separate briefings should be avoided. Those individuals performing Augmented Reviews need not be present for the brief.

4.5.4. The depth and complexity of the brief is made commensurate with the risks associated with the task being performed, utilizing the risk assessment from Attachments 2, 3 and 4.

4.5.5. Attachment 1, Technical Task Pre-job Brief, shall be **USED** to conduct the briefing. The Attachments (1-4) used to choose the risk factors for the task should be brought to the briefing so that the brief members have the opportunity to validate the selections.

4.5.6. During the brief, the participants will be actively engaged and **DISCUSS** the Minimum Briefing Expectations listed on Attachment 1.
The success of the Briefing is dependent on clear **COMMUNICATION** of the Task Scope, Roles and Responsibilities, and Critical assumptions used in the performance of the Technical Task, as well as the results of the Risk Assessment and the established Compensating Actions.
This Briefing will be considered by each participant as the key step which ensures that the correct individuals are performing the correct Task.

Miscommunication is Failure

4.5.7. The Technical Supervisor **IDENTIFIES** follow up actions (those actions not completed before the task begins) on Attachment 1. The tracking mechanism can be informal (such as a Calendar appointment) or formal (Action Tracking Item).

4.5.8. The Supervisor will determine the appropriate holds or checkpoints for the Task implementation to ensure that the committed Compensating Actions and Augmented Reviews are completed. These Actions / Reviews are critical to assurance of an error free product, as they resolve issues that were found to be applicable to the Task.

4.5.9. The Participants in the PJB will confirm understanding of the Task / Actions and the planned resolution of issues.

4.5.10. Briefs should be **REPEATED** if a change in team members occurs, the job is significantly delayed or accelerated, new information or new condition arise, or as otherwise determined to be necessary.

4.6. Technical Product Review and Implementation

4.6.1. Each Task will be processed in accordance with its approved method or process. The Technical Supervisor confirms that the Compensating Actions and Augmented Reviews determined through this T&RM are initiated, and integrated into the sequence for development, approval, and implementation of the Technical Product.

1. IF the Augmented Review requirements include the need for additional resources, the Technical Supervisor will contact the Senior Manager to facilitate this.

2. Using the Follow-up Actions checklist from Attachment 1, the Technical Supervisor will ensure that all committed actions are completed. Normally this is a constraint to the release of the Technical Product, but individual circumstances may warrant different co-ordination. The Technical Supervisor should ensure that the Senior Manager AND the Technical Product user (customer) understand any exceptions.

4.7. Technical Task Post-Job Review

4.7.1. The Technical Supervisor decides whether a post-job brief is needed, and will have noted on Attachment 1 at the time of the PJB if a Post Job Review is appropriate.

4.7.2. Technical task post-job reviews demonstrate the Continuous Improvement fundamental and should be **USED** to support lessons learned and enhancements to performing the task in the future (refer to Attachment 6 for form).

4.7.3. The lead worker for the task should **CONDUCT** a post-job review as soon as practical (typically within 2 weeks) after completing the task. The post-job review should include discussions on the successes, lessons learned, problems encountered, process issues and follow up actions.

4.7.4. **DOCUMENT** the results of the post-job review on Attachment 6.

4.7.5. **SUBMIT** the post-job review form to the Technical Supervisor for review and working file entry.

4.7.6. **ENTER** the Corrective Action Process (CAP) to document the lessons obtained from the post-job brief for items that meet the CAP threshold. An appropriate tracking mechanism should be used to track other learning opportunities.

5. DOCUMENTATION

5.1. The risk factor Attachments and briefing forms from this T&RM are human performance tools intended to enhance and improve technical decisions and human performance. They are **not** quality records and **no** retention is required. The site however, may choose to establish informal retention methods (i.e. retrievable electronic files, file with product, paper working file, etc) in order to improve the efficiency of preparing for future technical task pre-job briefs for similar tasks, or investigation of poor products.

6. REFERENCES

6.1. Station Commitments

6.1.1. Quad Cities
2003 INPO evaluation response to AFI EN.2-1

6.2. User References

6.2.1. HU-AA-1211, "Pre-job, Heighten Level of Awareness, Infrequent Plant Activity and Post-job Briefings"

6.2.2. HU-AA-101, "Human Performance Tools and Verification Practices"

6.2.3. MA-AA-716-008, "Foreign Material Exclusion Program"

6.2.4. CC-AA-102, "Design Impact and Configuration Change Impact Screening, Attachment 1A, Design Change Attribute Review" (DAR)

6.2.5. OP-AA-106-101-1006, "Operational and Technical Decision Making Process"

6.2.6. LS-AA-125, "Corrective Action Program (CAP) Procedure"

6.2.7. WC-AA-104, "Review and Screening for Production Risk"

6.2.8. LS-AA-105, Operability Determinations"

6.2.9. OP-AA-300-1540, "Reactivity Management Administration"

6.2.10. CC-AA-104, " Configuration Change Control"

6.2.11. CC-AA-104, "Document Change Requests"

6.2.12. CC-AA-112, "Temporary Configuration Changes"

6.3. Writers' References

6.3.1. INPO NX-1044, “Perry Nuclear Plant Engineering Change Risk Analysis”

6.3.2. PC-AA-1001, "Exelon Nuclear Project Management Handbook, Risk Analysis Section"

6.3.3. INPO NX-1054, “San Onofre Managing Vendor Performance”

6.3.4. NF-AA-100-1600, "Reload Risk Management Assessment Instructions"

6.3.5. INPO 05-002, “Human Performance Tools for Engineers”

7. ATTACHMENTS

7.1. Attachment 1, Technical Task Pre-job Brief form

7.2. Attachment 2, Consequence Risk Factors

7.3. Attachment 3, Human Performance Risk Factors

7.4. Attachment 4, Process Risk Factors

7.5. Attachment 5, Independent Third Party Review Guideline

7.6. Attachment 6, Technical Task Post-job Brief form

Supervisor Performing Brief:	**Date of Brief:**
Participants:	**Document/Task ID:** **Document / Task Type (EACE, EC, etc.)**
Task Description:	
Resources and Estimated Time to Complete: **Task Due Date/Time:**	**Post Job Review Recommended? (Y/N):**
Minimum Briefing Expectations	Key Briefing Points
Define Scope Clearly define the task and what the task entails (scope). Discuss how the scope of the task was validated.	
Roles and Responsibilities Clearly define Roles and Responsibilities (performer, preparer, checker, independence of verifier, project coordinator, corporate, Non Station Personnel, etc.).	
Critical Parameters Assumptions, inputs, or requirements that if allowed to be untrue or **not** met, would adversely affect the task outcome.	
Procedure/Standards Discuss and ensure proper understanding and adherence to the procedures and standards applicable to the task (e.g. ER, CC, Standards, Industry Codes & Standards) Bring copy (copies) of governing process procedure for the task to the brief. Identify potential procedure traps. Verify any software used during the task meets SQA requirements.	
Training and qualification Review personnel qualifications. Establish appropriate mentoring and oversight if appropriate.	
Lessons Learned Discuss previous lessons learned and experience (OPEX, NERs, CAP & individual) that may be applicable to this task, particularly those involving human performance errors.	
Fundamentals Discuss applicable fundamentals.	

Additional Briefing Topics, validate the risk factors chosen with the briefing members.

Consequence Risk Mitigation: For each consequence risk factor identified in Attachment 2, list the factor and the actions to be employed to mitigate that risk.

Risk Factor(s)	Compensating Action	Owner	Due Date

Human Performance Risk Mitigation: For each human performance risk factor identified in Attachment 3, list the factor and the actions to be employed to mitigate that risk.

Risk Factor(s)	Compensating Action	Owner	Due Date

Process Risk Mitigation: For each process risk factor identified in Attachment 4, list the factor and the actions to be employed to mitigate that risk.

Risk Factor(s)	Compensating Action	Owner	Due Date

Risk Ranking Summary: Risk Rank Level: ____ Aug Review Req'd:_____

Consequence Level (L,M,H):_____ Probability Level (L,M,H): _____ # Factors Apply: Att 3 __ Att 4__

Peer Check / Approval for modified Review Level (as req'd, step 4.4) _____

Follow-up actions:

Required?	Follow-up Action	Owner	Date	Tracking mechanism
	Progress update			
	10/50/90% review			
	ITPR			
	Additional Pre-job Brief			
	Post-job Brief			
	Other (specify)			

For each Risk Factor, INDICATE whether it is Applicable (Y or N), and SELECT or SPECIFY a Compensating Action Indicate the Severity Level per Attachment 5, section 2.1

Product Description:		
Applies? Y / N	**Consequence Risk Factors**	**Compensating Methods (tools, barriers, actions)**
Severity Level	**If a mistake is made, could the following happen?**	Suggested actions to mitigate the risk of a credible error in the Technical Product
Y / N High	[C.1] Personal injury, safety issue made or not addressed • Hot environment/heat stress • Diving activities • Hazardous materials • New or recurring IDLH atmosphere	1) Provide additional barriers. 2) Ensure risk areas are identified and safety practices employed. 3) Determine whether to enter Operational and Technical Decision Making Process. 4) Make an injury response plan. 5) Other:
Y / N High	[C.2] Reactivity Mgmt. Event Level 1 or Level 2 per OP-AA-300-1540	1) Solicit input from Reactor Engineering, Operations, System Manager, or Thermal Performance Engineer. 2) Determine if Reactivity Maneuver Approval (REMA) is appropriate. 3) Other:
Y / N High	[C.3] Scram, Lost/limited Generation (>5%) Also see WC-AA-104, Att. 1 for Production Risk screening.	1) Investigate alternative solutions. 2) Consult other sites, SME's 3) Review fleet SSPV/SDC (Station Single Point Vulnerability/Scram Derate Challenge) database. 4) Involve Operations and System Manager in solution. Determine whether to enter Operational and Technical Decision Making Process. 5) Perform ITPR. 6) Other

Product Description:		
Applies? Y / N	**Consequence Risk Factors**	**Compensating Methods (tools, barriers, actions)**
Severity Level	**If a mistake is made, could the following happen?**	Suggested actions to mitigate the risk of a credible error in the Technical Product
Y / N Med	[C.4] Operability determination or operability evaluation not adequate due to complexity of the task.	1) Review Technical Specification, surveillance requirements, and Bases prior to performing task. Discuss with Senior Licensed Operator. 2) Have copy of LS-AA-105 at preparer's and approver's desk. 3) Perform ITPR. 4) Other:
Y / N Med	[C.5] Regulatory open item created or not addressed (includes environmental, NRC, State Agencies, NEIL, or INPO)	1) Discuss with Regulatory/Licensing specialist or Senior Licensed Operator. 2) Confirm existing concern with Regulator first hand. (Seek understanding) 3) Other:
Y / N Med	[C.6] Unplanned Safety System Actuation/Loss	1) Add review by System Manager or Operations. Develop recovery plan. 2) Review PRA inputs for effective measures 3) Develop recovery plan 4) Other:
Y / N Med	[C.7] Unbudgeted financial consequences ($100k or more)	1) Investigate alternative solutions. 2) Request challenge board based on amount of potential loss or cost increase. 3) Involve Business Operations. 4) Other:
Y / N Med	[C.8] Tech Spec violation or Unplanned Tech Spec entry into a shutdown LCO	1) Review technical specification LCO, surveillance requirements, and Bases prior to performing task. 2) Prepare contingency plan. 3) Discuss with Senior Licensed Operator. 4) Other:
Y / N Med	[C.9] Reactivity Mgmt Event Level 3 per OP-AA-300-1540	1) Consult with Operations / Reactor Engineering to confirm margins or controls as necessary 2) Other:

Product Description:		
Applies? Y / N	**Consequence Risk Factors**	**Compensating Methods (tools, barriers, actions)**
Severity Level	**If a mistake is made, could the following happen?**	Suggested actions to mitigate the risk of a credible error in the Technical Product
Y / N Med	[C.10] Unplanned Security vulnerability	1) Involve Security in decisions and process. 2) Other:
Y / N Med	[C.11] Radiological release or exposure for this task or future plant work related to this task. • > 1 REM for job • Dose rate > 1 rem/hr • Any unmonitored release • Other	1) Involve Radiation Protection in task/solution. 2) Prepare contingency plan. 3) Consider ALARA review. 4) Other:
Y / N Low	[C.12] Operator Workaround or challenge created or not addressed	1) Involve Operating representative in task/solution. 2) Increase Maintenance Priority. 3) Improve solution using other sites or OPEX. 4) Other:
Y / N Low	[C.13] Unplanned Component Unavailability	1) Determine effect on Maintenance Rule, NRC performance indicators, system and plant effects. 2) Consider challenge board, troubleshooting team or root cause. Use EPIX search for equipment reliability data. 3) Other:
Y / N Low	[C.14] Adverse impact on outage (>2 hours) or project critical path	1) Prepare contingency plan. 2) Consider making a project or HIT team. 3) Discuss with Outage Management. 4) Other:

Product Description:

Applies? Y / N	Consequence Risk Factors	Compensating Methods (tools, barriers, actions)
Severity Level	If a mistake is made, could the following happen?	Suggested actions to mitigate the risk of a credible error in the Technical Product
Y / N Low	[C.15] Reportable environmental consequence	1) Involve Chemistry Environmental group in task/solution. 2) Prepare contingency plan. 3) Remove environmental hazard during task. 4) Establish additional barriers. 5) Other:
Y / N Low	[C.16] Introduction of foreign material	1) Investigate alternative methods and materials. 2) Enter Foreign Material Control procedure to establish controls. 3) Other:
Y / N Low	[C.17] Aggregate review: Activities, conditions, or situations that, when combined with this activity, could cause undesirable consequences	1) Consider rescheduling task, changing the other activity, condition or activity. 2) Develop schedule or fragnet to manage simultaneous activities. 3) Other:
Y / N Low	[C.18] Repeat functional failure of Maintenance Rule systems, structures or components with potential to create additional system entries with (a)(1) classification.	1) Obtain Management Review Committee approval. 2) Address extent of condition. 3) Consider likelihood of repeat failures in establishing corrective action schedule. 4) Review PRA impact of solution and alternatives 5) Other:
Y / N Low	[C.19] Reactor coolant, or secondary chemistry transient (steam generator, FW,CD,CC) outside of acceptable band.	1) Involve Chemistry. 2) Involve Operations and/or Engineering in task/solution. 3) Prepare contingency plan. 4) Discuss with Nuclear Fuels or Reactor Engineering. 5) Establish additional barriers. 6) Other :

Product Description:		
Applies? Y / N	**Consequence Risk Factors**	**Compensating Methods (tools, barriers, actions)**
Severity Level	**If a mistake is made, could the following happen?**	Suggested actions to mitigate the risk of a credible error in the Technical Product
Y / N Low	[C.20] Other unacceptable consequence not listed • Security compensatory actions • Fire protection comp. actions • Emergency plan affected • NPDES permit affected • High sensitivity issue with public • Potential adverse reduction in safety or production margins • Other	1) Choose appropriate tools, barriers, or actions and list on briefing sheet. 2) Other:

Human conditions that increase the likelihood of an individual making a technical error

"There is no such thing as a routine task."

