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CNRO-2011-00006
ENOC-11-00025
December 13, 2011

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

SUBJECT: Request for Approval of Change to the Entergy Quality Assurance Program Manual (QAPM) and Associated Plant Technical Specifications Regarding Staff Qualifications

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STATE OF VERMONT
DEPT OF PUBLIC SERVICE
MONTPELIER, VT.
05620-2601

- | | |
|---|--|
| River Bend Station
Docket Nos. 50-458 and 72-49 | Grand Gulf Nuclear Station
Docket Nos. 50-416 and 72-50 |
| Arkansas Nuclear One
Units 1 and 2
Docket Nos. 50-313, 72-13 and 50-368 | Indian Point Nuclear Generating
Units 1, 2, and 3
Docket Nos. 50-003, 50-247, 72-51 and 50-286 |
| Pilgrim Nuclear Power Station
Docket No. 50-293 | Waterford 3 Steam Electric Station
Docket No. 50-382 and 72-75 |
| James A. FitzPatrick Nuclear Power Plant
Docket Nos. 50-333 and 72-12 | Palisades Nuclear Plant
Docket Nos. 50-255 and 72-7 |
| Vermont Yankee Nuclear Power Station
Docket Nos. 50-271 and 72-59 | Big Rock Point Nuclear Plant-ISFSI
Docket Nos. 50-155 and 72-43 |

Dear Sir or Madam:

Pursuant to 10 CFR 50.54(a)(4) and 10 CFR 50.90, Entergy hereby requests approval of proposed changes to the Quality Assurance Program Manual (QAPM) and Technical Specifications (TS) for the above subject plants. The proposed changes standardize unit staff qualification requirements for the Entergy fleet. Some proposed changes to the QAPM are a reduction in commitment, and in accordance with 10 CFR 50.54(a)(4), NRC approval is required prior to implementation. The related TS changes for unit staff qualifications are requested in accordance with 10 CFR 50.90. Entergy discussed the proposed changes with the NRC staff in a pre-submittal meeting on April 5, 2011.

Enclosure 1 to this letter describes the proposed QAPM changes in more detail, the reason for the change, and the basis for concluding that the revised QAPM continues to satisfy the criteria of 10 CFR 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and

Fuel Reprocessing Plants." Attachment 1 of the enclosure contains a markup of the affected QAPM page.

Enclosure 2 describes the proposed changes to the TS and provides the technical and regulatory evaluations for the changes. The evaluations conclude that the proposed amendments do not involve a significant hazards consideration under the standards set forth in 10 CFR 50.92. Attachment 1 of the enclosure provides markups of the affected TS pages for each plant. The proposed changes do not affect the TS Bases.

Approval of the proposed QAPM changes and TS amendments are requested by December 1, 2012. Once approved, the amendments shall be implemented within 120 days. Although 10 CFR 50.54 allows changes to the Quality Assurance program to be regarded as accepted by the Commission 60 days after submittal to the Commission, Entergy does not plan to implement the QAPM changes until the corresponding changes to the TS are approved.

Other than the proposed changes to the QAPM, this letter does not contain any new commitments.

In accordance with 10 CFR 50.91, Entergy is notifying the appropriate states of this License Amendment Request (LAR) by transmitting a copy of this letter and enclosures to the designated State Officials.

If there are any questions or if additional information is needed, please contact Bryan Ford at 601-368-5516.

I declare under penalty of perjury that the foregoing is true and correct. Executed on December 13, 2011.

Sincerely,



JFM/BSF/RWB

- Enclosures: 1. Evaluation of Proposed Changes to the Quality Assurance Program Manual
2. Evaluation of Proposed Technical Specification Changes

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ENCLOSURE 1

**EVALUATION OF PROPOSED CHANGES TO THE
QUALITY ASSURANCE PROGRAM MANUAL (QAPM)**

Subject: Request for Changes to the QAPM Regarding Unit Staff Qualifications

1.0 SUMMARY DESCRIPTION

2.0 DETAILED DESCRIPTION

2.1 Standardization Regarding Use of ANSI/ANS 3.1 – 1978

2.2 Functional Titles

2.3 QA Manager Qualifications

3.0 EVALUATION OF CHANGES

3.1 Standardization Regarding Use of ANSI/ANS 3.1 – 1978

3.2 Functional Titles

3.3 QA Manager Qualifications

4.0 REFERENCES

ATTACHMENTS

1 QAPM Page Markups

ENCLOSURE 1
EVALUATION OF PROPOSED CHANGES TO THE QAPM

1.0 SUMMARY DESCRIPTION

The Entergy Quality Assurance Program Manual (QAPM) provides an overview of the quality program controls which govern the operation and maintenance of Entergy's quality related items and activities. The QAPM ensures conformance to 10 CFR 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants" and applies to all of the units in Entergy's nuclear fleet.

In accordance with 10 CFR 50.54(a)(4), Entergy requests NRC approval of proposed changes to unit staff qualification requirements contained in the QAPM. Some changes to the qualification requirements for the Radiation Protection Manager (RPM) and QA Manager are considered reduction in commitments and therefore require NRC approval prior to implementation. While other individual changes are clarifications or administrative and alone do not reduce commitments, they are included in the request for completeness. The proposed changes would 1) remove disparities between the QAPM and some unit Technical Specifications (TS), 2) standardize qualification requirements for the fleet, and 3) allow more flexibility in the selection of QA managers.

To fully implement the proposed QAPM changes, corresponding changes are needed to each plant's TS. The proposed TS changes and the evaluation of the TS changes are provided in accordance with 10 CFR 50.90 in Enclosure 2.

2.0 DETAILED DESCRIPTION

2.1 Standardization Regarding Use of ANSI/ANS 3.1 – 1978

Both the QAPM and plant TS specify requirements for unit staff qualifications. Exceptions to the requirements are also included in both the QAPM and the TS. Currently, the QAPM references ANSI/ANS 3.1 – 1978 as the overall standard for unit staff qualifications. While most of the Entergy plants' TS also reference the 1978 standard, four reference ANSI N18.1-1971. This disparity results in confusion over which requirements apply and to what extent they apply. This disparity was raised as an issue during an NRC inspection at Entergy headquarters in 2010.