For each Risk Factor, INDICATE whether it is Applicable (Y or N), and SELECT or SPECIFY a Compensating Action

Product Description:		
Applies? Y / N	**Human Performance Risk Factors**	**Compensating Methods (tools, barriers, actions)**
	Is this condition a challenge for this Task?	**Suggested actions to reduce or eliminate the risk of making errors**
Y / N	[H.1] Overconfidence/complacency, "can-do attitude"	1) Challenge preparer to discuss other's mistakes and discuss OPEX 2) Emphasize STAR, procedural compliance and place keeping. 3) Consider assigning a trainee to help the lead focus. 4) Other:
Y / N	[H.2] Challenge to mental state (e.g. stress, illness, fatigue)	1) Consider rescheduling or reassignment. 2) Add a peer review or supervisory oversight during task, not just at task delivery. 3) Other
Y / N	[H.3] Conflicts (personality)	1) Resolve conflict first. 2) Consider reassignment. 3) Other
Y / N	[H.4] Knowledge/experience gaps, low proficiency, lack of skills/training/qualification	1) Obtain necessary expertise. Consider both Plant expertise and technical abilities. 2) Assign a mentor. 3) Obtain necessary expertise or collaborative review. 4) Add an ITPR, supervisory oversight or challenge board based on potential consequences. 5) Review and keep a copy of the governing procedure at the preparer's and reviewer's desk. 6) Other

Product Description:		
Applies? Y / N	**Human Performance Risk Factors**	**Compensating Methods (tools, barriers, actions)**
	Is this condition a challenge for this Task?	**Suggested actions to reduce or eliminate the risk of making errors**
Y / N	[H.5] First time, Infrequent, or non-routine evolution	1) Assign a mentor; provide supervisory oversight, review inputs, methodology to be used. 2) Perform walk-through of task 3) Review and keep a copy of the governing procedure at the preparer's and reviewer's desk. 4) Other
Y / N	[H.6] Method changed or new process/procedure	1) Review and keep a copy of the governing procedure at the preparer's and reviewer's desk 2) Confirm methodology with process owner. 3) Perform walk-through of new process. . 4) Use enhanced placekeeping. 5) Other
Y / N	[H.7] Frequently performed (habit intrusion), repetitive actions or monotony	1) Emphasize STAR, procedural compliance and place keeping. 2) Consider assigning a trainee to help the lead focus. 3) Build in breaks or mix of assignments. 4) Other
Y / N	[H.8] High Complexity	1) Assign peer reviewer or assistant. 2) Validate inputs and methodology. Refer to Attachment 5 for ITPR. 3) Other
Y / N	[H.9] Available information expanded or inadequate / problem not clearly understood	1) Gather missing information or decide scope of issue. 2) Involve all stakeholders to define task. 3) Identify supplemental / validating information 4) Other

Product Description:		
Applies? Y / N	**Human Performance Risk Factors**	**Compensating Methods (tools, barriers, actions)**
	Is this condition a challenge for this Task?	**Suggested actions to reduce or eliminate the risk of making errors**
Y / N	[H.10] Group think, lack of independence	1) Assign an ITPR or challenge board. 2) Use a "devil's advocate" to argue opposite points. 3) Other
Y / N	[H.11] High workload/schedule pressure	1) Confirm ACTUAL need for due date. 2) Consider rescheduling or reassigning other tasks. Ensure that schedule is necessary. 3) Ensure scope of task is correct. 4) Do not lower standards, and base delivery date on an error-free product. 5) Other
Y / N	[H.12] Distraction/interruptions	1) Consider sequestering individual. 2) Assign a point-of-contact. 3) Establish expectations for re-starting task after interruption 4) Other
Y / N	[H.13] Availability of resources (people) inadequate	1) Request assistance from Corporate, another group or department or station. DO NOT lower standards. 2) Reschedule this or other tasks. 3) Other
Y / N	[H.14] Unclear goals, Standards or, Roles / Responsibilities	1) Establish the deliverables 2) Confirm roles and responsibilities 3) Verify understanding. 4) Other
Y / N	[H.15] Omission/failure to revise required document	1) Use Design Change Attribute Review (DAR) checklist to identify affected documents and programs. 2) Other

Product Description:		
Applies? Y / N	**Human Performance Risk Factors**	**Compensating Methods (tools, barriers, actions)**
	Is this condition a challenge for this Task?	**Suggested actions to reduce or eliminate the risk of making errors**
Y / N	[H.16] Personnel with historic knowledge or data regarding task are not part of the team.	1) Contact personnel or their manager to gain background information on decisions made to date regarding the previous task and its basis. 2) Other
Y / N	[H.17] Other human performance issues	1) Choose appropriate tool, barrier, or action and list on briefing sheet. 2) Other

Process conditions that increase the likelihood of an error in the Technical Product.

For each Risk Factor, INDICATE whether it is Applicable (Y or N), and SELECT or SPECIFY a Compensating Action

Product Description:		
Applies? Y / N	**Process Risk Factors**	**Compensating Methods (tools, barriers, actions)**
	Does this process use established, approved methods?	**Suggested actions to mitigate the risk of errors**
Y / N	[P.1] Process or procedure does not match scope of task.	1) Revise process of procedure 2) Define / redefine the task in writing, describing desired outcome. 3) Involve all stakeholders to avoid miscommunication / misunderstandings. 4) Ensure common understanding. 5) Other:
Y / N	[P.2] Parts of the task process/procedure cannot be followed or Task is Out-of Process (OOPS) or Parts of the task not addressed by current process	1) Stop and fix the task's process or get back in process. (Example: Designers walk down skipped because access to certain parts of containment is not possible at power and mod needed for next outage.) 2) Review and keep a copy of the governing procedure at the preparer's and reviewer's desk. - If Management has decided to proceed, ensure that the risks are repeatedly communicated and accepted by Station leadership. Clearly convey the risk associated with proceeding. Re-communicate the risk just before the consequences can manifest themselves.

Product Description:		
Applies? Y / N	**Process Risk Factors**	**Compensating Methods (tools, barriers, actions)**
	Does this process use established, approved methods?	**Suggested actions to mitigate the risk of errors**
Y / N	[P.3] Task is on a fast track	1) Re-evaluate risk areas and need for contingencies. 2) Establish additional supplemental or parallel reviews. 3) Consider a challenge board using PC-AA-1001, benchmarking, and OPEX. 4) Establish detailed plan and schedule for project/task including study/design/install phases as applicable. 5) Assign additional resources including Project Manager / Single Owner 6) Other
Y / N	[P.4] Task involves complex engineering decisions and/or products, which involve historical data, and repeat equipment failure.	1) Consider using OPERATIONAL AND TECHNICAL DECISION MAKING PROCESS OP-AA-106-101-1006. 2) Validate data or conditions which involve historical data 3) Ensure roles and responsibilities are established for making and implementing decisions. 4) Ensure decisions are based on a full understanding risks and the aggregate impact of conditions is understood. 5) Evaluate decision-making activities from repeat failures. 6) Other

Product Description:

Applies? Y / N	Process Risk Factors	Compensating Methods (tools, barriers, actions)
	Does this process use established, approved methods?	**Suggested actions to mitigate the risk of errors**
Y / N	[P.5] Significant inputs being provided by an outside organization	1) Determine how will their input be validated (Plant visit, review of their inputs and methods) Inputs, especially Non Station Personnel inputs, should be provided in writing and verified first-hand when possible. 2) Avoid over reliance on Non Station Personnel. Question Non Station Personnel's methodology and assumptions. 3) Ask for industry contacts in similar situation. Contact industry to determine whether or not Non Station Personnel input is within envelope of industry operating experience. 4) Refer to Attachment 5 for ITPR. 5) Confirm that outside organization's product is being used as intended by provider, and that the product / limits of validity are adequate for task 1) Conduct meeting / conference call to confirm info 2) Validate all input info 3) Validate product usage from other sites 6) Other

Product Description:		
Applies? Y / N	**Process Risk Factors** **Does this process use established, approved methods?**	**Compensating Methods (tools, barriers, actions)** **Suggested actions to mitigate the risk of errors**
Y / N	[P.6] Critical parameters uncertain	1) Define the inputs that will influence the outcome. Perform walk down of prints and wiring diagrams, validate assumptions. 2) Define how drawings and Plant parameters will be validated 3) Determine how omission errors will be detected 4) Other:
Y / N	[P.7] Tools, programs, and procedures necessary for the task not available or useable	1) Consider training, mentoring, buying a new tool, producing a useable procedure. 2) Review and keep a copy of the governing procedure at the preparer's and reviewer's desk. 3) Establish contingency actions or compensatory measures for weak tools. 4) Other
Y / N	[P.8] Design basis not collected or available	1) Review UFSAR, applicable Tech Specs, Reg Guides, SERs, and regulatory correspondence. 2) Review System Specs and Design Record. 3) Discuss and ensure proper understanding of design and licensing basis requirements and where they are located. 4) Determine how omission errors will be detected? 5) Other

Product Description:

Applies? Y / N	Process Risk Factors	Compensating Methods (tools, barriers, actions)
	Does this process use established, approved methods?	**Suggested actions to mitigate the risk of errors**
Y / N	[P.9] Multiple parties involved such that errors may be introduced via communication channels	1) Brief on expectations for communication between involved parties. 2) Conduct initial conference call, Confirm Actions at end of call 3) Establish record file for input information 4) Distinguish static from dynamic information 5) Confirm roles between parties for info handling and validation 6) Other
Y / N	[P.10] This is a Station first-time action, configuration change, or process change	1) Perform pre-implementation and post-implementation walk downs. 2) Validate new and revised testing, operational and maintenance procedures. 3) Perform simulator or mock-up validation / JIT training 4) Establish hold points and/or monitoring plan. 5) Refer to Attachment 5 for ITPR. (Mandatory for Configuration Change) 6) Request other site's process / procedure & experienced contact 7) Other

Product Description:		
Applies? Y / N	**Process Risk Factors**	**Compensating Methods (tools, barriers, actions)**
	Does this process use established, approved methods?	**Suggested actions to mitigate the risk of errors**
Y / N	[P.11] Product or process could result in operation outside of industry operating experience	1) Consider different solution. 2) Establish limits for critical parameters 3) Refer to Attachment 5 for ITPR. 4) Other
Y / N	[P.12] Other process risk factor not listed	1) Choose appropriate tool, barrier, or action and list on briefing sheet 2) Other

1. **DETERMINATION OF RISK RANKING AND AUGMENTED REVIEW REQUIREMENTS:**

1.1. Determine highest level of consequence

1.2. Estimate probability of error

1.3. Determine risk rank

1.4. Determine type of Augmented Review Required

2. **DETERMINE HIGHEST LEVEL OF CONSEQUENCE**

2.1. Review Attachment 2 Consequence Risk Factors, to determine which consequence risk factors apply. Choose the consequence risk factor that has the worst outcome (highest level), if a credible error exists in the Technical Product. Use the Risk Level indicated on Attachment 2, or the Supervisor's best estimate of Consequence, consistent with the examples given below.

2.2. Table 2.2 Consequence Level Examples

Consequence Level		
High	Medium	Low
Scram or Reactor Trip	Operability Issue affecting one train of safety related equipment	Reactor coolant, or secondary chemistry transient (steam generator, FW,CD,CC) outside of acceptable band.
Operability Issue affecting multiple trains of a safety related system (Common Mode Failure)	Regulatory non-compliance	Adverse impact on outage (>2 hours) or project critical path
Create a level 1 or 2 Reactivity Management Event	Create a level 3 Reactivity Management Event	Operator Workaround or challenge created or not addressed
	Lost Generation (>5%)	

Augmented Review Guideline
Page 2 of 7

3. ESTIMATE PROBABILITY OF ERROR

3.1. Review the risk factors of Attachments 3 and 4 and determine how many risk factors apply to the task being considered.

- High probability is defined as a task with 6 or more Attachment 3 & 4 risk factors
- Medium probability is defined as a task with 4 to 5 Attachment 3 & 4 risk factors
- Low probability is defined as a task with 3 or less Attachment 3 & 4 risk factors

4. DETERMINE RISK RANK

4.1. Use the table below to determine the Risk Rank and type of Augmented Review warranted. A higher Risk Rank value corresponds to higher risk and more extensive Augmented Review requirements.

Table 4.1: Risk Ranking

Risk Rank (choose the rank at the intersection of the task's consequence level and error probability)		**Probability of Error**		
		High ≥6	**Med 4-5**	**Low ≤3**
Highest Consequence Risk Factor level	**High**	4	3	2
	Medium	3	2	1
	Low	1	1	1

Augmented Review Guideline
Page 3 of 7

5. TYPE OF REVIEW REQUIRED

5.1. The level of Augmented Review is indicated directly from the Risk Rank shown above in Table 4.1:

Table 5.1 Augmented Review Requirements

Risk Rank	Type of Review Warranted.
4	Independent Collegial Review or Challenge Board (Multi-discipline)
3	Independent review by A/E, consultant, or Off-site Specialists
2	Independent Review by Station
1	Existing Process Reviews

5.2. Augmented Review scope will vary depending upon the nature and complexity of the Technical Task scope. The Augmented Review will, where applicable,

- Verify the purpose, methodology, and conclusion meet the project requirements
- Verify critical characteristics and design inputs have been evaluated
- Sample verify calculations
- Verify any technical high risk or regulatory requirements are appropriately addressed
- Apply ALL appropriate technical disciplines to the review to ensure all potential aspects are reviewed (e.g. mechanical, electrical, structural, I & C, fuels, others)
- Ensure any industry lessons learned have been incorporated.
- Consider business efficiency aspects of the product as it relates to quality of the final product.

5.3. CHOOSE the required review corresponding to the risk rank determined in Step 4 of this Attachment.

Augmented Review Guideline
Page 4 of 7

6. **INDEPENDENT COLLEGIAL/CHALLENGE REVIEW BOARD PROCESS FOR HIGH RISK & HIGH CONSEQUENCE TECHNICAL PRODUCTS**

6.1. This section provides guidance for performing the Independent Collegial/Challenge Review Board (CRB) review of a high risk technical product as defined in this T&RM. **(CM-1)**

6.2. The CRB is to assess the quality of a technical product in order to:

- provide additional assurance of the adequacy of the product,
- provide a performance measurement of the product, team or individual that developed the product and the organizational and process effectiveness, and
- promote the technical quality standards and expectations of the Subject Matter Experts (SME) and experienced personnel through peer review.

6.3. The CRB is not intended to replace the accountability of the initial preparation and review process of the product. It is a targeted scrutiny of the product, as completed, reviewed, and ready for approval by the line organization. It is required to be performed prior to use of the product.

6.4. Composition of the CRB for the need to perform a CRB review:

6.4.1. The Senior Manager accountable for the technical product is responsible for assigning an individual to lead the CRB review and approving the scope of the review. Personnel for the CRB are selected based on their expertise for the targeted topical coverage to perform the reviews. The CRB members shall not perform CRB function(s) for any segment of the work associated with the product, which they performed or independently reviewed. CRB members should not perform any CRB functions for segments of the product that they determined the methods to be used.

Augmented Review Guideline
Page 5 of 7

6.5. Schedule, Resources and Logistics

6.5.1. The CRB review should be accounted for in the development of the technical product including the selection of personnel.

6.5.2. The technical product owner should provide the documentation and a brief presentation of the product to the CRB. The CRB should work as a unit in a predetermined location to promote synergy. It is preferable, but not required, to have the team dedicated to the task on a full time basis.

6.5.3. The CRB should provide a draft report to the Senior Manager and the technical product owner responsible for the assessed product for review and comment. Issues identified by the CRB should be dispositioned prior to approval and issuance of the technical product, if practical.

6.6. Recommended Assessment Attributes:

6.6.1. The CRB conducts reviews utilizing technical subject matter experts, program owners, and other individuals that would add value in the review as appropriate.

6.6.2. Specific assessment focus areas should be selected based on unique attributes of the technical product (see 5.1) and known functional area weaknesses such as but not limited to those identified during previous CRB reviews, Focused Area Self Assessments, Nuclear Oversight Assessments, INPO Assessments, and other industry sponsored assessments.

6.6.3. Errors found by the CRB that necessitate product revision should be entered into the corrective action program.

6.7. Resolution of Issues

6.7.1. Discrepancies, improvement opportunities and strengths should be identified in the final report and forwarded to the Senior Manager and Owner of the technical product for review and corrective action, as appropriate.

Augmented Review Guideline
Page 6 of 7

7. INDEPENDENT THIRD PARTY REVIEW

7.1. This section provides guidance for performing the independent third party review of a technical product as defined in this T&RM.

7.2. The purpose of the independent third party review is to assess the quality of a technical product in order to:

- provide additional assurance of the adequacy of the product,
- provide a performance measurement of the product, team or individual that developed the product and the organizational and process effectiveness, and
- promote the technical quality standards and expectations of the Subject Matter Expert (SME) and experienced personnel through peer review.

The independent third party review is not intended to replace the accountability of the initial preparation and review process of the product. It is a targeted scrutiny of the product, as completed, reviewed, and ready for approval by the line organization. It is required to be performed prior to use of the product. The ITPR review may be initiated in parallel with appropriate portions of the technical product, provided:

- The Sr. Manager or designee concurs with the parallel review, and
- The final product is reviewed by the ITPR reviewer to confirm that changes during development do not invalidate the ITPR conclusions.

7.3. An independent third party review shall be performed for technical products in accordance with the criteria set forth in this T&RM.

7.4. The Senior Manager accountable for the technical product is responsible for assigning an individual or team to perform the independent third party review and approving scope of the review. The individual selected is based on expertise for the targeted topical coverage. Anyone performing the independent third party review shall not have performed any function for any segment of the work associated with the product or determined the methods used.

Augmented Review Guideline
Page 7 of 7

7.5. Schedule, Resources and Logistics

7.5.1. The independent third party review should be accounted for in the development of the technical product including the selection of personnel. Risk Rank 3 ITPR of off-site developed products (i.e. A/E, EOC, OEM, consultant, corporate...) should be performed by a different off-site entity than who developed the product.

7.5.2. The technical product owner should provide the documentation and a brief presentation of the product to the independent third party reviewer.

The independent third party reviewer should provide a draft report to the Senior Manager and the technical product owner responsible for the assessed product for review and comment. Issues identified by the independent third party reviewer should be dispositioned prior to approval and issuance of the technical product, if practical.