Entergy proposes to revise the QAPM and each plant's TS for consistency and to allow the use of the QAPM as the single document to control exceptions or clarifications to the standard. The proposed changes minimize the potential for having conflicting upper tier documents and would only require one document to be changed if any additional clarifications are needed in the future.

Currently the QAPM states:

Qualification requirements for personnel, other than Licensed Operators covered under 10CFR55, shall meet ANSI/ANS 3.1 1978 except for positions where an exception to either ANSI/ANS 3.1-1978 or N18.1 -1971 is stated in the applicable

unit's Technical Specifications. If an exception exists for a given position, the applicable unit's Technical Specification qualification requirements shall apply.

The intent of the QAPM is to apply the qualification requirements of ANSI/ANS 3.1 - 1978 to all Entergy units to the extent that exceptions are specifically stated in the QAPM or the TS. The current wording of the QAPM is intended to ensure that each unit complies with both the QAPM and TS regarding staff qualifications. However, the current wording is subject to being misunderstood due to the variations in associated TS requirements.

Entergy proposes to clarify the scope of the 1978 standard to be applied to its units, clarify the exceptions, and eliminate TS disparities by revising both the QAPM and the TS. The current QAPM wording is proposed to be replaced with the following:

Entergy is committed to Sections 1 – 4 of ANSI/ANS 3.1-1978 with following clarifications and exceptions.

Qualification requirements for personnel shall meet ANSI/ANS 3.1-1978 except the following:

- a. The radiation protection manager shall meet or exceed the qualifications of Regulatory Guide 1.8, Revision 2, 1987.*
- b. Managers required to hold an SRO license are specified in the applicable unit's Technical Specifications.*
- c. Licensed Operators shall be qualified in accordance with the requirements of 10 CFR 55.*

This proposed change standardizes the qualification requirements for the fleet and relocates the radiation protection manager (RPM) exception currently specified in the TS to the QAPM. Associated TS changes are provided and evaluated in Enclosure 2.

2.2 Functional Titles

Because there may be differences between functional titles used in the ANSI standard and those used by Entergy organizations, Entergy proposes to add the following clarification to ensure that regardless of the title, the position has the authority and specified qualifications to accomplish the functional responsibilities.

Individuals assigned to professional-technical comparable positions shall have the authority and specified qualifications to accomplish the functional responsibilities of the position.

2.3 Quality Assurance Manager Qualifications

Section 4.4.5 of ANSI/ANS 3.1 - 1978 specifies the following requirements for the Quality Assurance individual (group leader).

At the time of initial core loading or assignment to the active position, the responsible person shall have six years experience in the field of quality assurance, preferably at an operating nuclear plant, or operations supervisory experience. At least one year of

this six years experience shall be nuclear power plant experience in the overall implementation of the quality assurance program. (This experience shall be obtained within the quality assurance organization.) A minimum of one year of this six years experience shall be related technical or academic training. A maximum of four years of this six years experience may be fulfilled by related technical or academic training.

Neither the QAPM nor ANSI/ANS 3.1 - 1978 provide any allowance to consider candidates for the position that do not fully meet all of the above requirements but, based upon other factors, may be an appropriate choice for the position. The NRC has recognized the need for such an allowance and has included the allowance in section 17.5 of the Standard Review Plan (NUREG 0800). Entergy requests that this allowance be included in the QAPM as follows:

Individuals who do not possess the formal education and minimum experience requirements for the manager responsible for quality assurance should not be eliminated automatically when other factors provide sufficient demonstration of their abilities. These other factors are evaluated on a case-by-case basis and approved and documented by senior management.

3.0 EVALUATION OF CHANGES

10 CFR 50.54(a)(4) requires changes to the quality assurance program description that reduce commitments to be submitted to the NRC and receive NRC approval prior to implementation. The proposed change must be accompanied by a letter that provides the basis for concluding that the revised program incorporating the change continues to satisfy the criteria of 10 CFR 50 Appendix B and the Safety Analysis Report quality assurance program description commitments previously accepted by the NRC. The requested QAPM changes are evaluated in accordance with the requirements of 10 CFR 50.54(a)(4).

3.1 Standardization Regarding Use of ANSI/ANS 3.1 – 1978

3.1.1 Background

Entergy's common QAPM is applicable to both the Entergy Operations, Inc. (EOI) plants and the Entergy Nuclear Operations, Inc. (ENO) plants. The common QAPM was approved by the NRC for the EOI plants (Arkansas Nuclear One - Units 1 and 2, Grand Gulf, River Bend, and Waterford) on November 6, 1998 (Reference 1). Regarding unit staff qualifications, the initial approved common QAPM stated:

Qualification requirements for personnel will meet ANSI/ANS 3.1-1978 except where exception to ANSI N18.1 or to this Standard is identified in the applicable unit's Technical Specifications.

Prior to approval of the QAPM changes, the EOI plants' commitments ranged from ANSI N18.1 -1971 to ANSI/ANS 3.1-1981 and combinations of these standards. The revision was requested to consolidate the QA programs for the sites into a single program to provide consistency among the Entergy plants. In its approval, the NRC also noted that more restrictive requirements were still in place in the TS and other regulations where appropriate (e.g., licensed operator qualifications). The NRC conclusion was that the change was acceptable and that the requirements of 10 CFR 50 Appendix B would continue to be met.

Although the QAPM change was approved, some of the EOI plant's TS still contained requirements to meet ANSI N18.1-1971. This required those plants to meet both ANSI N18.1-1971 and ANSI/ANS 3.1-1978 except where specific exceptions to the standards were specified. Following approval of the consolidated QAPM, EOI plants whose TS still referred to ANSI N18.1-1971 began requesting and receiving NRC approval of license amendments to relieve the burden and confusion associated with compliance to both standards (see section 3.1.1 of Enclosure 2 for additional discussion). Although the Waterford 3 TS referred to ANSI/ANS 3.1-1978 as the base standard, the TS retained an exception which refers to ANSI N18.1-1971 for qualification requirements of personnel in the Health Physics, Chemistry and Radwaste Departments.

As Entergy acquired additional plants (ENO plants – Indian Point, Units 1, 2 and 3; Palisades; Big Rock Point; Pilgrim; James A. FitzPatrick; and Vermont Yankee), these plants adopted Entergy's common QAPM under the provisions of 10 CFR 50.54. The plan to use a common QA program for the ENO plants was discussed with the NRC in a meeting on September 19, 2001 (Reference 2). Like the EOI plants, the TS requirements for ENO plants also remained in effect and were required to be met.

Indian Point Units 2 and 3 applied for license amendments to replace the reference to ANSI N18.1 – 1971 with ANSI/ANS 3.1-1978. The requests were approved by issuance of amendment nos. 252 and 234 (Reference 3). Currently, the TS for James A. FitzPatrick, Palisades, Pilgrim, and Vermont Yankee still refer to ANSI N18.1-1971.

Entergy desires to standardize the qualification requirements for the fleet by replacing the TS reference to ANSI N18.1-1971 with ANSI/ANS 3.1-1978 and clarifying the scope of commitment and exceptions to ANSI/ANS 3.1-1978 in the QAPM. The proposed TS changes are provided and evaluated in Enclosure 2.

Entergy is aware that ANSI/ANS 3.1-1978 was not officially endorsed by a Regulatory Guide (RG). However, this standard has been approved as an acceptable standard in the TS for more than twenty plants, including seven Entergy plants (the EOI plants and Indian Point units). Entergy considered the adoption of later standards but decided to remain with the standard that is currently contained in the QAPM and common to most of Entergy's plant TS. Enclosure 2 provides additional discussion concerning Entergy's decision to remain with the 1978 standard.

3.1.2 Scope of Commitment to ANSI/ANS 3.1-1978

The following new sentence is proposed for clarification:

Entergy is committed to Sections 1 – 4 of ANSI/ANS 3.1- 1978 with the following clarifications and exceptions.

ANSI/ANS 3.1-1978 includes five sections that provide criteria for the selection and training of personnel. Sections 1 through 4 include scope, definitions, responsibilities, and qualifications. Section 5 contains standards for a training program. The standards for a training program were developed prior to the issuance of 10 CFR 50.120, "Training and qualification of nuclear power plant personnel" that established training requirements for all licensees. The current QAPM only discusses qualifications of personnel and does not commit to the training program standards contained in ANSI/ANS 3.1-1978. A commitment to the older training standards is

not needed because 10 CFR 50.120 requires licensees to establish, implement, and maintain a training program that meets specified requirements. For example, the training program must be derived from a systematic approach to training (SAT) and training must be provided for specified categories of plant personnel. The industry has developed SAT implementation guidance through the Institute of Nuclear Power Operations (INPO), which Entergy has implemented, to meet the requirements of 10 CFR 50.120.

Additionally, 10 CFR 50.120 requires the training program to incorporate the instructional requirements necessary to provide qualified personnel to operate and maintain the facility in a safe manner in all modes of operation. The training program must be developed to be in compliance with the facility license, including all TS and applicable regulations. The training program must be periodically evaluated and revised as appropriate to reflect industry experience as well as changes to the facility, procedures, regulations, and quality assurance requirements. The training program must also be periodically reviewed by licensee management for effectiveness.

10 CFR 50 Appendix B Criterion II, "Quality Assurance Program" states, "The program shall provide for indoctrination and training of personnel performing activities affecting quality as necessary to assure that suitable proficiency is achieved and maintained." The new QAPM sentence is an administrative change that clarifies which sections of ANSI/ANS 3.1-1978 apply to the Entergy fleet and does not reduce any commitments in the QAPM or affect compliance with Appendix B Criterion II.

3.1.3 ANSI Standard Exceptions

Currently, the QAPM (Table 1 Regulatory Commitments, section A.1) states the following regarding compliance with the ANSI standard for personnel qualification:

Qualification requirements for personnel, other than Licensed Operators covered under 10CFR55, shall meet ANSI/ANS 3.1 1978 except for positions where an exception to either ANSI/ANS 3.1-1978 or N18.1 -1971 is stated in the applicable unit's Technical Specifications. If an exception exists for a given position, the applicable unit's Technical Specification qualification requirements shall apply.

The statement is proposed to be modified to read:

Qualification requirements for personnel shall meet ANSI/ANS 3.1-1978 except the following:

- a. *The radiation protection manager shall meet or exceed the qualifications of Regulatory Guide 1.8, Revision 2, 1987.*
- b. *Managers required to hold an SRO license are specified in the applicable unit's Technical Specifications.*
- c. *Licensed Operators shall be qualified in accordance with the requirements of 10 CFR 55.*

The change is proposed to eliminate the confusion between the QAPM and each site's TS, by removing the general reference to exceptions stated in the TS. Rather, the exceptions (i.e., the RPM qualification requirements) will be specified in the QAPM. Changes to the sites' TS

to relocate the exceptions to the QAPM are requested in Enclosure 2 to this letter. The above proposed changes do not add any new exceptions. The relocation of the exceptions is acceptable as any future changes to the exceptions will be controlled in accordance with 10 CFR 50.54. Section 50.54(a)(3) allows licensees to make changes to their quality assurance program so long as those changes do not reduce commitments and the licensee submits a copy of the changes to the NRC. Changes that reduce commitments are required to be submitted to the NRC for review and approval prior to implementation.

Entergy also proposes to standardize the relocated RPM qualification requirements for the fleet. The RPM qualification requirements are being revised to be consistent with Grand Gulf. An evaluation of the affects of the change is provided below.