7.6. Recommended Assessment Attributes:

7.6.1. The independent third party reviewer is considered a technical subject matter expert.

7.6.2. Specific assessment focus areas should be selected based on unique attributes of the technical product (see 5.1) and known functional area weaknesses such as but not limited to those identified during previous reviews, Focused Area Self Assessments, Nuclear Oversight Assessments, INPO Assessments, and other industry sponsored assessments.

7.6.3. Errors found by the independent third party reviewer that necessitate product revision (beyond non-consequential typos) should be entered into the corrective action program.

7.7. Resolution of Issues

7.7.1. Discrepancies, improvement opportunities and strengths should be identified in the final report and forwarded to the Senior Manager and Owner of the technical product for review and corrective action, as appropriate.

Lead / Principal Performing Brief:	**Date of Brief:**
Participants:	**Document/Task ID:**
Task Description:	
Successes: (Acknowledge and Reinforce Positive Behaviors)	
Lessons Learned:	
Follow-up Actions: (e.g., Corrective Action, Procedure Change Request, Training, Schedule Change, Mentoring, etc.)	

LICENSE AND TECHNICAL SPECIFICATIONS AMENDMENT PROCESS

1. PURPOSE

1.1. Establish the procedural requirements to prepare, submit, obtain approval and implement an amendment to an Operating License (OL), Possession Only License and/or Technical Specifications (TS) for an Exelon Nuclear Station or AmerGen Nuclear Station. For additional guidance on developing License Amendment Requests (LARs), refer to the LAR Process Training and Reference Material (T&RM), LS-AA-101-1000.

2. TERMS AND DEFINITIONS

2.1. Emergency License Amendment Request – A license amendment needed to avoid derating or shutdown of a nuclear power plant, or to resume operation or increase in power output up to the plant's licensed power level. Generally, these changes are needed in 14 days or less. This process is described in 10 CFR 50.91 (a)(5).

2.2. Exigent License Amendment Request – A license amendment needed on an expedited basis, generally more than 14 days and less than 2 months in the future. This process is described in 10 CFR 50.91 (a)(6).

3. RESPONSIBILITIES

3.1. The Licensing Manager is responsible for coordinating the development, review, submittal, and NRC review and approval of LARs.

3.2. The Licensing Manager/Regulatory Assurance Manager (RAM) is responsible for coordinating the overall activities related to implementation of LARs.

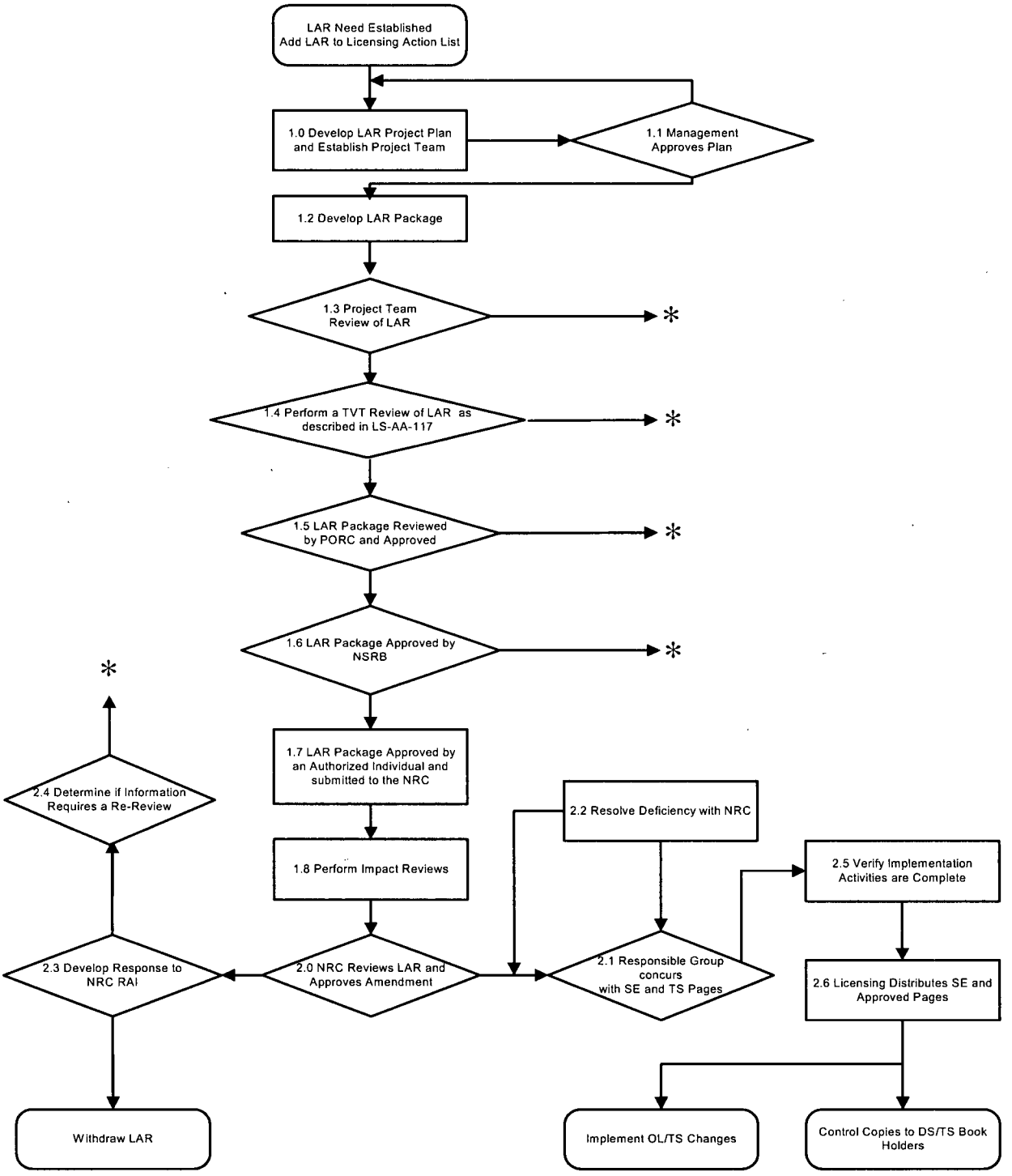
3.3. The cognizant technical group or sponsoring organization is responsible for the accuracy/completeness of all technical information in the LAR.

3.4. The cognizant technical group (or other group as determined by the Licensing Manager/Regulatory Assurance Manager) is responsible for the coordination of reviews to determine the impact of the LAR on station procedures, programs, UFSAR, etc.

4. MAIN BODY

4.1. The following flowchart provides an overview for developing a LAR and implementing amendments to the OL, Possession Only License and/or TS.

LAR Development, Approval and Implementation Process



* Resolve Comments by Re-Review as Determined by RAM/Licensing Manager

LAR Need Established Add LAR to Licensing Action List	LAR need identified: • **NOTIFY and OBTAIN** concurrence from the Station Management and Corporate Licensing. • **DETERMINE** type of license amendment required: - Technical Specification (TS) change; - License change; - Change requiring prior NRC approval. ***(Licensing)*** • Initiate action tracking items, as appropriate. • A LAR may be processed on a normal, exigent, or emergency basis as determined by the urgency of the need and circumstances.
1.0 Develop LAR Project Plan and Establish Team	**DEVELOP** LAR Project Plan, as appropriate, to identify LAR team, strategy, review method, and schedule.
1.1 Management Approves Plan	**REVIEW and APPROVE** LAR Project Plan; **COMMIT** resources. **If** YES, **then GO** to Step 1.2. **If** NO, **then GO** to Step 1.0. ***(Cognizant Managers)***

1.2 Develop LAR Package	**ASSEMBLE** LAR package as follows. • **GATHER** information needed to develop package – technical and administrative. ***(Licensing)*** • **DEVELOP** LAR package in accordance with LAR Process T&RM. The LAR Process T&RM provides the standard template for an Exelon or AmerGen LAR package. ***(Licensing)*** • **PREPARE** the technical analysis and information supporting a finding of no significant hazards consideration with support and guidance from Licensing. ***(Cognizant Technical Group)*** • **VERIFY** appropriateness and applicability of information contained in the package. ***(Licensing)*** • **CONFIRM** technical inputs to the LAR have been assessed in accordance with HU-AA-1212, "Technical Task Risk/Rigor Assessment, Pre-Job Brief, Independent Third Party Review, and Post-Job Brief." ***(Licensing)*** • **REVIEW** proposed changes for consistency with appropriate Improved Standard Technical Specifications and NRC approved TS Task Force Travelers. ***(Licensing)*** • **RESOLVE** open issues within package. ***(Licensing)***
1.3 Project Team Review of LAR	**PERFORM** a review of the LAR package for accuracy and completeness. ***(LAR Team)*** **If** package is ready for continued processing, **then GO** to Step 1.4. **If** package needs revisions, **then RESOLVE** comments.
1.4 Perform TVT Review of LAR as described in LS-AA-117	Perform a Technical Verification Team (TVT) review of the LAR as described in LS-AA-117, "Written Communications." **If** package is ready for continued processing, **then GO** to Step 1.5. **If** package needs revisions, **then RESOLVE** comments.

1.5 LAR Package Reviewed by PORC and Approved	NOTE: The cognizant technical sponsor or Licensing will present the amendment package to the PORC. **REVIEW** LAR package. **APPROVE** LAR package. ***(PORC)*** **If** approved, **then GO** to Step 1.6. **If <u>not</u>** approved, **then RESOLVE** comments and re-review as determined by RAM/Licensing Manager.
*	**RESOLVE** comments **and RE-REVIEW** as determined by RAM/Licensing Manager.
1.6 LAR Package Approved by NSRB	NOTE: The cognizant technical sponsor or Licensing will present the amendment package to the NSRB. Note that only LARs related to nuclear safety are required to be reviewed by the NSRB prior to submittal to the NRC. **APPROVE** LAR package. ***(NSRB)*** **If** approved, **then GO** to Step 1.7. **If <u>not</u>** approved, **then RESOLVE** comments **and RE-REVIEW** as determined by RAM/Licensing Manager.
1.7 LAR Package Approved by an Authorized Individual and submitted to the NRC	**APPROVE** the LAR by **SIGNING** the "unsworn declaration" statement or the Oath and Affirmation in the LAR transmittal cover letter. ***(Duly Authorized Officer)*** A duly authorized officer is defined as the Director – Licensing or other individual as authorized by the Vice President – Licensing & Regulatory Affairs. **SUBMIT** LAR package to NRC. ***(Licensing)***

1.8 Perform Impact Reviews	After the package is submitted to the NRC, the cognizant technical group (or other group as determined by the Licensing Manager/Regulatory Assurance Manager) should assign Action Tracking Items (ATIs) to determine if other documents (e.g., UFSAR, procedures, programs) need to be changed as a result of the LAR. The results of this review should be documented via the assigned ATIs and considered during implementation of the license amendment change. Significant items should be tracked via ATIs to completion.
2.0 NRC Reviews LAR and Approves Amendment	Note: If during the NRC's review of the LAR package, the need for the amendment is eliminated, withdrawal of the LAR is performed via letter to the NRC signed by the Director – Licensing or designee. **NRC** reviews the proposed LAR. **If** the NRC issues a Request for Additional Information (RAI) to support their review, **then GO** to Step 2.3. **NRC** approves the LAR. **If** approval is granted, **then GO** to Step 2.1.
2.1 Responsible Group Concurs with SE and TS	License Amendment is **RECEIVED** and **REVIEWED**. When issued by the NRC, the LAR Team (e.g., Regulatory Assurance, Licensing, and cognizant technical group) **REVIEWS and CONCURS** with: • NRC License Amendment; • NRC Safety Evaluation (SE); • Revised Operating License (OL)/TS pages. **If** YES, **then GO** to Step 2.5. **If** NO, **then GO** to Step 2.2.
2.2 Resolve Deficiency with NRC	**CONTACT** the NRC to resolve the deficiencies. Upon resolution, return to Step 2.1. ***(Licensing)***

2.3 Response to NRC RAI	Regulatory Assurance/Licensing **ASSESSES** if additional information can be provided to the NRC that would resolve the issues. **If** YES, **then GO** to Step 2.4. **If** NO, **then** the amendment request will not be approved. Withdrawal of the LAR is performed via letter to the NRC signed by the Director – Licensing or designee.
2.4 Determine if Information Requires a Re-review	**DETERMINE** if the information results in a change to the OL/TS pages **or** results in a significant technical change. ***(Regulatory Assurance/Licensing)*** **If** YES, **then** the prepared response should be sent through the appropriate review process (i.e., site technical review, PORC, etc.) as determined by RAM/Licensing Manager. **If** NO, **then PREPARE** response, **SUBMIT** to NRC and **GO** to Step 2.0.
2.5 Verify Implementation Activities are Complete	**VERIFY** the following for the OL/TS Change. • All activities (e.g., procedure revisions, UFSAR revisions) required to be complete concurrent with License Amendment implementation are complete. ***(Cognizant Technical Group/other group as determined by Licensing/Regulatory Assurance)*** • All activities NOT required to be complete concurrent with License Amendment implementation are being tracked via Action Tracking. ***(Cognizant Technical Group/ other group as determined by Licensing/Regulatory Assurance)***
2.6 Licensing Distributes SE and Approved Pages	**DISTRIBUTE** OL/TS Change Package to Site document management group for implementation. This package will be assembled and distributed in accordance with LAR Process T&RM. ***(Licensing)*** **(CM-1)** If an order is issued by the NRC, the order will be assembled and distributed similar to an LAR, as described above, for inclusion in all controlled copies of the station's "Technical Specifications, Limiting Conditions for Operation and Surveillance Requirements" manual.

5. DOCUMENTATION

5.1. LARs generated via this procedure will be maintained in accordance with the appropriate Site document management group procedures for correspondence to the NRC.

6. REFERENCES

6.1. LS-AA-101-1000, "License Amendment and Technical Specifications Change Request Process, Training and Reference Material."

6.2. LS-AA-117, "Written Communications."

6.3. AD-AA-102, "Station Qualified Review."

6.4. "HU-AA-1212, "Technical Task Risk/Rigor Assessment, Pre-Job Brief, Independent Third Party Review, and Post-Job Brief," current revision.

6.5. Title 10 Code of Federal Regulations (CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," Sections 50.4, 50.36, 50.59, 50.71, 50.90, 50.91, 50.92; Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," Sections 51.21 and 51.22, Part 72, "Licensing Requirements for the Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste," and Part 73, "Physical Protection of Plants and Materials."

6.6. NRC Administrative Letter 98-10, "Dispositioning of Technical Specifications that are Insufficient to Assure Plant Safety."

6.7. NRC Information Notice 97-80, "Licensee Technical Specifications Interpretations."

6.8. NRR Office Instruction LIC-101, Revision 1, "License Amendment Review Procedures."

6.9. Generic Letter 86-03, "Application for License Amendments."

6.10. NUREG 1430, "Standard Technical Specifications, Babcock & Wilcox Plants," current revision.

6.11. NUREG 1431, "Standard Technical Specifications, Westinghouse Plants," current revision.

6.12. NUREG 1433, "Standard Technical Specifications, General Electric Plants, BWR/4," current revision.

6.13. NUREG 1434, "Standard Technical Specifications, General Electric Plants, BWR/6," current revision.

6.14. Station Commitments

6.14.1. All Stations

CM-2 Quality Assurance Topical Report, commitment to the first element of the oversight of safety (Entire Procedure).

6.14.2. Peach Bottom

CM-1 T03989 (Step 2.6).

PLANT OPERATIONS REVIEW COMMITTEE

1. PURPOSE

1.1. This procedure establishes the minimum requirements for the Plant Operations Review Committee (PORC) as the on-site review body.

1.2. This procedure applies to personnel involved in or interfacing with PORC or PORC-related activities.

1.3. This procedure **PROVIDES** the methodology to implement the requirements regarding on-site review and describes the organization, responsibilities, and method of operation of the PORC.

2. TERMS AND DEFINITIONS

2.1. **PORC:** A multi-disciplined committee responsible for review of activities that have the potential to affect nuclear safety.

2.2. **PORC Action Item:** An action item assigned by the PORC Chair/Alternate Chair when an issue presented to PORC requires further investigation or follow-up.

2.3. **Approved:** The issue being reviewed by PORC has been determined to be acceptable. An item may be "Approved with Conditions," provided that the specific conditions that must be satisfied prior to unconditional approval are adequately described in the PORC Meeting minutes, including which PORC members must review the resolution of the conditions prior to final approval by the PORC Chair/Alternate Chair.

2.4. **Disapproved:** The issue being reviewed by PORC has been determined to be unacceptable from a nuclear safety perspective. The issue must be re-presented to a full PORC meeting prior to approval.