3.1.3.1 Exception to Radiation Protection Manager Qualifications

As indicated in the above proposed QAPM changes, Entergy proposes that the RPM qualification requirements be relocated from the TS to the QAPM and revised to be consistent across the fleet. Currently, the individual plant TS specify the qualification requirements for the RPM. The latest standard to which any plant is committed is Regulatory Guide (RG) 1.8, Revision 2, 1987. All other units are committed to RG 1.8, Revision 1, 1975. Entergy is proposing to apply the 1987 version of the RG to all Entergy plants. Associated TS changes are provided and evaluated in Enclosure 2. The relocated exception in the QAPM would read:

- a. *The radiation protection manager shall meet or exceed the qualifications of Regulatory Guide 1.8, Revision 2, 1987.*

The QAPM contains an allowance to preclude disqualifying individuals who met previous commitments but do not meet new more restrictive commitments. The QAPM states

Individuals filling positions who met the previous commitment at the time of implementation of this commitment can be considered to meet any more restrictive aspects of the requirements of this commitment for that position without further review and documentation.

The above allowance is retained in the QAPM and would apply to any individual currently serving in the RPM position that does not fully meet the newer requirements.

Entergy has compared the requirements of RG 1.8, Revision 1, 1975 to RG 1.8, Revision 2, 1987. Differences are noted below and categorized as Administrative, Less Restrictive, or More Restrictive.

1. Education requirements (*administrative change*):

RG 1.8, Revision 1, 1975 states that the RPM should have a bachelor's degree *or the equivalent* in a science or engineering subject, including some formal training in radiation protection.

RG 1.8, Revision 2, 1987 states that the RPM should have a Bachelor Degree in a science or engineering subject, including formal training in radiation protection.

Although Revision 2 of the RG does not use the term “or equivalent” when referring to a Bachelor’s Degree, section 4.1 of ANSI/ANS-3.1-1981 as endorsed by the RG provides an allowance for the RPM to be qualified without a Bachelor Degree. The ANSI states:

Individuals who do not possess the formal educational requirements specified in this section shall not be automatically eliminated where other factors provide sufficient demonstration of their abilities. These other factors shall be evaluated on a case by-case basis and approved and documented by the plant manager...

The ANSI standard lists examples of positive factors that may be considered in making the evaluation of an acceptable alternative to the educational requirements. In addition, the Entergy QAPM currently lists criteria (Table 1, section A.2) that may be considered equivalent to a Bachelor Degree. This criteria will remain in the QAPM unchanged and is considered to meet the alternative requirements allowed by the ANSI standard.

Therefore, there are no actual changes to the education requirements (neither less restrictive nor more restrictive).

2. Experience requirements (*less restrictive and more restrictive*)

a. Less Restrictive

RG 1.8, September 1975 states that the RPM should have at least five years of professional experience in applied radiation protection and that at least three years of this professional experience should be in applied radiation protection work in a nuclear facility dealing with radiological problems similar to those encountered in nuclear power stations, preferably in an actual nuclear power station.

RG 1.8, Revision 2, 1987 states that the RPM should have four years of experience in applied radiation protection and that three years of this experience shall be in applied radiation protection work in a nuclear facility dealing with radiological problems similar to those encountered in nuclear power plants, preferably in a nuclear power plant.

This change is less restrictive in that the total professional experience requirement for the RPM is reduced from five years to four years.

b. More Restrictive

There are three more restrictive requirements:

- RG 1.8 – 1975 allows a master’s degree to be considered equivalent to one year of professional experience, and a doctor’s degree may be considered equivalent to two years of professional experience where course work related to radiation protection is involved. This allowance is not contained in RG 1.8 – 1987 or the endorsed ANSI standard.

- ANSI/ANS-3.1-1981 includes new more prescriptive requirements for the three years experience at a nuclear facility. The ANSI states that during the three years, the individual shall participate in the radiation protection section of an operating nuclear power plant during the following periods.
 - (1) Routine refueling outage (1 to 2 months).
 - (2) Two months operation above 20 percent power.6 months experience shall be onsite.
- ANSI/ANS-3.1-1981 includes new requirements for the individual who temporarily replaces the radiation protection group leader. The ANSI states that the replacement must have a Bachelor Degree in a science or engineering subject and 2 years experience, one of which shall be nuclear power plant experience. As noted above under Item 1 – Education Requirements, alternatives to the Bachelor Degree may also be applied to the temporary replacement.

Relocating the RPM qualification requirements from the TS to the QAPM does not reduce the effectiveness of the QA Program and does not affect compliance with the requirements of 10 CFR 50 Appendix B. Updating the qualification requirements from RG 1.8, Revision 1, 1975 to the more recent standard of ANSI/ANS-3.1-1981 as endorsed by RG 1.8, Revision 2, 1987, does not significantly change the requirements in a manner that would reduce the ability of the RPM to fulfill his responsibilities.

3.1.3.2 Exception for Managers required to hold an SRO license (administrative change)

Section 4.2.2 of ANSI/ANS 3.1-1978, states that at the time of initial core loading or appointment to the position, whichever is later, the operations manager shall hold a Senior Reactor Operator's license. The Entergy plants' TS take exception to this requirement, specifying that either the operations manager or an operations middle manager (or assistant operations manager) shall hold an SRO license. The current QAPM is being revised to delete the general reference to exceptions specified in the TS to avoid confusion. Therefore the exception for this requirement is specifically stated in the QAPM as follows:

Qualification requirements for personnel shall meet ANSI/ANS 3.1 1978 except the following...

- b. Managers required to hold an SRO license are specified in the applicable unit's Technical Specifications.*

This change is administrative and alone has no impact on current commitments or requirements. The change is included here for completeness of the overall requested change.

3.1.3.3 Exception for Licensed Operators (administrative change):

Currently, the QAPM states:

Qualification requirements for personnel, other than Licensed Operators covered under 10CFR55, shall meet ANSI/ANS 3.1 1978...

This exception for Licensed Operators is reworded and relocated to the list of exceptions as follows:

Qualification requirements for personnel shall meet ANSI/ANS 3.1 1978 except the following...

- c. Licensed Operators shall be qualified in accordance with the requirements of 10 CFR 55.*

This change is administrative and does not alter existing commitments. The current exception for licensed operators is relocated from the lead sentence to the list of exceptions. Licensed Operators will continue to be qualified in accordance with 10 CFR 55. This exception remains consistent with the NRC Safety Evaluation for the Entergy consolidated QAPM (Reference 1), which stated, "In addition, more restrictive requirements are still in place in Technical Specifications, and other regulations where appropriate (e.g., licensed operator qualifications)."

3.2 Functional Titles *(administrative change)*

ANSI/ANS-3.1-1978 provides qualification standards for specified functional areas of responsibility for nuclear organizations. Because there may be differences between functional level titles used in the ANSI standard and those used by Entergy organizations, Entergy proposes to add the following clarification to ensure that the comparable position has the authority and specified qualifications to accomplish the functional responsibilities.

Individuals assigned to professional-technical comparable positions shall have the authority and specified qualifications to accomplish the functional responsibilities of the position.

This change is administrative and ensures compliance with the intent of the commitment. It does not reduce the effectiveness of the QA Program and better ensures compliance with 10 CFR 50 Appendix B.

3.3 QA Manager Qualifications *(less restrictive change)*

Entergy proposes the following new exception to ANSI/ANS 3.1-1978 Section 4.4.5:

Individuals who do not possess the formal education and minimum experience requirements for the manager responsible for quality assurance should not be eliminated automatically when other factors provide sufficient demonstration of their abilities. These other factors are evaluated on a case-by-case basis and approved and documented by senior management

ANSI/ANS 3.1-1978 Section 4.4.5 prescribes the following requirements for qualification of the person responsible for Quality Assurance:

4.4.5 Quality Assurance. At the time of initial core loading or assignment to the active position, the responsible person shall have six years experience in the field of quality assurance, preferably at an operating nuclear plant, or operations supervisory experience. At least one year of this six years experience shall be nuclear power plant experience in the overall implementation of the quality assurance program. (This experience shall be obtained within the quality assurance organization.) A minimum of one year of this six years experience shall be related technical or academic training. A maximum of four years of this six years experience may be fulfilled by related technical or academic training.

The ANSI standard provides no alternatives that would allow consideration of candidates that might not meet each item of the standard but may possess other knowledge, skills, or experience that demonstrates their ability to fulfill the responsibility. The NRC has recognized that such an allowance is acceptable and has provided an exception in the Standard Review Plan (SRP), NUREG-0800. Chapter 17.5 of the SRP was issued in 2007 to provide standards for the review of Quality Assurance programs for design certification, early site permit and new license applicants. Qualification standards for the individual responsible for management of the implementation of the QA plan is provided in section S.2 of Chapter 17.5. Item e of Section S.2 states:

- e. Individuals who do not possess these formal education and minimum experience requirements should not be eliminated automatically when other factors provide sufficient demonstration of their abilities. These other factors are evaluated on a case-by-case basis and approved and documented by senior management.

Entergy requests to apply this same allowance by adding it to the QAPM as an exception to ANSI/ANS 3.1 – 1978, Section 4.4.5. This change is a reduction in commitment but does not reduce the effectiveness of the QA Program. An individual being considered for the position will be evaluated on a case-by-case basis as to their capabilities to perform the duties and responsibilities of the position. Use of the exception must be approved by senior management and documented. Without the exception, some candidates that are fully capable of fulfilling the duties and responsibilities would be automatically excluded from consideration.

While 10 CFR 50 Appendix B does not specify particular qualification requirements, it does require that an organization be capable of fulfilling the duties and responsibilities specified in the QA Program. The proposed change continues to ensure that the QA manager is sufficiently qualified to fulfill the duties and responsibilities of the position.

3.4 Conclusion

In conclusion, based on the considerations discussed above, the proposed changes will not reduce the effectiveness of the Entergy QA Program and the QA Program will continue be in compliance with the Commission's regulations, in particular, 10 CFR 50 Appendix B.

4.0 REFERENCES

1. Letter dated November 6, 1998 from J. N. Hannon, USNRC to M.R. Kansler, EOI, "Consolidation of Quality assurance (QA) Programs"
2. Meeting Summary dated November 30, 2001 from Guy S. Vissing, USNRC, "Summary of Meeting on September 19, 2001, with Entergy Nuclear Operations, Inc. Concerning a Planned Program to Develop a Common Quality Assurance Manual for the Northern Entergy Nuclear Power Plants and Entergy Nuclear Generating Company Power plants."
3. Indian Point Nuclear Generating Unit Nos. 2 and 3 – Issuance of Amendments Re: Proposed Changes to Technical Specifications: Miscellaneous Editorial Changes, Including TSTF-485 (TAC NOS. MD3074 AND MD3075).

Attachment 1
Proposed QAPM Changes
(Marked-up Page)

Quality Assurance Program Manual (QAPM) Changes for the Entergy Nuclear Fleet (Arkansas Nuclear One – Unit 1, Arkansas Nuclear One – Unit 2, Big Rock Point, Grand Gulf Nuclear Station, Indian Point Nuclear Generating Units 1, 2, and 3, James A. FitzPatrick Nuclear Power Plant, Palisades Nuclear Plant, Pilgrim Nuclear Power Station, River Bend Station, Waterford 3 Steam Electric Station, and Vermont Yankee Nuclear Power Station).

QAPM Page Number

INSERTS FOR QAPM PAGE MARKUPS

INSERT 1:

Entergy is committed to Sections 1 – 4 of ANSI/ANS 3.1-1978 with following clarifications and exceptions.

Qualification requirements for personnel shall meet ANSI/ANS 3.1-1978 except the following:

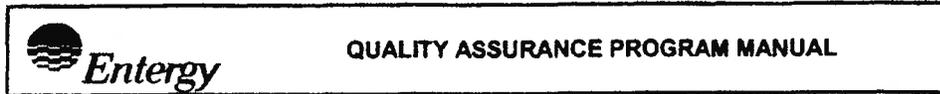
- a. The radiation protection manager shall meet or exceed the qualifications of Regulatory Guide 1.8, Revision 2, 1987.
- b. Managers required to hold an SRO license are specified in the applicable unit's Technical Specifications.
- c. Licensed Operators shall be qualified in accordance with the requirements of 10 CFR 55.