2.5. **Remanded:** An issue may be remanded when there is insufficient time to perform an adequate review by PORC, or when the item requires additional analysis or investigation. A remanded item does **not** indicate a recommendation of approval or disapproval.

3. RESPONSIBILITIES

3.1. Plant Manager

3.1.1. **APPOINTS** qualified PORC Primary and Alternate Members in writing.

3.1.2. **PROVIDES** supervisory direction to the PORC and **ENSURES** compliance with this procedure.

3.1.3. **APPOINTS** an individual (PORC Coordinator) to **PROVIDE** coordination and appropriate direction to the PORC.

3.1.4. **INDEPENDENTLY REVIEWS and APPROVES** PORC's findings and recommendations, except as provided for in 4.1.2.4.

3.1.5. **ENSURES** qualifications of PORC Primary and Alternate Members.

3.1.6. **FOLLOWS** the recommendations of PORC or selects a course of action that is more conservative regarding safe operation of the facility.

3.2. PORC Chair/Alternate Chair

3.2.1. **ENSURES** the functions of PORC are implemented per this procedure.

3.2.2. **ENSURES** formal PORC meetings are convened as needed to **REVIEW** the required items.

3.2.3. **PRESIDES** over PORC meetings.

3.2.4. **ENSURES** a PORC quorum exists for each meeting.

NOTE: For technically complex issues, the PORC Chair/Alternate Chair shall make a determination if the minimum procedurally required quorum is sufficient to perform an adequate review from a nuclear safety perspective. The basis for this determination shall be documented in the PORC meeting minutes.

3.2.5. **ENSURES** that the necessary technical expertise is present during a PORC meeting for review of the subject matter under consideration.

3.2.6. **ENSURES** reviews are of sufficient depth and scope to ensure that safety questions are adequately addressed and documented.

3.2.7. **DETERMINES** when PORC needs the additional expertise of a subject matter expert.

3.2.8. **ENSURES** that those present in PORC meetings, when reviewing safeguards information, satisfy security program requirements to review safeguards documents.

3.2.9. **ENSURES** PORC action items are assigned.

3.2.10. **REVIEWS** and **APPROVES** PORC meeting minutes.

3.2.11. **ENSURES** that PORC meeting minutes document the recommendation of approval or disapproval and do not contain safeguards material.

3.2.12. **PROVIDES** prompt notification to the Site Vice President and NSRB in the event of a safety significant disagreement between the PORC and the Plant Manager.

3.2.13. **APPOINTS** Subcommittees consisting of one or more PORC Primary and Alternate Members.

3.2.14. **ENSURE** PORC minutes include a summary of key nuclear safety questions discussed, bases for PORC's recommendation, dissenting viewpoints, and open action items.

3.3. PORC Primary/Alternate Members

3.3.1. **ASSIST** the PORC Chair/Alternate Chair in ensuring compliance with the requirements of this procedure.

3.3.2. **RECOMMEND** approval or disapproval of items reviewed by PORC as required.

3.3.3. **ATTEND and PARTICIPATE** in PORC meetings as directed.

3.3.4. **ENSURE** the **FUNCTIONS** of PORC are implemented.

3.3.5. **MEET** appropriate qualification requirements as outlined in Attachment 2.

3.4. PORC Coordinator/Designee

3.4.1. **MAINTAIN** a list of appointed PORC Primary and Alternate Members.

3.4.2. **ARRANGES** regularly scheduled PORC meetings and **ENSURES** distribution of review packages to PORC members.

3.4.3. **PREPARE** minutes from each PORC meeting.

3.4.4. **MAINTAIN** PORC action items and **TRACK** closure.

3.4.5. **OBTAIN** approval of PORC minutes from the PORC Chair/Alternate Chair.

3.4.6. **DISTRIBUTE** the approved PORC minutes to the Plant Manager, Site Vice President, NSRB Coordinator and others as appropriate.

3.5. Regulatory Assurance Manager

3.5.1. **DETERMINE** which station procedures require a PORC review prior to approval and implementation. The Plant Manager shall concur with the listing of station procedures that require PORC review.

3.6. PORC

3.6.1. PORC shall, as a minimum:

1. **ADVISE** the Plant Manager on matters of nuclear safety in plant operations.

2. **RECOMMEND** to the Plant Manager, or his designee, approval or disapproval of items considered.

3. **INCLUDE** among its review conclusions a recommendation for approval or disapproval of items considered in Section 3.6.2. For activities involving a change in accordance with 10 CFR 50.59 or 10 CFR 72.48 written evaluations, PORC shall **REVIEW** for concurrence with the conclusions reached by the preparer.

4. **PROVIDE** prompt notification to the Site Vice President and the NSRB of any safety significant disagreement between the PORC and the Plant Manager. The Plant Manager shall **FOLLOW** the recommendations of PORC or select a course of action that is more conservative regarding safe operation of the facility.

3.6.2. PORC Review Responsibilities

1. Administrative procedures, program descriptions, and changes thereto for the following:

   a) Applicable station Administrative Procedures recommended in Regulatory Guide 1.33, Appendix A. Refer to Attachment 4 for a standard list of Corporate administrative procedures. Refer to site guidance to determine the PORC review requirements for site administrative procedure changes.

Byron

REFER to station procedure BAP 1210-T4

   b) If there is not clear guidance regarding the need for PORC review of a site administrative procedure change, consult the site Regulatory Assurance Manager as described in step 3.5.1.

   c) The administrative procedure for development of Emergency operating procedures required to implement NUREG-0737 and NUREG-0737, Supplement 1 as stated in Section 7.1 of Generic Letter 82-33.

d) Station Security Plan.

e) Process Control Program (PCP).

f) Off-site Dose Calculation Manual (ODCM).

g) Emergency Plan.

2. Proposed changes (e.g., procedures, modifications to structures, systems and components, tests and experiments) for which written evaluations were completed under the provisions of 10 CFR 50.59 or 10 CFR 72.48.

3. Proposed changes required to be PORC reviewed by other procedures or programs.

Hope Creek and Salem

4. Proposed tests, experiments, and changes or modifications that affect nuclear safety.

5. Proposed changes to Technical Specifications (TS), Technical Specification Bases (if required by the TS Bases Control Program) and the Operating License that require Nuclear Regulatory Commission (NRC) approval prior to implementation.

6. Results of investigations for events and conditions that involve violations (affecting nuclear safety) of the Technical Specifications or the Operating License, covering evaluations and recommendations to prevent recurrence.

7. Results of investigations for events reportable to the NRC via 10 CFR 50.72 (for items affecting nuclear safety), 10 CFR 50.73 or 10 CFR 72.216 covering evaluations and recommendations to prevent recurrence.

8. Results of investigations for any accidental, unplanned or uncontrolled radioactive release covering evaluations and recommendations to prevent recurrence.

9. Performance of special reviews, investigations, and reports thereof requested by the Site Vice President, Plant Manager or Nuclear Safety Review Board.

PEACH BOTTOM

10. Review of major changes to Radwaste treatment system.

11. Startup reviews for plant refueling and forced outages, post trip reviews and post transient reviews as required by OP-AA-108-108 and OP-AA-108-114.

NOTE: Other site programs (e.g. POD, MRC, PHC, MRM, etc) provide for continuing review of plant operations, investigations, and root cause evaluations to assist the Plant Manager in monitoring general plant operating conditions and planning future activities.

12. Other items as identified by the Plant Manager

3.7. Presenter

3.7.1. **ENSURES** items presented to PORC are properly **REVIEWED, PREPARED** and **APPROVED** by a Station Qualified Reviewer (SQR) and the Site Functional Area Manager (SFAM), as required, in accordance with governing procedures.

3.7.2. **ENSURES** a documented nuclear safety analysis has been performed (independent from 10 CFR 50.59 or 10 CFR 72.48 screenings or evaluations).

3.7.3. **PROVIDE** materials to the PORC Coordinator in accordance with established deadline.

3.7.4. **POSSESS** an in depth knowledge of the activity and documents presented.

3.7.5. **ASSIST** the PORC Coordinator in documenting significant concerns and issues raised prior to and during the PORC meeting for inclusion in the minutes.

3.7.6. **OBTAIN** Plant Manager approval, as applicable, after the PORC Chair/Alternate Chair has authorized the recommendation of approval of the activity.

4. MAIN BODY

4.1. PORC Composition

4.1.1. The composition of PORC shall be as follows:

Chair and Alternate Chair	The Operations Director, Maintenance Director, Site Engineering Director, Work Management Director, Shift Operations Superintendent, Regulatory Assurance Manager, or as designated by the Plant Manager
Member	Operations Representative *
Member	Maintenance Representative *
Member	Site Engineering Representative *
Member	Nuclear Oversight Representative #
Member	Regulatory Assurance Representative *
Member	Radiation Protection Representative *
Member	Chemistry Representative *
Member	Work Management Representative*

* These members should be the direct report to the Plant Manager or Site Vice-President unless the direct reports cannot meet Attachment 2 qualifications.

#Though NOS is considered a regular Member of PORC, they may remove themselves as a voting member of PORC to support independent auditing or oversight of PORC functions. This should be coordinated in advance by the NOS member, to ensure a minimum PORC quorum will exist.

4.1.2. The Plant Manager may **APPOINT** additional Members as Primary or Alternates providing they satisfy the Attachment 2 requirements.

1. **APPOINT** PORC Primary and Alternate Members in writing.
2. **INDICATE** approval of PORC Members approved without having required 10 CFR 50.59 qualification.
3. **NOTIFY** PORC Chair/Alternate Chair of PORC Members approved without having required 10 CFR 50.59 qualification.
4. **If** the Plant Manager Chairs the PORC, **then** approval of PORC recommendations shall be by the Site Vice President

PEACH BOTTOM

5. PORC members shall meet the requirements of ANSI 18.1-1971, Sections 4.2, 4.4, or 4.6 for applicable required experience.

4.2. PORC Meetings

4.2.1. Quorum (Except as allowed by Section 4.2.3)

1. A quorum of the Committee exists when all of the following conditions are met:

   a) A PORC Chair/Alternate Chair is present.

   b) At least four additional Members are present, of which at least two must be Primary Members.

      NOTE: It is the expectation that the Primary Members attend PORC meetings, when available. Consistent use of Alternate Members when Primary Members are available for a quorum is not consistent with the intent or purpose of PORC. Also, it is contrary to the intent and purpose of the PORC to have a PORC quorum that consists of a primary and alternate member from the same department. An exception to this is when primary member is the chairperson; in this case it is appropriate to have an alternate voting member from the same department.

   c) Necessary technical expertise is present, as determined by the PORC Chair/Alternate Chair, for review of the subject matter under consideration.

2. To constitute a valid PORC meeting, the quorum must be present at a common location or be in telephone communication.

3. A PORC Member should **RECUSE** him or herself if he or she was principally involved in developing the activity being presented. **NOTIFY** the PORC Chair/Alternate Chair and PORC Coordinator immediately.

4. The individual that prepared or independently reviewed the SQR review of the issue being reviewed by PORC cannot be part of the PORC quorum. The SFAM for the issue may be part of the PORC quorum, provided the SFAM did not also perform the SQR review.

4.2.2. Frequency

1. The PORC shall **MEET** on an as needed basis as convened by the PORC Chair/Alternate Chair.

4.2.3. Walk-around PORC

1. In limited circumstances and at the discretion of the PORC Chair/Alternate Chair, a committee meeting may be waived and the preparer may obtain approval of the proposed change by presenting it to the individual PORC Members as follows:

   a. Provide a proposed quorum consisting of at least the Chair/Alternate Chair and four Members. The quorum shall not consist of more than two Alternate Members. Obtain PORC Chair/Alternate Chair approval to conduct a Walk-around PORC using the proposed quorum.

   b. Distribute the pre-PORC package to the quorum at least two days prior to requesting the PORC Members' approval; otherwise request PORC Chair/Alternate Chair approval of expedited review.

   c. Obtain a Walk-around PORC meeting number from Walk-around PORC log that is maintained by the PORC Coordinator (e.g., WA 04-001)

   d. Discuss the proposed change with the PORC Members and obtain a recommendation for approval or disapproval. The PORC Members shall notify the PORC Chair/Alternate Chair of the result of the review. (e.g., face-to-face, voice mail, email)

   e. Discuss the proposed change with the PORC Chair/Alternate Chair including the results of the other PORC Members votes and comments. Obtain the PORC Chair/Alternate Chair's vote and comments. If approved then have the PORC Chair/Alternate Chair sign the required approval form.

   f. Prepare Walk-around PORC minutes and forward to the PORC Coordinator. The minutes shall include the following information:

      1. Walk-around PORC number

      2. Date of approval

      3. Subject

      4. Presenter name

5. Quorum Member names including the designation as a Primary or Alternate Member and their vote results

6. Issue Summary

7. Summary of Safety Significance

8. PORC Member Comments and Responses

9. Disposition (Approved or Disapproved)

10. Disposition comments

11. PORC Action Items

4.2.3.2. PORC Coordinator attaches the Walk-around PORC minutes to the next set of regular PORC minutes and creates PORC Action Item tracking, if required.

4.3. PORC Review Process

4.3.1. For items that require PORC review, the individual/department responsible for the item **FORWARDS** the appropriate documentation to the PORC Coordinator. The documentation to be provided to PORC for review shall include as appropriate, the nuclear safety analysis, the 10 CFR 50.59 applicability, screening or evaluation, 10 CFR 72.48 evaluation, and other required supporting documentation that **PROVIDES** a description of the change or activity. **If** the item does not require a 10 CFR 50.59 or 10 CFR 72.48 review **then** other supporting documentation shall be provided.

NOTE: The level of review of each item sent to PORC should be commensurate with the potential to affect nuclear safety. Consequently, PORC may elect to assign a Subcommittee consisting of one or more Members, to **ASSESS** the potential effect on nuclear safety for each item and **RECOMMEND** whether a full Committee review is warranted. Refer to Section 4.3.2.

NOTE: The PORC Chair may establish standing Subcommittees.

4.3.2. **If** PORC elects to assign a Subcommittee to **DETERMINE** safety significance of the item before it is presented to the full PORC for review, **then CONTINUE** with Section 4.3.2.1. **If** PORC elects **not** to have this Subcommittee, **then SKIP** to Section 4.3.3.

1. PORC Chair/Alternate Chair **ASSIGNS** Subcommittee to screen items submitted for review based on safety significance.

   a. The Subcommittee shall be composed of one or more PORC Primary or Alternate Members as appointed by the Chair/Alternate

Chair. Expertise from other personnel not directly involved with the item being reviewed may be used by Subcommittee Member(s) as needed.

2. PORC Coordinator **FORWARDS** the required supporting documentation to the Subcommittee for screening per Section 4.3.2.1.

3. Subcommittee shall **COMPLETE** Attachment 3, Nuclear Safety Significance Assessment Form for each item **and FORWARD** the conclusions to the PORC Coordinator.

4. **If** the Subcommittee concludes that the item warrants full PORC review based on the criteria in Attachment 3, **then CONTINUE** with Section 4.3.3.

5. **If** the Subcommittee concludes that the item does **not** warrant full PORC review based on the criteria in Attachment 3, then the PORC Coordinator **INFORMS** PORC during the next available meeting and **DOCUMENTS** those items that were **not** reviewed by the full PORC in the minutes of the meeting.

4.3.3. The PORC Coordinator **INCLUDES** the item in the PORC agenda and **ENSURES** distribution of the required supporting documentation as applicable, to the PORC members for review.

4.4. Presenting Items to PORC

4.4.1. Items presented for PORC consideration should have a manager or designee serving as the sponsor for the item. The sponsor is responsible to **ENSURE** the material being presented to PORC has been adequately prepared and is presented by an individual knowledgeable of the material.

4.4.2. The presenter should use Attachment 1 to **DEVELOP** presentations to PORC.

4.4.3. The presenter should **SCHEDULE** the item for PORC review sufficiently in advance of the PORC meeting to allow for a proper review. Items **not** submitted in advance may be removed from the agenda by the PORC Chair/Alternate Chair.

4.4.4. The PORC Coordinator will **PREPARE** a meeting agenda that includes, as a minimum, the scheduled date and time of the meeting, items to be presented to PORC and the individual responsible for presenting the item (may be waived by the PORC Chair/Alternate Chair).

4.4.5. The PORC Coordinator will **ENSURE** the agenda and accompanying review materials are distributed to PORC members to allow review before the scheduled meeting.

4.4.6. PORC review of unscheduled items is **not** recommended **if** the item can be scheduled on the next PORC agenda.

4.4.7. At the discretion of the PORC Chair/Alternate Chair, documents or action items may be reviewed by the PORC at a regularly scheduled meeting, although the documents or items were not included in the PORC meeting agenda.

4.5. Reviewing PORC Agenda Package

4.5.1. PORC Chair/Alternate Chair and Members should:

1. **REVIEW** the PORC agenda package to gain a thorough understanding of the documents to be reviewed.

2. **FOCUS** review on nuclear safety concerns and 10 CFR 50.59 or 10 CFR 72.48 written evaluations, as applicable.

3. To the extent possible, **RESOLVE** any questions with the sponsor/presenter of the items before the meeting.

4. **ENSURE** consideration of common-mode interactions or failures (i.e., aggregate effect) while performing activities and responsibilities.

4.6. Reviewing Items Presented to PORC

4.6.1. Recommended Approval or Disapproval of PORC Items

1. The PORC shall **RECOMMEND** approval or disapproval for items considered. **DOCUMENT** PORC recommendations in the minutes of the meeting. The PORC Chair/Alternate Chair may allow a conditional recommendation of approval provided the conditions are stipulated in the minutes and satisfied prior to PORC Chair/Alternate Chair signature.

   NOTE: For those items that only require PORC review a statement shall be placed in the minutes to document the review and any substantive comments resulting from the review.

2. The PORC Chair/Alternate Chair may **REMAND** the item for additional analysis or investigation. A remanded item does **not** indicate a recommendation of approval or disapproval.

3. The PORC Chair/Alternate Chair **ENSURES** a majority of the Members present **RECOMMEND** approval or disapproval before submitting to the Plant Manager for approval. Any dissenting opinions by the Members are recorded in the minutes. The Plant Manager is **INFORMED** of the dissenting opinions before approval of the item.

4. **DOCUMENT** a lack of a majority recommended approval vote as disapproval in the PORC minutes.

5. The PORC may **INCLUDE** advisory comments to the Plant Manager concerning nuclear safety, concerning the specific activity, or in general. These comments should be clearly documented in the PORC minutes.

6. The PORC Chair/Alternate Chair should direct that an Issue Report be initiated as required when the thresholds for PORC related activities are met. Refer to LS-AA-120 for PORC related IR thresholds.

4.7. PORC Meeting Minutes

4.7.1. PORC Coordinator or designee shall:

1. **PREPARE** minutes for each meeting. The meeting minutes shall include the following, as a minimum:

   a. Identification of the PORC meeting number and date.

   b. Identification of the PORC Chair/Alternate Chair and voting members, including the member's designation as Primary or Alternate.

   c. A description of each issue reviewed by PORC. This description must be sufficiently detailed, such that an independent reviewer of the PORC meeting minutes, without access to the materials reviewed, can determine the specific issue/activity reviewed by PORC.

   d. A description of substantive questions regarding nuclear safety and the responses to those questions. This description must be sufficiently detailed, such that an independent reviewer of the PORC meeting minutes, without access to the materials reviewed, can determine the specific issue/activity reviewed by PORC.

   e. The recommendation of the PORC quorum regarding the issue, including the basis for the determination that implementation of the issue will not adversely impact nuclear safety.

2. **OBTAIN** approval from the presiding PORC Chair/Alternate Chair.

3. **OBTAIN** Plant Manager approval of the PORC recommendations. The Plant Manager approval may be documented by signing the PORC meeting minutes or an alternative site-specific form may be used.

4. **DISTRIBUTE** the approved PORC minutes to the Plant Manager, Site Vice-President and NSRB.

5. **PROCESS** the original PORC minutes, which are QA records, in accordance with station administrative procedures.

4.8. PORC Action Items

4.8.1. PORC Chair/Alternate Chair shall:

1. **ASSIGN** action items when an issue presented to PORC requires further investigation or follow-up.

2. **INFORM** the PORC Coordinator of the action item assignment and the due date for completion.

3. **APPROVE** extensions for PORC Action Item due dates.

4.8.2. PORC Coordinator shall:

1. **ENSURE** that an action tracking item is initiated in PASSPORT or PIMS documenting the assigned PORC action item.

   NOTE: For those PORC Action Items that are closed prior to PORC Chair/Alternate Chair approval of the PORC minutes, an action tracking item need not be initiated.

2. **ASSIGN** the PORC action tracking item to the appropriate group for resolution.

3. **DOCUMENT** the PORC action item tracking number in the PORC meeting minutes.

4. **TRACK** PORC action items and provide periodic reports to the PORC Chair/Alternate Chair and Plant Manager on overdue items.

4.8.3. Assigned individuals shall:

1. **PROVIDE** resolution for assigned action items in a timely manner.

2. **PRESENT** the resolved issue to the PORC Chair/Alternate Chair.

3. **COMPLETE** the action tracking item associated with the PORC action item upon final approval of the issue by the PORC Chair/Alternate Chair.

5. DOCUMENTATION

5.1. QA Records

5.1.1. The following documents shall be retained in accordance with the requirements of the Records Retention Schedule:

1. Minutes of the PORC meetings.

2. Attachment 2, PORC Member Qualification.

3. Attachment 3, Nuclear Safety Significance Assessment Form.

5.2. Non-QA Records

5.2.1. No non-QA records are created by this procedure.

6. REFERENCES

6.1. Station Commitments

6.2. Quality Assurance Topical Report (QATR), NO-AA-10

1. Chapter 1, Section 2.3.5
2. Chapter 5, Section 2.3.1.1

6.3. Peach Bottom and Clinton

1. Updated Final Safety Analysis Report

6.4. LS-AA-104, "Exelon 50.59 Review Process"

6.5. Braidwood, Byron, Dresden, LaSalle, Quad Cities and Peach Bottom

1. ANSI N18.1

6.6. Clinton, Hope Creek, Limerick, Oyster Creek, Salem, and Three Mile Island

1. ANSI/ANS 3.1

6.7. OP-AA-108-108, Unit Restart Procedure

6.8 OP-AA-108-114, Post Transient Review

6.9. LS-AA-120, Issue Identification and Screening Process

7. ATTACHMENTS

7.1. Attachment 1, PORC Presentation Material

7.2. Attachment 2, PORC Member Qualification

7.3. Attachment 3, Nuclear Safety Significance Assessment Form

7.4. Attachment 4, List of Reg. Guide 1.33, Appendix A Procedures

ATTACHMENT 1
PORC Presentation Material
Page 1 of 2

A. Generic Requirements for Presenting Items to PORC

1. When preparing and presenting an item to PORC, the presenter's supervisor should:

   a) **ENSURE** that the material has received the required independent technical and/or safety review.

   b) **ENSURE** that these reviews include affected organizational reviews and all cross-discipline reviews necessary to fully assess safety considerations. Evaluation areas should cover:

      1. Reactivity Management impact

      2. Design and Licensing Basis impact

      3. Unit Risk Impact (e.g., change in core damage frequency)

      4. Human Performance impact

      5. Offsite/occupational dose impact

   c) **ENSURE** that reviews include sufficient documentation to support the safety impact evaluation.

   d) **ENSURE** that an appropriate basis is provided for any identified corrective actions and that these actions are clearly identified in the document.

B. Recommended Presentation Format

1. New or Revised Procedures, Programs or Plans, or Technical Specifications.

   a) Proposed change.

   b) Difference between existing requirements and the proposed change.

   c) Affect on nuclear safety and basis for that determination.

   d) Regulatory requirements that are impacted and how any discrepancies were resolved.

   e) 10 CFR 50.59 or 10 CFR 72.48 evaluation conclusions or other change process conclusion.

ATTACHMENT 1
PORC Presentation Material
Page 2 of 2

2. Facility Changes

   Present facility changes by describing as applicable:

   a) The facility change and systems affected by the change.

   b) Regulatory and licensing requirements impacted by the change.

   c) The details on how discrepancies were resolved.

   d) Affect on nuclear safety and basis for that determination.

   e) Any limitations (mode of operation, etc.) affected by the change (compensatory measures included).

   f) Any special conditions created or impacted by the change.

   g) 10 CFR 50.59 or 10 CFR 72.48 evaluation conclusion or other change process conclusions.

3. Results of Investigations

   a) Summarize event description, cause and corrective actions and corrective actions to prevent recurrence.

   b) Summarize logic in cause determination.

   c) Describe alignment of causes and corrective actions (e.g., Why are we confident that these actions will be effective?).

   d) Affect on nuclear safety and basis for that determination.

   e) Be prepared to discuss the impact on other units, trains, or similar components.

ATTACHMENT 2
PORC Member Qualification
Page 1 of 1

Site _____

Name		Title
Based on my experience and academic training, I meet the qualifications for the following positions in accordance with ANSI-N18.1 for Braidwood, Byron, Dresden, LaSalle, Quad Cities and Peach Bottom or ANSI/ANS 3.1 for Clinton, Hope Creek, Limerick, Oyster Creek, Salem and Three Mile Island.		
Check the positions below or indicate N/A as applicable		
Plant Manager	**Per ANSI**	
Operations Manager#	**Per ANSI**	
Maintenance Manager	**Per ANSI**	
Technical Manager	**Per ANSI**	
Additional requirements for all members candidates		
I have read and understand the PORC Procedure.		
I have the required 10 CFR 50.59 qualification for PORC membership. *		
I meet the Site specific requirements. (See Section 4.1.2.)		
To the best of my knowledge and belief, the information I have provided is true and correct.		
PORC Member Candidate Signature		Date:
Approved as: Primary Member - Alternate Member (circle one) Plant Manager Approval:		Date:

RECORDS:

Distribution: Original – Records Management

For PORC membership qualifications **only**, the "Operations Manager" is not required to hold an active Senior Reactor Operator's License.

* The Plant Manager may approve a candidate as a PORC member that does not have the 10 CFR 50.59 required PORC qualification, provided this member is restricted from reviewing activities involving 10 CFR 50.59 screenings or evaluations.

ATTACHMENT 3
Nuclear Safety Significance Assessment Form
Page 1 of 1

Item Title: _____

Item Number:_____ Revision No._____

Does the proposed change:		YES	NO
1	Result in a change to a procedure affecting Technical Specifications, ECCS, ESF, or PRA risk significant equipment or systems?		
2	Result in a modification or change to a ECCS, ESF, or PRA risk significant system?		
3	Consist of a major change to the facility and/or a major test or experiment?		
4	Consist of a major change to a plant process?		
5	Change the qualification or operational characteristics of installed components or systems classified as safety related.		
6	Change the nuclear safety response of the plant to normal evolutions, anticipated operational occurrences, or design basis accidents?		
7	Have the potential to reduce the ability of the operator to assess or control the nuclear safety status of the plant?		
8	Result from investigations of significant operational abnormalities including accidental unplanned or uncontrolled radioactive releases?		
9	Increase the potential for a plant trip or present a challenge to safety systems?		
10	Require NRC approval prior to implementation, e.g., TS, Security Plan, Emergency Plan?		
11	10 CFR 50.59/10 CFR 72.48 written evaluation be prepared?		

If any answer to the above questions is "Yes", a full PORC review is required. If all questions are answered "No", a full PORC review is not required. Assumptions must be documented in the Comments Section below.

COMMENTS

(Use additional pages as necessary)

Circle as applicable
THIS ITEM DOES/DOES NOT REQUIRE FULL PORC REVIEW.

PORC Member's Name _____ Department:_____
Print

PORC Member's _____Date:_____
Signature

ATTACHMENT 4
List of Reg. Guide 1.33 Appendix A Administrative Procedures
(This listing contains procedures applicable to all sites. The Site Regulatory Assurance Manager will identify other site-specific procedures requiring review)
Page 1 of 3

Reg. Guide 1.33 Administrative Procedures:

a. Security and Visitor Control

1) SY-AA-101, "Physical Protection Program"

2) SY-AA-101-104, "Revision and Control of Security Plans"

3) SY-AA-101-106, "Control and Classification of Safeguards Information"

4) SY-AA-101-117, "Processing Visitors and Vehicles"

b. Authorities and Responsibilities for Safe Operation and Shutdown

1) OP-AA-101-111, "Roles and Responsibilities of On-Shift Personnel"

2) OP-AA-108-104, "Technical Specification Compliance"

3) OP-AA-108-108, "Unit Restart Review"

c. Equipment Control (e.g., locking and tagging)

1) OP-AA-108-101, "Control of Equipment and System Status"

2) OP-AA-108-103, "Locked Equipment Program"

3) OP-MA-109-101, "Clearance and Tagging"

4) OP-MW-109-101, "Clearance and Tagging"

5) OP-CL-109-101, "Clearance and Tagging"

d. Procedure Adherence and Temporary Change Method

1) AD-AA-101, "Processing of Procedures and T&RMs"

2) AD-AA-102, "Station Qualified Review"

3) HU-AA-104-101, "Procedure Use and Adherence"

ATTACHMENT 4
List of Reg. Guide 1.33 Appendix A Administrative Procedures
Page 2 of 3

e. Procedure Review and Approval

1) AD-AA-101, "Processing of Procedures and T&RMs"

2) LS-AA-106, "Plant Operations Review Committee"

f. Schedule for Surveillance Tests and Calibration

1) Site specific procedure for scheduling of Technical Specification required surveillance tests and calibrations.

g. Shift and Relief Turnover

1) OP-AA-112-101, "Shift Turnover and Relief"

h. Log Entries, Record Retention and Review Procedures

1) OP-AA-111-101, "Operating Narrative Logs and Records"

2) RM-AA-101, "Management of Records"

3) RM-AA-103, "Electronic Records Program"

i. Access to Containment

1) Site specific procedure for controlling access to containment

j. Bypass of Safety Functions and Jumper Control

1) CC-AA-112, "Temporary Configuration Changes"

2) MA-AA-716-100, "Maintenance Alteration Process"

ATTACHMENT 4
List of Reg. Guide 1.33 Appendix A Administrative Procedures
Page 3 of 3

k. Maintenance of Minimum Shift Complement and Call-in of Personnel

1) Site specific procedure for minimum operating shift complement and call-in of personnel.

l. Plant Fire Protection Program

1) CC-AA-211, "Fire Protection Program"

m. Communication Systems Procedures

1) OP-AA-104-101, "Communications"

NUCLEAR OVERSIGHT REGULATORY AUDIT PROCEDURE

1. PURPOSE

1.1. Objective

- This procedure provides direction for the scheduling, planning, preparing, performing, closing, reporting and following up for Exelon Nuclear Oversight (NOS) audits necessary to comply with the requirements of 10CFR50 Appendix B.

1.2. Applicability

- This process meets the requirements of the Exelon/Amergen Quality Assurance Topical Report (QATR) and NQA-1-1994 for Quality Assurance (QA) audits. The audits performed as stated in this procedure verify the effectiveness of Exelon Nuclear Company programs and processes and provide management with information on conditions that potentially affect plant safety, operability, reliability, or productivity.

- The audit scoping process will integrate NOS performance assessment results into the data used in the evaluations performed for the regulatory required audits.

- Audits and assessments satisfy the ISEG/IOSRG function alternative that is now encompassed within the functional responsibilities of the Company's collective program elements, including NOS, and the Nuclear Safety Review Board (NSRB). These reviews are included in the responsibilities that are comprised of oversight activities, system performance monitoring, review of operating experience information, operability evaluations, and review of changes to the Technical Specifications and Final Safety Analysis Report that affect design bases.

- The Master Audit Plans (MAPs), contained within NO-AA-200-002-1001, *Exelon Nuclear Audit Handbook,* detail the regulatory requirements necessary to satisfy the audit requirements for all Exelon Nuclear Company plants.

2. TERMS AND DEFINITIONS

2.1. Acceptable

- The functional area effectively meets all program and process regulatory requirements and implementation is found to be in compliance with the defined processes with no significant programmatic breakdowns

2.2. Adverse Finding

- An adverse finding is identified when any of the following conditions occur:
  - A Significant Condition Adverse to Quality (SCAQ) as defined in the Exelon Nuclear Corrective Action Program or NQA-1-1994 is identified.
  - An issue that typically meets the screening criteria defined for a Significance Level 1 or Significance Level 2 in accordance with the Exelon Nuclear Corrective Action Program.
  - A single event or issue that represents a failure of multiple barriers that could be attributed to departmental or cross-cutting performance failures, and has resulted in adverse consequences with respect to plant and/or personnel safety.
  - The failure of a process, program, or equipment/component/system that results in unacceptable conditions and/or behaviors with resultant adverse consequences to plant and/or personnel performance/safety/operability.
  - A validated adverse trend (more than one event or deficiency) that has the potential to result in significant plant and/or personnel performance issues if left uncorrected with respect to human performance, material condition, or process.