INSERT 2:

- | | |
|---------------------------|--|
| 3. ANSI/ANS 3.1 Section 4 | Individuals assigned to professional-technical comparable positions shall have the authority and specified qualifications to accomplish the functional responsibilities of the position. |
|---------------------------|--|

INSERT 3:

- | | |
|-------------------------------|--|
| 4. ANSI/ANS 3.1 Section 4.4.5 | Individuals who do not possess the formal education and minimum experience requirements for the manager responsible for quality assurance should not be eliminated automatically when other factors provide sufficient demonstration of their abilities. These other factors are evaluated on a case-by-case basis and approved and documented by senior management. |
|-------------------------------|--|



**Table 1
Regulatory Commitments**

A. Regulatory Guide 1.8 Revision 1, dated September 1975

Clarification/Exception

1. General

INSERT 1 →

~~Qualification requirements for personnel, other than Licensed Operators covered under 10CFR55, shall meet ANSI/ANS 3.1 1978 except for positions where an exception to either ANSI/ANS 3.1-1978 or N18.1 -1971 is stated in the applicable unit's Technical Specifications. If an exception exists for a given position, the applicable unit's Technical Specification qualification requirements shall apply.~~

Individuals filling positions who met the previous commitment at the time of implementation of this commitment can be considered to meet any more restrictive aspects of the requirements of this commitment for that position without further review and documentation.

2. General

The following qualifications may be considered equivalent to a bachelor's degree:

- a. 4 years of post secondary schooling in science or engineering,
- b. 4 years of applied experience at a nuclear facility in the area for which qualification is sought,
- c. 4 years of operational or technical experience/training in nuclear power, or
- d. any combination of the above totaling 4 years.

Years of experience used to meet the education requirements as allowed by this exception shall not be used to also meet the experience requirements.

INSERT 2

INSERT 3

ENCLOSURE 2

Evaluation of Proposed Technical Specifications Changes

Subject: Application for Fleet License Amendments to Revise the TS Requirements for Unit Staff Qualifications

- 1.0 SUMMARY DESCRIPTION
- 2.0 DETAILED DESCRIPTION
 - 2.1 Unit Staff Qualification Requirements
 - 2.2 Shift Technical Advisor (STA) Qualifications
 - 2.3 Radiation Protection Manager (RPM) Qualifications
 - 2.4 New Paragraph for Licensed Operators
 - 2.5 Editorial Deletion of Note No Longer Applicable (Waterford 3 Only)
- 3.0 TECHNICAL EVALUATION
 - 3.1 Changes to Unit Staff Qualifications
 - 3.2 Changes to Shift Technical Advisor (STA) Requirements
 - 3.3 Changes to RPM Qualifications
 - 3.4 New Paragraph for Licensed Operators
- 4.0 REGULATORY EVALUATION
- 5.0 ENVIRONMENTAL CONSIDERATION
- 6.0 REFERENCES

ATTACHMENTS

- 1. Proposed Technical Specifications Changes (Marked-up Pages)

ENCLOSURE 2

Evaluation of Proposed Technical Specifications Changes

1.0 SUMMARY DESCRIPTION

This evaluation supports a request to revise the Operating Licenses for the Entergy nuclear fleet to standardize unit staff qualification requirements. Specifically, Entergy proposes that each plant's Technical Specifications (TS) be revised as needed to: 1) specify ANSI/ANS 3.1-1978 for unit staff qualification requirements and relocate exceptions to the Quality Assurance Program Manual (QAPM), 2) specify ANSI/ANS 3.1-1993 as endorsed by Regulatory Guide 1.8, Revision 3, 2000 for the Shift Technical Advisor (STA) qualification requirements and, 3) make administrative changes for clarification and consistency. The affected licensed plants are:

Arkansas Nuclear One Units 1 & 2 License Nos. DPR-51 & NPF-6	Indian Point Nuclear Generating Unit No. 2 License No. DPR-26
Grand Gulf Nuclear Station License No. NPF-29	Indian Point Nuclear Generating Unit No. 3 License No. DPR-64
River Bend Station License No. NPF-47	Pilgrim Nuclear Power Station License No. DPR-35
Waterford 3 Steam Electric Station License No. NPF-38	James A. FitzPatrick Nuclear Power Plant License No. DPR-59
Vermont Yankee Nuclear Power Station License No. DPR-28	Palisades Nuclear Plant License No. DPR- 20

The unit staff qualification requirements are contained in the TS for all Entergy plants. Staff qualification requirements are also contained within the QAPM. Having qualification requirements in both licensing documents has caused some inconsistencies and confusion over the proper commitments or requirements that apply to some plants. Entergy is requesting TS changes and QAPM changes to eliminate the inconsistencies and standardize the requirements for the fleet. In addition, exceptions to the standards will be located in one licensing document – the QAPM. This evaluation addresses the requested TS changes. Proposed changes to the QAPM are evaluated in Enclosure 1 to this letter.

2.0 DETAILED DESCRIPTION

2.1 Unit Staff Qualification Requirements

Each plant TS currently specify qualifications requirements for members of the unit staff. These requirements are typically contained in the Administrative Controls section of the TS and refer to a Regulatory Guide or ANSI Standard that establish qualification standards that are acceptable to the NRC staff. Certain exceptions to the standard are also specified either

in the QAPM or TS. The Improved Standard TS (ISTS) NUREGs (i.e., NUREGs 1430 through 1434) provide a format for specifying the requirements as follows:

Each member of the unit staff shall meet or exceed the minimum qualifications of [Regulatory Guide 1.8, Revision 2, 1987, or more recent revisions, or ANSI Standard acceptable to the NRC staff]. [The staff not covered by Regulatory Guide 1.8 shall meet or exceed the minimum qualifications of Regulations, Regulatory Guides, or ANSI Standards acceptable to NRC staff].

While each of Entergy's nuclear plant's TS contain a similar section specifying the qualification requirements, the plants differ on the referenced standard and exceptions to the standard. The majority of the plants' TS reference ANSI/ANS 3.1-1978 as the base standard for unit staff qualifications, which is consistent with Entergy's QAPM. The QAPM applies to all plants in the nuclear fleet. However, some TS reference ANSI N18.1-1971. This results in confusion in the qualification requirements due to multiple standards that apply to those plants. Entergy proposes to revise each site's TS to specify ANSI/ANS 3.1-1978 as the common standard. In addition, exceptions to the standard are proposed to be located in one licensing document, the QAPM. The proposed modified TS for each plant would read:

Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI/ANS 3.1-1978 for comparable positions with exceptions specified in the Entergy Quality Assurance Program Manual (QAPM).