2.3. Adverse Trend

- An adverse trend is identified when any of the following conditions occur:
  - If continued, will result in exceeding the limits of acceptable performance criteria
  - If it indicates a repetitive occurrence of conditions which do not show a positive response to previous recommendation / actions
  - If it is likely to have resulted from an undetected deficiency in the affected area
  - If it is a marked increase in adverse indications attributable to an organization and not attributable to increased oversight

2.4. Area Requiring Management Attention (ARMA)

– An "ARMA" indicates that the criterion or a specific attribute within a criterion requires management attention to improve performance in this area. It is a collegial determination of performance by the ATLs, based upon objective evidence, indicating that management attention is needed to bring the element or attribute up to required standards. This does not mean the functional area is unacceptable or does not meet regulatory requirements. Any area in which a site-specific finding was issued is automatically an ARMA. A fleet-wide common finding may not result in an ARMA at a particular site. Attributes to consider for rating a criterion or attribute as an ARMA include the following:
  - Procedures do not exist or have significant problems with clarity and/or accuracy
  - Non-compliance with procedures is pervasive
  - There is a lack of evidence of involvement by management
  - Self-assessments are not being conducted or are cursory
  - Corrective actions are not timely, complete, or do not solve the problems

2.5. Audit

– A planned and documented activity performed to determine by investigation, examination, or evaluation of objective evidence that applicable regulatory requirements committed to within the quality assurance program have been developed, documented and effectively implemented in accordance with specified requirements, procedures, instructions, drawings, and other applicable documents.

2.6. Audit Team Leader (ATL)

– An individual who meets the certification requirements of Lead Auditor per the Exelon/Amergen QATR and NQA-1-1994, and is qualified to plan, perform and direct an audit, report issues, create reports, and evaluate corrective actions. An ATL will be assigned for each regulatory required audit.

2.7. Audit Template

– An Audit Template is designed to develop a standardized and consistent approach to gather objective evidence that will allow NOS to ensure that the Company is meeting regulatory requirements. Audit Templates augment and support the audit process by providing additional information to auditors, suggested methods of verification, recommended sample methods, and regulatory bases. Audit Templates include element designations to facilitate cross-referencing of observations with the MAP. Audit Templates include the Elements and Attributes as defined in the MAP for auditing the performance of various functional area activities, programs and processes. The criterion used to evaluate the effectiveness of these elements includes regulatory (i.e. federal, state, and local) and industry specific requirements.

2.8. Audit T&RMs

- Training and reference material that contains guidance regarding the performance and documentation of audits, data analysis, and objective evidence.

2.9. Auditor

- An individual who has experience or training commensurate with the scope, complexity, or special nature of the activities being audited and received appropriate orientation to audit an activity/subject area. This qualified individual shall perform audits under the direction of an ATL.

2.10. Audit Plan

- A document used to describe and document approval of a planned audit subject, duration, and scope, and to convey this information to the management of the audited/ assessed organization as well as other interested parties.

2.11. Audit Cycle

- As stated within the QATR requirements this is the duration in which all regulatory requirements are audited. This frequency is 2 years for all regulatory requirements except those associated with EP and Security, which are a 1-year frequency, and NSRB activities that are audited on a 5-year frequency. An audit cycle begins at the end of the last audit and the start of the next audit.

2.12. Condition Adverse to Quality (CAQ)

- An all-inclusive term used in reference to any of the following:
  - Failures
  - Malfunctions
  - Deficiencies
  - Defective items
  - Nonconformances

2.13. Deficiency

- A condition or concern that does not meet specific requirements of procedures, T&RMs, policies, process descriptions, department descriptions, management expectations, or professional standards. A CAQ is typically a deficiency. A deficiency typically meets the screening criteria defined for Significance Level 4 in accordance with the Exelon Nuclear Corrective Action Program.

2.14. Enhancement Opportunity

– Identified performance meets agreed upon standards, but a potential exists for performance improvement or enhanced standards. Concurrence from the NOS Manager or Lead ATL should be received if the enhancement opportunity is not documented in the Corrective Action Program.

2.15. Evaluate (or Data Analysis)

– The act of examining or judging a supporting attribute in order to fulfill the MAP requirement. This may be accomplished through auditing the supporting attribute, review of NOS observations, line organization self-assessments, CAP trend data, field observation (FO) trend data, and performance indicators. Conclusions cannot be based solely on observations by organizations other than NOS.

2.16. Finding

– A finding is a Condition Adverse to Quality (CAQ) that typically meets the screening criteria defined for Significance Level 3 in accordance with the Exelon Nuclear Corrective Action Program. It can also be an identified gap between performance and standards having actual or potential impact as listed below and requires an evaluation, corrective actions, and follow up by NOS. A finding can also be an event precursor, where the gap represents a breakdown of a quality program element or lack of adequate quality controls. A finding is identified when any of the following conditions occur:
  - Failure to comply with regulatory requirements and commitments.
  - Ineffective corrective actions with respect to a previously identified NOS finding or deficiency.
  - A situation adversely impacts the health and safety of the public or environment
  - A situation adversely impacts reliability, availability, or maintainability of the equipment or facility

– Examples of conditions which may warrant a finding include:
  - Deficiencies in design, manufacturing, construction, testing, or process requiring substantial rework, repair, or replacement
  - Damage to a structure, system, component, or facility requiring substantial repairs
  - Loss of essential data or records
  - Repeated failure to correct a known deficiency

2.17. Follow-up

– Activity used to evaluate adequacy and timeliness of corrective actions, extent of condition determinations, and applicability of any other issues from other sites or sources. Follow-up is required for audit and performance assessment findings / adverse findings, NOS Escalated / Elevated issues, and audit areas rated as ARMA. Areas rated as ARMA are followed-up in accordance with NO-AA-200-003. Follow-up activities to evaluate performance may also be assigned / performed based upon, but not limited to the following inputs:
  - Audit / Performance Assessment deficiencies
  - NOS Manager's top three site issues
  - Problem Development Sheet (PDS) identified issues
  - Daily review / input of Issue Reports (IR) in the Station Issue Matrix (SIM)
  - NOS missed opportunities and Event Clock Resets
  - NSRB comments / concerns / issues
  - INPO / WANO Areas for Improvement (AFI)
  - NRC comments / concerns / issues
  - Internal / External OPEX
  - NOS Vice President (VP), NOS Performance Assessment Director, NOS Audit and Programs Director or NOS Manager requests

2.18. Functional Area

– Specific organizational areas in which the MAPs are categorized for evaluation during the audit process (i.e. Operations, Maintenance, Engineering, Work Control, and Plant Support).

2.19. Improvement Required

– A corporate comparative audit report rating that typically is identified when the following conditions occur:
  - One core audit area has an ARMA rating; or
  - One finding was issued.

2.20. Master Audit Plan (MAP)

– A series of documents contained within the NO-AA-200-002-1001, *Exelon Nuclear Audit Handbook* that define the regulatory and programmatic requirements needed to satisfy the audit requirements for the Exelon Nuclear Company plants.

2.21. Master Audit Schedule (MAS)

- The schedule that identifies during which audit period each regulatory requirement is planned to be audited at each site. The MAS will nominally cover a two year audit cycle or as directed by the NOS VP or Director of Audits and Programs. The schedule should be reviewed annually and the regulatory cycle should be updated to reflect the start date of the next audit. This may be tracked on a schedule by the Director of Audits and Programs or Audit Manager, or in Action Tracking.

2.22. Meets Expectations

- A subjective determination of performance by the ATL, based upon objective evidence that the audited element or attribute meets expectations and minimum requirements. This element or attribute is not deficient even though CRs may have been written on issues identified while auditing per the templates.

2.23. Objective Evidence (OE)

- Any documented statement of fact, other information, or record, with quantitative or qualitative data, pertaining to the quality of an item or activity, based on observations, measurements, or tests that can be verified. Objective evidence shall be examined to the extent necessary to determine that a quality system is being effectively implemented.

2.24. Performance-Based Techniques

- An approach to auditing that analyzes and evaluates with an emphasis on safety and reliability. This technique includes observation and evaluation of activities that impact reliability and safety while verifying regulatory and programmatic compliance and effectiveness of implementation.

2.25. Regulatory Requirement

- These are the requirements of a program or process that shall be audited in accordance with regulations and are important to plant safety, reliability, and product quality or activities. Regulatory requirements are listed in the scope of a MAP and shall be audited to meet the minimum audit requirements of the QATR. These regulatory requirements are audited on a frequency that is in accordance with the requirements of 10CFR50 Appendix B and stated in the Exelon/Amergen QATR.

2.26. Risk Informed

– A process that focuses attention on design and operational issues commensurate with their importance to public health and safety through the use of site specific Probabilistic Risk Assessments (PRAs) and Probabilistic Safety Assessments (PSAs) for selection of structures, systems, and components (SSCs) and plant activities.

2.27. Satisfactory

– A corporate comparative audit report rating that typically is identified when the following conditions occur:
  - No DMNE ratings; and
  - No findings; and
  - No adverse findings.

2.28. Significant Condition Adverse to Quality (SCAQ)

– A condition, which if left uncorrected, could have a serious effect on safety or operability.

2.29. Significant Improvement Required

– A corporate comparative audit report rating that typically is identified when the following conditions occur:
  - Two or more core audit areas have ARMA ratings; or
  - Two or more findings were issued; or
  - One adverse finding was issued.

2.30. Site-specific Audit Schedule

– The site-specific audit schedule identifies the start and end dates for each discrete audit activity at each site. The schedule covers the calendar year and identifies the ATL and team members for each audit. The site-specific audit schedule implements audits at time periods, which meet the requirements of the MAS.

2.31. Strength

– A program, process, or activity that has exceeded standards and has demonstrated positive results.

2.32. Technical Specialist

– An individual with expertise in a specific discipline who is utilized to supplement an assessment or audit team. Technical specialists shall work under the direction of the Assessment or Audit Team Leader. Technical specialists shall be oriented in accordance with NO-AA-101-1003, *Technical Specialist Orientation*, prior to performing assessment or audit activities. Technical specialists shall be independent of activities assessed or audited and shall not be accountable to the organization assessed or audited during the assessment or audit, nor shall they assess or audit activities they have performed. Technical specialist orientation documentation shall be maintained in accordance with NO-AA-1022, *NOS Records Management*.

2.33. Trend Analysis

– The process of reviewing and evaluating information related to deficiencies, causes, events, and/or performance indicators, occurring in given periods of time, to identify adverse performance trends.

2.34. Unacceptable

– The functional area program and/or processes are ineffective and do not meet the regulatory requirements, and/or the processes are not implemented to the degree that defined regulatory elements are being met.

3. RESPONSIBILITIES

3.1. NOS VP

Shall be responsible for the following:

- Conducting a periodic review of the audit program using an independent organization to assure that oversight of QA Program implementation is effective and audits are being accomplished to program requirements.
- Periodically apprising the President, CNO, and the Nuclear Safety Review Board of the status of the quality assurance aspects at Company facilities and immediately apprise them of significant problems affecting quality.
- Certifying authority for NOS Audit personnel. This function may be delegated to designated staff.
- Verifying implementation of solutions for Level 1 and 2 Condition Reports

3.2. NOS Audit and Programs Director

Responsible for the administration, implementation, and coordination of the NOS Regulatory Audit Program for the Exelon fleet. Shall be responsible for the following:

- Formulating, developing, and establishing audit program for such areas as operations, maintenance, modifications, in-service inspection/testing, surveillance testing, fuel handling, health physics, chemistry, radiological environmental monitoring, meteorological monitoring, fire protection, physical security, emergency preparedness, radioactive waste and material, independent spent fuel storage, training, procurement, records, non-conformances, and corrective action in accordance 10CFR50 Appendix B requirements and as stated in the Exelon/Amergen QATR.
- Developing, maintaining and approving the audit schedule and templates that provide oversight of common programs and processes in accordance with the requirements as stated in the Exelon/Amergen QATR.
- Providing NOS and Site VP's periodic reports of the results of the Regulatory Audit Program including a Corporate Comparative Audit Report of regulatory required audits, as determined appropriate by the NOS Audit and Programs Director.
- Determining the on-going status and adequacy of the Regulatory Audit Program through regular review of NOS activities.
- Ensuring that personnel involved in implementing the NOS audit procedures are trained and/or qualified, as appropriate.

- Maintaining and updating the MAS as necessary to ensure that all audits are performed within required periodicity but do not affect normal operations at the sites.

- Coordinating audit resources with external groups (i.e. NIEP), other utilities and contract services (i.e. Fire Protection consultants) necessary to complete the auditing requirements.

- Assuring the Regulatory Required audit teams are staffed with qualified ATLs and auditors

- Reviewing and approving Corporate Comparative Audit Reports

- Compiling and analyzing the Site Audit Reports to determine fleet compliance with quality requirements

3.3. NOS Audit Manager

Management position responsible to head and oversee NOS audit activities at the plants as well as vendor audits and surveys. The NOS Audit Manager position is also responsible for coordination of vendor audit activities in accordance with NO-AA-500. The NOS Audit Manager position is also responsible to prioritize and communicate audit issues to appropriate senior management and for the resolution of these issues. Shall be responsible for the following:

- Providing recommendations for correcting program deficiencies or improving the implementation of the audit process.

- Evaluating the general performance of the NOS Audit Team Leaders and auditors.

- Periodically apprising Exelon senior executive management of the status of the audit process at their respective plants, and immediately apprise them of significant problems affecting safety.

- Supporting the Regulatory Requirement's Audit process with site resources.

- Reporting audit results to applicable site and corporate management.

- Ensuring follow-up activities to audit findings are assigned and performed.

3.4. Site NOS Manager

Shall be responsible for the following:

- Responsible for supporting the Regulatory Audit Program.

- Ensuring support and implementation of the Site Specific Audit Schedule.

- Ensuring site is informed of upcoming audits.

- Ensuring audit plans are distributed as appropriate.
- Reviewing on-going audits and associated issues.
- Ensuring appropriate Site Managers are invited to audit entrance and exit meetings.
- Reviewing the site audit reports, resolving any differences with the ATL, signing the final audit report signifying acceptance of the results, and issuing the report within three working days after the audit exit, but no later than ten working days after the audit exit. Ensuring a copy of the report is added to the shared drive audit folder.
- Ensuring audit results are presented to appropriate Site and NOS management personnel.
- Providing feedback to NOS Audit and Programs Director, Audit Team Leaders and audit team members on the performance of audits. This may include feedback from the evaluated organization.
- Interfacing with the Nuclear Safety Review Board (NSRB) relative to NOS audit activities.
- Ensuring audit requirements are met.
- Providing periodic reports to the, NOS Audit and Programs Director on the status and adequacy of the audit program and teams.
- Determining which Issue Reports within the CAP should receive post-closure follow-up verification.
- Imposing Stop Work authority.
- Issuing escalation letters as a result of audit activities.

3.5. Audit Team Leader (ATL)

An individual who meets the certification requirements of a Lead Auditor. Shall be responsible for the following:

- Developing and approving the Audit Plan prior to the audit that they are responsible to execute.

- Soliciting line management input in the areas being audited (prior to the commencement of the audit) to incorporate audit scope recommendations from line management. This will be accomplished during the audit preparation by ensuring that the regulatory requirements of the programs to be audited are identified and that the interfaces with their site counterparts, and the respective line organization management are established to obtain the required input. This information is captured in the Audit Plan and results in the Audit Report.

- Determining the need for and arranging for the participation of Technical Specialist(s). The audit templates have been created by Subject Matter Experts and are written so any qualified auditor should be able to verify the regulatory requirements. The templates are also reviewed against current regulations prior to the audit. This extensive verification and validation process minimizes the requirements for Technical Specialists.

- Ensuring that the team collectively has the experience or training necessary for the activity/subject being audited and is independent of the area being audited.

- Providing orientation, indoctrination, guidance, and just-in-time training to audit team members and technical specialists.

- Conducting an entrance meeting.

- Reviewing objective evidence and approving all adverse findings, findings, deficiencies, and enhancements resulting from the audit.

- Contacting the Site NOS Manager, the Audit and Programs Director, the Audit Manager and the applicable Lead Corporate ATL for a collegial review of any finding or adverse finding. The intent is to ensure the issue is properly classified and consistent across the fleet.

- Coordinating team member activities, evaluating audit results and emerging issues for significance and the need for further investigation.

- Informing NOS and line management of the audit progress and results. This occurs as required, based on the severity of the findings or adverse findings generated during the audit. Issues identified that have the potential for affecting nuclear safety are provided to the site management, up through the Site VP and through the NOS VP who has a direct reporting relationship with the company CNO.

- Conducting an exit meeting.

- Preparing a draft audit report prior to exiting the site and giving it to the site NOS manager. At the discretion of the NOS Manager, a copy of the draft audit report may be given to the responsible line manager for validation of factual information only.