A markup of the each plant's current TS reflecting this change is provided in Attachment 1 to this enclosure. Changes to the QAPM to include the exceptions are requested and evaluated in accordance with 10 CFR 50.54 in Enclosure 1 to this letter.

2.2 Shift Technical Advisor (STA) Qualifications:

Currently, the Entergy plants' TS vary on the requirements for the STA. Most refer to the Commission Policy Statement for STA qualification requirements. Grand Gulf on the other hand is committed to ANSI/ANS 3.1-1981 as endorsed by RG 1.8, Revision 2, 1987. There are other TS wording differences that will be addressed for clarity and standardization.

For the STA qualification, Entergy is proposing to commit all plants to the latest standard (i.e., ANSI/ANS 3.1-1993 as endorsed by RG 1.8, Rev. 3, 2000). The RG requirements are generally more prescriptive than the Commission Policy Statement.

The ITS NUREGs provide a format for specifying the STA requirements as follows:

An individual shall provide advisory technical support to the unit operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. This individual shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift.

Each of Entergy's nuclear plant's TS contain a similar section specifying the STA requirements but may differ from the ITS wording. For example, the ANO Unit 1 and Unit 2 TS begin:

In MODES 1, 2, 3, or 4, an individual shall provide advisory technical support for the operations shift crew...

Several of the Entergy plants currently include the clarification as to which plant MODES the STA must be on-shift serving in the STA role. Entergy desires to standardize this clarification for all plants. The proposed wording is different between BWRs and PWRs due to the differences in MODE definitions.

The following TS wording is proposed for BWRs

In MODES 1, 2, or 3, an individual shall provide advisory technical support to the operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. This individual shall meet the qualifications specified by ANSI/ANS 3.1-1993 as endorsed by RG 1.8, Rev. 3, 2000.

The following TS wording is proposed for PWRs:

In MODES 1, 2, 3, or 4, an individual shall provide advisory technical support to the operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. This individual shall meet the qualifications specified by ANSI/ANS 3.1-1993 as endorsed by RG 1.8, Rev. 3, 2000.

Although this is a deviation from the ISTS wording, the change is consistent with the intent of NUREG-0737 as further discussed in section 3 of this enclosure and is therefore only a clarification of the current requirements. The above wording concerning the applicable MODES is modified for two plants (i.e., Pilgrim and Vermont Yankee) to be consistent with their custom TS nomenclatures for the different plant modes.

2.3 Radiation Protection Manager (RPM) Qualifications

Currently, each plants' TS specify the RPM qualifications as an exception to ANSI/ANS 3.1 - 1978 or as an exception to ANSI N18.1 - 1971 (depending upon which standard the TS references for unit staff qualifications). All of the plants TS, except Grand Gulf require the RPM to meet the qualification requirements of Regulatory Guide (RG) 1.8, September 1975. The GG TS requires the RPM to meet RG 1.8 Revision 2, 1987. Entergy is requesting that the latest standard to which any plant is committed (i.e., RG 1.8 Revision 2, 1987) be applied to all of plants in the fleet. However, as discussed in section 2.1 above, Entergy proposes that the QAPM be the single document for specifying exceptions to prevent conflicts or confusion in the future. Therefore the RPM qualification exception will be relocated to the QAPM.

2.4 New Paragraph for Licensed Operators

The ISTS NUREGs include a paragraph that defines licensed operators consistent with 10 CFR 55.4. The paragraph in the ITS NUREGs reads:

5.3.2 For the purpose of 10 CFR 55.4, a licensed Senior Reactor Operator (SRO) and a licensed reactor operator (RO) are those individuals who,

in addition to meeting the requirements of TS 5.3.1, perform the functions described in 10 CFR 50.54(m).

This paragraph was added to the ISTS NUREGs at the request of the NRC. Some of Entergy's plants incorporated this paragraph into their TS either through the ITS conversion or other license amendment. The following Entergy plants currently include this paragraph in the TS: Palisades Nuclear Plant, Indian Point 2, Indian Point 3, and James A. FitzPatrick.

Entergy requests that this new paragraph be added to the following plants' TS: Grand Gulf Nuclear Station, Pilgrim Nuclear Power Station, River Bend, Arkansas Nuclear One - Units 1 and 2, Waterford – Unit 3, Vermont Yankee.

2.5 Editorial Deletion of Note No Longer Applicable (Waterford 3 Only)

The note on page 6-6 of Waterford 3 TS that reads “*Not responsible for sign-off function.” is no longer applicable and is being deleted. This note was associated with TS 6.2.3.3, which was removed from TS by license amendment number 146. The associated License Amendment Request dated October 16, 1996, did not identify the need to remove the note. This change is strictly editorial and has no regulatory, environmental, or safety impact.

3.0 TECHNICAL EVALUATION

3.1 Change in Unit Staff Qualifications

3.1.1 Background

Entergy has a common Quality Assurance Program that is currently applicable to both the Entergy Operations, Inc. (EOI) plants and the Entergy Nuclear Operations, Inc. (ENO) plants. The common QAPM was approved by the NRC for the EOI plants (Arkansas Nuclear One - units 1 and 2, Grand Gulf, River Bend, and Waterford 3) on November 6, 1998 (Reference 1). Regarding unit staff qualifications, the initial common QAPM stated:

Qualification requirements for personnel will meet ANSI/ANS 3.1-1978 except where exception to ANSI N18.1 or to this Standard is identified in the applicable unit's Technical Specifications.

Prior to approval of the QAPM changes, the EOI plants' commitments ranged from ANSI N18.1-1971 to ANSI/ANS 3.1-1981 and combinations of these standards. The revision was requested to consolidate the QA programs for the four sites into a single program to provide consistency among the Entergy plants. In its approval, the NRC also noted that more restrictive requirements were still in place in the TS and other regulations where appropriate (e.g., licensed operator qualifications). The NRC conclusion was that the change was acceptable and that the requirements of 10 CFR 50 Appendix B would continue to be met.