- Approving the final audit report signifying review and acceptance of the objective evidence.
- Ensuring the site NOS manager signs the final audit report, signifying acceptance of the results, and the audit report is appropriately distributed.
- Ensuring that the audit is performed in accordance with the Audit Plan.
- Analyzing data.
- Ensuring that all Audit Plans and Audit Reports are retained as quality documents.
- Ensuring that the audit AR (and other related ARs) is closed as scheduled after the audit.
- Providing feedback to the audit team during all phases of the audit.
- Preparing the audit exit summary presentation for the audit exit meeting.
- Collaborating with the other ATLs to create the Corporate Comparative Audit Report at the completion of the specific audit topic. One ATL will take the lead role.
- Providing feedback on auditor performance to the appropriate ATL from the auditor's reporting site at the end of each audit.
- Performing audit finding follow-up activities.

3.6. Audit Team Members

Shall be responsible for the following:

- Assisting with the preparation of the audit plan for each site prior to the commencement of the audit process.
- Reviewing audit templates prior to audit performance.
- Performing observation activities to support audits.
- Providing accurate and documented objective evidence on the areas audited.
- Assisting in the preparation of audit reports and data analysis.
- Developing issues and submitting documentation to the corrective action process, as appropriate.
- Providing real-time feedback to the organization being audited. This includes workers, FLS, and managers.

4. **MAIN BODY**

4.1. Master Audit Plan (MAP)

4.1.1. A MAP is the tool that implements the MAS

- Regulatory requirements, and the suggested methodology to audit for compliance are contained in the MAPs.
- All regulatory requirements shall be audited within the required frequency as required by the MAS.
- When conducting an increased frequency audit because of previously identified performance shortfalls, not all regulatory requirements have to be audited, but only the regulatory requirements deemed necessary based on the performance shortfalls. Justification for the limited audit scope should be documented in the audit sample plan.

4.2. Master Audit Schedule (MAS) and Site-Specific Audit Schedules

4.2.1. The NOS Audit and Programs Director or Audit Manager shall prepare and maintain the MAS.

- The MAS is reviewed and approved by the NOS Audit and Programs Director.
- The MAS shall include the regulatory required audits identified in Attachment 1 that will be audited and the audit start and completion dates.
- The MAS may include additional audits, or increased frequency audits, based on performance shortfalls.
- The MAS will nominally cover a two year cycle or as directed by the NOS VP or NOS Audit and Programs Director. A review of the audits performed should take place annually to ensure regulatory requirements are being met.

4.2.2. Site-specific schedules are generated to implement the requirements of the MAS. The Audit and Programs Director or Audit Manager approve site-specific audit schedules. Once generated, the NOS Audit and Programs Director or Audit Manager and the Site NOS Manager shall review site-specific schedule each quarter.

- The review should take into consideration the site refuel outage schedule, MRMs, NSRB schedules, Operating License Exams, the line self-assessment schedule as well as U.S. Nuclear Regulatory Commission and INPO inspection and assessment activities when being developed. This will enhance the combined oversight process at the station and maximize efficiency. The site-specific audit schedule will reflect these activities where audit resources are scheduled to support them.

- The review shall confirm that all audits are scheduled correctly within the periodicity defined in the MAS. Periodicity is the time between the previous audit entrance and the next audit entrance in calendar months (e.g. the scheduled entrance meeting is in the same calendar month as the previous entrance meeting with an allowance of a 6 month grace period for 24 month audits and a 3 month grace period for 12 month audits).

- The review should include consideration for evaluating additional regulatory requirements or supporting requirements based upon major program or performance changes that could impact safety. This review shall include site performance indicators including, but not limited to, security and emergency preparedness, past audit reports, and any other data the Site NOS Manager deems relevant. This review should be documented.

4.2.3. NOS Audit and Programs Director or Audit Manager, Site NOS Managers and ATLs shall ensure MAS frequency requirements are met and do not exceed the required periodicity established by the MAS.

4.3. Audit Planning

4.3.1. The ATL shall prepare a written audit plan. The Audit Handbook contains an example of an audit plan. The plan shall include the following:

- Issuance date
- Organizations notified
- Purpose/Scope (including management input)
- Audit period date
- Tentative audit period exit meeting date
- Team composition
- Related standards
- Regulatory Requirements to be audited, including follow-up from previous audits
- ATL approval signature
- Distribution list

4.3.2. The method in which performance is verified should be performance-based and risk informed.

1. Verification should target samples based upon risk insights from site specific PRA/PSA for selection of structures, systems, and components (SSCs) and plant activities.

2. SSCs and plant activities should be selected based upon their relative significance as indicated in the PRA/PSA insights for:
   - Dominant accident sequences and their contribution to core damage frequency and significant release frequency.
   - Accident initiators, components, systems, and operator actions ranked by importance measure.

3. On-line maintenance, surveillance, plant modifications or changes in equipment performance history may significantly change the importance of SSCs or accident sequences. Therefore, audit planning must be flexible in consideration of changing plant conditions.

4.3.3. The Audit Plan should be communicated to the appropriate line manager, and others as required prior to the audit performance. Communications should include as a minimum; the approved plan, audit team members, and schedule.

4.4. Audit Preparation

4.4.1. The ATL shall ensure that each team member is prepared and has received training (if appropriate) to audit their assigned topical areas prior to the start of the audit including:

- Applicable baseline regulatory requirements for audited area
- The audit scope with particular emphasis on assigned areas and the method which performance will be verified
- Procedures and templates relating to the areas being audited
- Previous audit and assessment results
- A review of applicable line self-assessments
- Licensee Event Reports, NRC violations, OPEX, OEAP data, Nuclear Event Reports (NERs), and INPO evaluations that relate to the audit.
- Corrective Action Program
- Trend reports
- Audit Performance

4.4.2. As appropriate, the ATL will provide and document orientation and indoctrination for audit team members including Technical Specialists.

- The ATL should consider including the following topics as part of the orientation and indoctrination:
  - A description of the audit process
  - Applicable baseline regulatory requirements for audited area
  - Just-in-time training

4.4.3. The ATLs will coordinate and ensure a verification and validation of the audit templates prior to their use in the audit.

4.5. Audit Implementation

4.5.1. The ATL shall conduct the audit in accordance with the approved Audit Plan.

- Audits should, when appropriate, observe actual performance in addition to review of the records that result from the activity.
- Elements or Attributes that require management attention (i.e. ARMA) shall be documented in accordance with the Corrective Action Program thresholds.
- Conditions requiring prompt corrective action shall be reported immediately to line management and Site NOS Manager.

4.5.2. Audit team members shall keep the ATL apprised of all activities performed and maintain the appropriate interface with the line organizations being audited.

4.5.3. The ATL should meet with the site functional area manager at a frequency agreed upon at the entrance meeting (preferably daily) to discuss current audit status. Pre-exit debriefs may occur during these meetings.

4.5.4. The ATL should inform the line management and the Site NOS Manager of all identified issues prior to the formal exit.

- When a possible finding or adverse finding is identified, the ATL should contact the Site NOS Manager, the Audit and Programs Director, the Audit Manager and the applicable Lead Corporate ATL for a collegial review of the issue. The intent is to ensure the issue is properly classified and consistent across the fleet.
- If the audit identifies additional examples of conditions that are encompassed within an existing open NOS finding, then issuance of a new finding is not required. The additional examples should be entered into the corrective action program with reference to the existing finding.

4.5.5. All objective evidence and evaluations should be documented in a timely manner.

- Entries shall be sufficiently detailed to provide a complete record of the investigation and provide objective evidence that acceptance criteria have been met for the item reviewed.
- Data should include methodologies, acceptance criteria, items reviewed and sampling techniques, and personnel contacted.
- If a functional area is suspected to be unacceptable, the ATL shall discuss the issues with the Site NOS Manager and the NOS Audit and Programs Director or Audit Manager prior to making that declaration.

4.5.6. An exit meeting for each audit shall be conducted with appropriate line management.

- The exit meeting should include an executive summary (including an evaluation of functional area performance as acceptable or unacceptable), an explanation of all issues, and any element or attribute rated as an ARMA.
- Attendance shall be documented.

4.6. Audit Closure

4.6.1. The ATL shall ensure all required audit documentation is completed.

- Forwarding the signed audit report and other requisite documentation (e.g. audit plan, etc.) to the NOS Manager for submittal to Records Management.
- Ensuring completion of all audit related OE.
- Ensuring completion of all audit related ARs.

4.7. Audit Follow-up

4.7.1. Finding follow-up shall be performed for each audit finding and adverse finding. In addition:

- Adverse findings shall:
  - Be given strong consideration to perform a full Root Cause Evaluation by the assessed organization's management
  - Have scheduled corrective actions including measures to prevent recurrence
  - Have actions taken or planned, identified in writing
  - Findings shall have the same actions as adverse findings; however, the investigation may be performed by completion of an ACE or similar cause determination investigation

4.7.2. All Issue Reports (IRs) written for findings or adverse findings should have the following recommendations included in the body of the IR: significance level, investigation classification, actions as stated in step 4.7.1, and a statement to determine why the finding was not identified or corrected prior to the audit. Clearly state in the body of the IR that the issue is considered an NOS Finding or Adverse Finding and the requirements for addressing this classification are contained within this procedure.

4.7.3. All findings or adverse findings shall have an ATL assigned to evaluate the adequacy of the responses from the assessed organization and verify the corrective actions are accomplished as scheduled. Action Tracking Assignments shall be created and assigned to an ATL to track and document the following activities:

- The thoroughness of the cause determination, completion of corrective actions as applicable, adequacy of completed corrective actions, and actions to prevent recurrence should be evaluated in the follow up.
- The corrective actions commitments (effectiveness) shall also be evaluated by an ATL. This action may be accomplished during the next audit preparation activities.

4.7.4. All comparative roll-up issues shall have an ATL assigned to evaluate the adequacy of the responses from the assessed organization and verify the corrective actions are properly established. Action Tracking Assignments shall be created and assigned to an ATL to track and document the following activities:

- The thoroughness of the cause determination.
- The appropriateness of the corrective actions to address the fleet-wide issue.

4.8. Audit Reports

4.8.1. A site-specific audit report will be issued for each audit performed. At the conclusion of each site audit, a draft audit report shall be provided to the Site NOS Manager prior to the ATL leaving the site. At the discretion of the NOS Manager, a copy of the draft audit report may be given to the responsible line manager for validation of factual information only. The Audit Handbook contains an example of an audit report. The report will include the following information at a minimum:

- Title
- Date of issuance
- Addresses
- Executive summary (Contains a functional area effectiveness statement of Acceptable or Unacceptable regulatory performance)
- The audit scope
- Summary of audit results (includes adverse findings/findings, deficiencies, strengths, and enhancements)
- Deviations from the Audit Plan
- Element/attribute summaries which contain an evaluation statement (Meets Expectations or are ARMAs) for all elements audited (this should align with program elements found in each respective MAP)
- Attachments:
  - Identification of Personnel contacted during audit (includes audit team members)
  - Audit Plan

- The report should also refer to the action tracking number that contains all of the supporting information relative to the audit (i.e. sample plan, audit plan, audit preparation report, OE reports, technical specialist orientation, etc.).

- Safeguards information should not be placed in an audit report. However, if safeguards information must be included, then the report shall be controlled in accordance with applicable security procedures.

- The NOS Manager will review the report and typically issue it within three working days of the audit exit, but no later than ten working days after the audit exit.

4.9. Corporate Comparative Audit Report

4.9.1. The assigned ATLs will prepare a Corporate Comparative Audit Report for audits performed that incorporate the fleet results of the audited areas, as determined appropriate by the NOS Audit and Programs Director. This comparative report will include the results of each site audit summarizing fleet performance.

4.9.2. Completed Corporate Comparative Audit Reports should include the following information at a minimum:
- Title
- Date of issuance
- Fleet executive summary
- Comparative analysis results
- Enhancements / Strengths (if any, otherwise don't include the topic)
- Site audits comparison
- Insights
- Site differences analysis
- Addressing site deficiencies
- Comparative graph or chart
- Individual site results
- NOS Audit Manager approval

4.9.3. The draft corporate comparative audit report shall be routed to the NOS Audits and Programs Director, Audit Manager and Corporate ATLs for an initial review. A conference call among the reviewers and the preparers of the report should be conducted prior to the challenge board to ensure comments are understood and recommended changes are made.

NOTE: The definitions for Satisfactory, Improvement Required and Significant Improvement Required ratings are meant to provide a starting point for the ATLs analysis, not the final decision for classification.

4.9.4. After incorporation of comments and changes resulting from the initial review, a challenge board should be performed within 10 to 14 working days of the last audit exit by the NOS Performance Assessment Director, Lead Corporate Assessor, NOS Audit and Programs Director, Audit Manager, and applicable ATLs of the draft corporate comparative audit report.

NOTE: The ATL responsible for the comparative report should schedule the challenge board well in advance to ensure participant availability.

4.9.5. After incorporation of comments and changes resulting from the challenge board, the report should be forwarded to the Site NOS Managers as a draft copy for a face-to-face review with their Site Vice Presidents to solicit comments for input. The intent is to have no surprises. A draft copy should also be forwarded to the NOS VP.

4.9.6. Comments raised by the NOS Managers and Site Vice Presidents should be addressed by the ATL(s) that prepared the report. If deemed valid, they shall be incorporated into the report. If the comments are not deemed valid by the ATL, contact the NOS Audit and Programs Director, Audit Manager, and Corporate ATLs for resolution.

4.9.7. The Lead ATL completes the report and forwards it to the Audit Manager for approval.

4.9.8. The final report shall be signed and distributed within 30 days of the last audit exit or as approved by the NOS Audit and Programs Director. Distribution should be in accordance with the standardized distribution list.

4.10. Corporate Audits

- Audits are performed of corporate functions, such as Security, FFD, CAP, EP, and NFS in accordance with the MAP. Sub-attributes of the selected templates that may not be applicable to the corporate functions may be marked "N/A" in the verification section of the objective evidence. The duration of these audits is defined within the MAS and shall use the following sections of this procedure:

- Audit Planning

- Audit Preparation

- Audit Implementation

- Audit Closure

- Audit Follow-up

- Audit Reporting

- Corporate Comparative Audit Report

5. DOCUMENTATION

5.1. All documentation initiated through this procedure is maintained in accordance with the applicable implementing procedures and the Exelon Nuclear Standard Record Retention Schedule.

5.2. Audit comparative reports shall be maintained in action tracking.

6. REFERENCES

6.1. Station Commitments

None

6.2. User References

6.2.1. NO-AA-21, *Nuclear Oversight Audit Process Description*

6.2.2. NO-AA-200-002-1001, *Exelon Nuclear Audit Handbook*

6.2.3. NO-AA-200-002-1002, Nuclear Oversight Audit Templates

6.2.4. NO-AA-101, *Nuclear Oversight Training Program Description*

6.2.5. NO-AA-101-1003, *Technical Specialist Orientation*

6.2.6. NO-AA-1022, *Nuclear Oversight Records Management*

6.2.7. NO-AA-1024, *Nuclear Oversight Documenting Objective Evidence*

6.2.8. RM-AA-101, *Records Management Program*

6.2.9. 10CFR50, Appendix B, Criteria XVI and XVIII

6.2.10. NO-AA-10, *Exelon/Amergen Nuclear Standard Quality Assurance Topical Report*

6.2.11. NQA-1-1994, *Quality Assurance Program Requirements for Nuclear Facilities*

6.2.12. NRC letter dated October 24, 1996, *Review of NEI Proposed Improvements to Quality Assurance Programs* (Reference NEI Letter dated January 30, 1996)

6.2.13. NUREG 0737, *Clarification of TMI Action Plan Requirements*

7. ATTACHMENTS

7.1. Attachment 1, Regulatory Required Audits

Attachment 1
Regulatory Required Audits

Audit	QATR Appendix B Requirement
Chemistry, Radwaste, Effluent and Environmental Monitoring	Parts b, d, g, h, i, and j
Corrective Action Program	Parts c and d
Document Control and Quality Assurance Records	Parts b, d, and k
Emergency Preparedness	Parts b, d, and m
Engineering Design	Part d
Engineering Programs and Station Blackout	Parts b, d and t
Fire Protection	Parts d, e, and f
ISFSI	Parts d and o
Maintenance Functional Area	Parts b and d
Materials Management and Procurement Engineering	Part d
Nuclear Safety Review Board	Part n
Nuclear Fuels	Part d
Operations Functional Area	Parts a and d
Radiation Protection	Part d and u
Security Plan, FFD, Access Authorization, and PADS	Parts b, d, l, p, q, and s
Surveillance and Test Program	Parts a, b and d
Training and Staffing	Parts b and d
Zion Station	Part r

Notes:
1. The Emergency Preparedness audit is performed every year.
2. The Security Plan, FFD, Access Authorization, and PADS audit is performed every year with the Access Authorization and PADS templates performed every other year for a biennial frequency for each.
3. The Zion Station audit is performed every year.
4. The NSRB audit is performed every five years.
5. All other audits are performed every two years.

REVISION, CONTROL, AND DISTRIBUTION OF SECURITY PLANS AND IMPLEMENTING PROCEDURES/T&RM

1. PURPOSE

1.1. This procedure provides direction for the revision, control, and distribution of the company's Station Security Plans and implementing procedures/T&RM.

1.2. This procedure is applicable to all operating Exelon Nuclear Stations.

2. TERMS AND DEFINITIONS

2.1. **Exelon** - This term applies to Exelon, AmerGen, and PSEG locations when used within this procedure.

3. RESPONSIBILITIES

3.1. Designees are responsible for duties as delegated and assigned. Position titles used in this procedure include designees unless otherwise specifically stated.

3.2. The Director, Nuclear Security shall maintain one copy of all past and current approved Nuclear Station Security Plans for all Exelon nuclear stations.

3.3. The Director, Nuclear Security shall coordinate and approve general revisions to the security plans and implementing procedures/T&RM.

3.4. The site Manager, Nuclear Security shall coordinate and approve station specific, initial and revisions, to implementation of procedures/T&RM.

3.5. The site Manager, Nuclear Security shall present proposed revisions to security plans and implementing procedures/T&RM to the security peer group.

3.6. The Director, Nuclear Security shall maintain the Station Security Plan Transmittal Log, Attachment 1.

3.7. The Director, Nuclear Security shall coordinate with Licensing and Regulatory Affairs to ensure timely submittal of revision approval requests and reports of changes implemented without prior NRC approval.

3.8. The Corporate Functional Area Manager (CFAM) and Site Functional Area Manager (SFAM) shall resolve conflict and make determination on fatal flaw for implementing procedures/T&RM, in accordance with AD-AA-101, *Processing of Procedures and T&RMs*.

4. MAIN BODY

4.1. Security Plans (including Training and Qualification Plan, and Safeguards Contingency Plan)

4.1.1. Revision of Security Plans

1. **EVALUATE** consequences and risk factors in accordance with HU-AA-1212, *Technical Task Risk/Rigor Assessment, Pre-Job Brief, Independent Third Party Review, and Post-Job Brief*.

2. **DETERMINE** if the change may be implemented without prior NRC approval under 10CFR 50.54(p) by completing an Evaluation of Proposed Change to Station Security Plan, Attachment 3.

   - **If** a change does **not** meet the threshold of a 50.54(p) change and is considered to be a reduction in effectiveness, **then** the change needs to be processed as a 10 CFR 50.90 plan change.

3. **DRAFT** the proposed revision to the Station Security Plan.

4. SUBMIT the proposed revision to the site security management for review and approval.

5. **SUBMIT** the proposed revision to the Director, Nuclear Security for review **and** approval.

6. **DETERMINE** if a 10 CFR 50.59 evaluation is required.

   - **If** all aspects of the Plan change are covered by the 10 CFR 50.54 (p) review, **then** a 10 CFR 50.59 Evaluation is **NOT** required.

   - Otherwise, **CONDUCT** a 10 CFR 50.59 evaluation in accordance with procedure LS-AA-104, *Exelon 50.59 Review Process*.

7. **OBTAIN** Plant Operation Review Committee (PORC) approval of the Station security plan revision prior to implementation, as applicable.

8. **If** it has been determined that the revision can be implemented without prior NRC approval, **then DISTRIBUTE** the revision according to section 4.1.3 below for implementation.

9. **NOTIFY** Licensing and Regulatory Affairs that the change has been implemented.

10. **FORWARD** the proposed revision to Licensing and Regulatory Affairs to submit a request for NRC approval (under 10 CFR 50.90) if it has been determined that an approved revision **cannot** be implemented without prior NRC approval.

11. If necessary **COMPLETE** development items/actions per HU-AA-1101, *Change Management*.

4.1.2. Control of Security Plans

1. **IDENTIFY and CONTROL** Station Security Plans, revisions, **and** proposed revisions as Safeguards Information. See *Control and Classification of Safeguards Information*, SY-AA-101-106.

4.1.3. Distribution of Security Plans

1. **RECORD** the distribution of Station Security Plan revisions on Security Plan Revision Transmittal, Attachment 2.

2. **If** the transmittal sheets are **not** returned within 30 days of distribution, **then NOTIFY** the recipient **and REQUEST** return of the Station Security Plan Revision Transmittal, Attachment 2.

3. **CONTINUE** the follow-up process until the recipient has complied **and** returned the Station Security Plan Revision Transmittal, Attachment 2.

4.1.4. Correspondence Notifying NRC of Security Plan Revision Implementation

1. **UTILIZE** LS-AA-117-1002, Typical Licensing and Regulatory Affairs Correspondence Concurrence Form, in accordance with LS-AA-117.

2. **COMPLETE** all applicable fields on the form.

3. Type of review should be marked as "individual" or "series" review.

4. Discipline code should be "other: Security".

5. **FORWARD** the completed form and copy of the letter to the NRC to the appropriate Manager of Nuclear Security (MNS).

6. The Site MNS or designee will review the letter and concur that the content is factual and accurate, and sign under review concurrence on the LS-AA-117-1002.

7. The site security personnel will then return the completed form to the originator.

8. Once the originator reviews and verifies the information on LS-AA-117-1002, the NRC correspondence may be submitted.

4.2. Implementing Procedures/T&RM

4.2.1. Revision of Implementing Procedures/T&RM

1. **EVALUATE** consequences and risk factors in accordance with HU-AA-1212, Technical Task Risk/Rigor Assessment, Pre-Job Brief, Independent Third Party Review, and Post-Job Brief.

2. **ENSURE** commitments are challenged and updated in accordance with SY-AA-110 and AD-AA-101.

3. **ENSURE** references are updated.

4. **DETERMINE** if the change may be implemented without prior NRC approval under 10CFR 50.54(p) by completing an Evaluation of Proposed Change to Station Security Plan, Attachment 3.

   - **If** a change does **not** meet the threshold of a 50.54(p) change and is considered to be a reduction in effectiveness, **then** the change needs to be processed as a 10 CFR 50.90 plan change.

5. **DETERMINE** if a 10 CFR 50.59 evaluation is required—if all aspects of the change are covered by the 10 CFR 50.54(p) review, a 10 CFR 50.59 evaluation is **not** required. Otherwise, **CONDUCT** a 10 CFR 50.59 evaluation in accordance with procedure LS-AA-104, *Exelon 50.59 Review Process*.

6. **DRAFT** the proposed revision to the implementing procedure in accordance with AD-AA-101, *Processing of Procedures and T&RMs* and AD-AA-101-1002, *Writer's Guide and Process Guide for Procedures and T&RMs*.

7. **SUBMIT** the proposed revision to the security peer group for review **and** approval in accordance with AD-AA-101, *Processing of Procedures and T&RMs*.

8. If necessary **COMPLETE** development items/actions per HU-AA-1101, *Change Management*.

9. **OBTAIN** Plant Operation Review Committee (PORC) approval of the Station security plan revision prior to implementation, as applicable.

10. **SUBMIT** the proposed revision to the Director, Nuclear Security for review **and** approval.

11. **SUBMIT** the approved procedure/T&RM, with associated documentation, the applicable site or corporate records management department.

5. DOCUMENTATION

5.1. **RETAIN** completed Station Security Plan Revision Transmittals, Attachment 2, with the appropriate Station Security Plan revision.

6. REFERENCES

6.1. Commitments - None

6.2. 10CFR 73.21, Requirements for the Protection of Safeguards Information

6.3. NRC Generic Letter 95-08, 10CFR 50.54(p) Process for Changes to Security Plans without Prior NRC Approval.

6.4. LS-AA-104, Exelon 50.59 Review Process

6.5. LS-AA-106, Plant Operation Review Committee

6.6. AD-AA-102, Independent Technical Reviews

6.7. RS-AA-103, Changes to Emergency Plan, Quality Assurance Topical Report and Site Security Plans

6.8. SY-AA-101-106, Control and Classification of Safeguards Information

6.9. AD-AA-101, Processing of Procedures and T&RMs

6.10. AD-AA-101-1002, Writer's Guide and Process Guide for Procedures and T&RMs

6.11. HU-AA-1212, *Technical Task Risk/Rigor Assessment, Pre-Job Brief, Independent Third Party Review, and Post-Job Brief.*

6.12. HU-AA-1101, Change Management

6.13. LS-AA-117-1002, Typical Licensing and Regulatory Affairs Correspondence Concurrence Form

6.14. LS-AA-110, Commitment Management

7. ATTACHMENTS

7.1. Attachment 1, Station Security Plan Transmittal Log

7.2. Attachment 2, Station Security Plan Revision Transmittal

7.3. Attachment 3, Evaluation of Proposed Change to Site Security Plan or Implementing Procedure/T&RM

Information required by this form may be input and retained electronically.

ATTACHMENT 1
Station Security Plan Transmittal Log
Page 1 of 1

Station: _____

Plan #	Rev #	Transmittal Date Sent	Attachment 2 Date Received

ATTACHMENT 2
Station Security Plan Revision Transmittal
Page 1 of 1

Plan No.: _____

Date Transmitted: _____

TRANSMITTED TO

Station: _____

The following Security Plan Revision is transmitted to you for insertion in your Security Plan:

Security Revision to: _____

Revision No. ___ Dated _____

COMPLETE the Plan revision **and RETURN** this sheet within thirty (30) calendar days, signed, to:

Director, Nuclear Security
Exelon Nuclear
4300 Winfield Road
Warrenville, Illinois 60555

I acknowledge receipt of the above revision. Superseded pages were:

___ destroyed

___ retained for record

Received by: _____

(Please Print Name)

_____ _____

Signed Dated

Retain with associated Station Plan Revision

(Sample)

Attachment 3
Evaluation of Proposed Change to Site Security Plan or Implementing Procedure/T&RM

Page 1 of 2

According to 10 CFR 50.54(p), a proposed change to a security plan, guard training and qualification, or safeguards contingency plan can be made without prior NRC approval provided the proposed change does not reduce the effectiveness of the plan. NRC Generic Letter 95-08, "10 CFR 50.54(p) Process for Changes to Security Plan without Prior NRC Approval," clarified the language in 10 CFR 50.54(p) by providing screening criteria for proposed changes that may be made without prior NRC approval. It also provided a suggested outline for applying the screening criteria for the evaluation of a proposed security plan change. This evaluation form contains the suggested outline from the generic letter. The generic letter also provides examples of changes found acceptable to be made without prior NRC approval, as well as examples of changes found unacceptable to be made without prior NRC approval. Those examples should be considered when completing this form. Prior to completing this form, review the pertinent licensing correspondence and NRC Safety Evaluations to determine the basis for the portion of the site security plan proposed to be changed.

SECURITY PLAN or PROCEDURE BEING REVISED:

List the document and proposed revision number.

SECTION/TITLE:

List the section and title of where the change is proposed.

PROPOSED COMMITMENT:

Specify the relevant existing and revised commitments. Address any offsetting provisions.

IMPACT ON EFFECTIVENESS OF THE PLAN:

This section asks a series of questions. **If** the response to each question is "no" **and** the rationale supports a "no" response, **then** the change may be processed using the provisions of 10 CFR 50.54(p) without NRC prior approval. The questions are as follows:

1. ☐Yes ☐No Does this change delete or contradict any regulatory requirement?

2. ☐Yes ☐No Would the change decrease the overall level of security system performance as described in paragraphs (b) through (h) of 10 CFR 73.55 to protect with the objective of high assurance against the design basis threat of radiological sabotage as stated in 10 CFR 73.1(a)?

   Rationale: Explain the rationale.

(Sample)

Attachment 3
Evaluation of Proposed Change to Site Security Plan or Implementing Procedure/T&RM
Page 2 of 2

3. ☐Yes ☐No For any NRC-approved security plan commitments that are alternatives to one or more of the requirements of 10 CFR 73.55 (b) through (h): does this change decrease the overall level of security system performance needed to protect with the objective of high assurance against the design basis threat of radiological sabotage as stated in 10 CFR 73.1(a)?

Rationale: Explain why the change does **not** decrease the overall effectiveness of the plan while taking into consideration existing unique site-specific security features. Consider historical reasons why specific commitments were included in the security plans. Were there specific counterbalancing commitments and has that counterbalance been changed negatively?

Originator: _____ Date: _____

Director, Nuclear Security: _____ Date: _____

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Exelon Nuclear

TYPICAL LICENSING AND REGULATORY AFFAIRS CORRESPONDENCE CONCURRENCE FORM

Station(s): Limerick Generating Station, Units 1 and 2 Correspondence No.: _____

Subject/Document: LAR - Remove Footnote From Jet Pump Surveillances

Document Prepared by: G. Stewart Location: Kennett Square Extension: 803:5529

Required Review and Disciplines Assigned by: G. Stewart/Senior Licensing Engineer
Title

Type of Review Required: (Reference LS-AA-117)
- ☒ Technical Verification Team Review
- ☐ Individual or Series Review
- ☐ No Technical Review

Note: If the subject document falls within the scope of AD-AA-102, "Station Qualified Review," one of the reviewers must be a Station Qualified Reviewer.

Disciplines Required:

☐ Maintenance	☐ Radiation Protection	☐ Chemistry	☐ Training
☒ Operations	☐ Engineering - I&C	☐ Radwaste	☐ Reg Assurance / Licensing
☒ Rx Engineering	☐ Design Engineering	☒ Engr - Mech Systems	☐ Programs Engineering
☐ Nuclear Fuels	☐ Work Management	☐ Engr - Elect Systems	☐ Other: _____

Review Concurrence: *Signature indicates that the individual has reviewed the subject document and concurs that the content is factual and accurate.*

Print Name / Signature	Discipline	Date
John George (TVT)/	Plant Engineering	10/11/07
Bob Potter (TVT)/	Reactor Engineering	10/11/07
Dan Doran/	Sr. Mgr - Plant Engineering	10/17/07
Bob Dickinson/	LGS Engineering Director	10/17/07
Gary Schneelman/	Operations	10-11-07

Does this letter contain commitments? ☐ Yes ☒ No
If yes, corporate or site commitment coordinator has been notified: N/A Date: N/A

Required Reviews and Signatures (check as appropriate):

☒ Station Qualified Review Required: _____ Date: 10/4/07

☒ PORC Approval Required: PORC Meeting No. 07-029 11/2/07

☒ Corporate Licensing Concurrence Required: _____ Date: _____

☒ Site Regulatory Assurance Concurrence Required: _____ Date: 11/6/07

☒ Station Manager Approval Required: _____ Date: 11/6/07

☒ Site Vice President Approval Required: _____ Date: 11/12/07

Note: The completed original of this form will be retained by the organization transmitting the submittal (i.e., either Licensing or site Regulatory Assurance) in accordance with RM-AA-101, "Records Management Program."

SRRS ID#: 5A.113

Exelon Nuclear

TYPICAL LICENSING AND REGULATORY AFFAIRS CORRESPONDENCE CONCURRENCE FORM

Station(s): Limerick Generating Station, Units 1 and 2 Correspondence No.: _____

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- ☒ Technical Verification Team Review
- ☐ Individual or Series Review
- ☐ No Technical Review

Note: If the subject document falls within the scope of AD-AA-102, "Station Qualified Review," one of the reviewers must be a Station Qualified Reviewer.

Disciplines Required:

☐ Maintenance	☐ Radiation Protection	☐ Chemistry	☐ Training
☒ Operations	☐ Engineering - I&C	☐ Radwaste	☐ Reg Assurance / Licensing
☒ Rx Engineering	☐ Design Engineering	☒ Engr - Mech Systems	☐ Programs Engineering
☐ Nuclear Fuels	☐ Work Management	☐ Engr - Elect Systems	☐ Other: _____

Review Concurrence: Signature indicates that the individual has reviewed the subject document and concurs that the content is factual and accurate.

Print Name / Signature	Discipline	Date
John George (TVT)/	Plant Engineering	
Bob Potter (TVT)/	Reactor Engineering	
Dan Doran/	Sr. Mgr - Plant Engineering	
Bob Dickinson/	LGS Engineering Director	
	Operations	

Does this letter contain commitments? ☐ Yes ☒ No
If yes, corporate or site commitment coordinator has been notified: N/A Date: N/A

Required Reviews and Signatures (check as appropriate):

☒ Station Qualified Review Required: _____ Date: _____

☒ PORC Approval Required: PORC Meeting No. _____

☒ Corporate Licensing Concurrence Required: D. A. Heller Date: 10/15/07

☒ Site Regulatory Assurance Concurrence Required: _____ Date: _____

☒ Station Manager Approval Required: _____ Date: _____

☒ Site Vice President Approval Required: _____ Date: _____

Note: The completed original of this form will be retained by the organization transmitting the submittal (i.e., either Licensing or site Regulatory Assurance) in accordance with RM-AA-101, "Records Management Program."

SRRS ID#: 5A.113