As noted, some of the EOI plant's TS still contained requirements to meet ANSI N18.1-1971 even though the QAPM changes were approved. This required those plants to meet both ANSI N18.1 – 1971 and ANSI/ANS 3.1-1978 except where specific exceptions to the standards were specified. Following approval of the consolidated QAPM, EOI plants whose

TS still referred to ANSI N18.1 – 1971 began requesting license amendments to relieve the burden and confusion associated with commitments to both standards.

On October 31, 2001, ANO-1 Amendment 215 (Reference 2) approved the conversion of the ANO-1 TS to the ISTS. The amendment replaced the qualification requirements of ANSI N18.1-1971 with ANSI/ANS 3.1-1978. ANO-2 subsequently requested a license amendment to change the TS administrative section, including replacement of ANSI N18.1-1971 with ANSI/ANS 3.1-1978 for qualification requirements. The NRC issued Amendment 255 (Reference 3) on September 28, 2004 approving the changes.

GGNS also requested an amendment to change the qualification requirements from ANSI N18.1-1971 to ANSI/ANS 3.1-1978 to be consistent with the QAPM and eliminate the dual qualification requirements. The NRC approved the GGNS request by Amendment 157 (Reference 4) on April 23, 2003.

The River Bend and Waterford 3 TS already contained a reference to ANSI/ANS 3.1-1978 and were not revised.

As Entergy acquired additional plants (i.e., ENO plants – Indian Point, Units 2 and 3; Palisades; Pilgrim; James A. FitzPatrick; and Vermont Yankee), these plants adopted Entergy's common QAPM under the provisions of 10 CFR 50.54. The plan to use a common QA program for the ENO plants was discussed with the NRC in a meeting on September 19, 2001 (Reference 5). Like the EOI plants, the TS requirements for ENO plants also remained in effect and were required to be met.

Indian Point Units 2 and 3 also applied for license amendments to replace the reference to ANSI N18.1 – 1971 with ANSI/ANS 3.1-1978. The requests were approved by issuance of Amendments no. 252 and no. 234 (Reference 6).

Currently, the TS for James A. FitzPatrick, Palisades, Pilgrim, and Vermont Yankee still refer to ANSI N18.1 – 1971. Entergy desires to standardize the qualification requirements by replacing the TS reference to ANSI N18.1 – 1971 with ANSI/ANS 3.1-1978.

3.1.2 Evaluation:

In general, ANSI/ANS 3.1-1978 is more restrictive than ANSI N18.1 – 1971. For example, ANSI/ANS 3.1-1978 requires the Technical Manager to have three years nuclear power plant experience whereas ANSI N18.1-1971 requires only one year. Additional years of experience are also required for other positions such as some professional – technical group leaders. Additionally, ANSI/ANS 3.1-1978 establishes qualification requirements for Independent Review Personnel which are not contained in ANSI N18.1-1971.

ANSI/ANS 3.1-1978 is less restrictive regarding qualifications of temporary personnel. Whereas, ANSI N18.1 – 1971 does not distinguish between qualifications of personnel regularly filling a position and personnel temporarily filling a position, ANSI/ANS 3.1 - 1978 provides exceptions for personnel temporarily filling positions. The 1978 standard states:

Personnel temporarily filling positions due to absences of the principal may not meet the literal requirements of this standard. Use of personnel to fill a position for which

they do not meet the minimum requirements set forth in this standard is permissible on a justifiable basis ordinarily not to exceed three months but shall not be used as a means of reducing the level of minimum qualifications which the following paragraphs establish as being acceptable. This does not apply to positions requiring Senior Reactor Operator or Reactor Operator licenses.

This less restrictive allowance for non-licensed staff does not effect the 10 CFR 50.120 obligations to assure that personnel, whether temporary or permanent, are qualified to perform assigned tasks. It only relaxes the prescriptive standards for a temporary period provided the deviation can be justified.

In summary, the TS for seven of Entergy's units already require the unit staff to meet ANSI/ANS 3.1-1978. The change from ANSI N18.1-1971 to ANSI/ANS 3.1-1978 for the remaining four plants provides an overall improved standard that has already been found acceptable for the other Entergy plants.

Entergy is aware that ANSI/ANS 3.1-1978 was not officially endorsed by a Regulatory Guide. However, this standard has been approved as an acceptable standard in the TS for more than twenty plants, including seven Entergy plants. Entergy considered the adoption of later standards but decided to remain with the standard that is currently contained in the QAPM and common to most of Entergy's plant TS. A brief synopsis of the evolution of the standards and the reason for Entergy's decision is discussed below.

3.1.3 Consideration of Later Standards

RG 1.8 Rev 1 -1975 generally endorsed ANSI N18.1-1971. Most of the industry's TS today reference this version of the ANSI standard for unit staff qualifications. A revision of ANSI N18.1-1971 was approved by the ANSI Board of Standards Review and issued as ANSI/ANS-3.1-1978. As discussed above, in general, ANSI/ANS 3.1-1978 is more restrictive than ANSI N18.1 – 1971. However, NRC endorsement of the 1978 standard was delayed as lessons learned from the TMI-2 accident were developed. Entergy has reviewed subsequent standards and for reasons discussed below, has decided not to voluntarily adopt a later standard for staff positions other than the RPM and the STA.

a. The 1981 Standard (Partially endorsed by RG 1.8 Rev 2)

During 1981, ANSI/ANS-3.1-1978 was updated to factor in lessons learned from the TMI-2 accident and changing regulatory requirements; it was reissued as ANSI/ANS-3.1-1981. The NRC endorsed certain sections of the 1981 standard for certain positions through Revision 2 to Regulatory Guide 1.8. Specifically, RG 1.8 Revision 2 endorsed sections 4.3.1.1, "Shift Supervisor," 4.3.1.2, "Senior Operator," 4.5.1.2, "Licensed Operators," 4.4.8, "Shift Technical Advisor," and 4.4.4, "Radiation Protection," of ANSI/ANS-3.1-1981. Endorsement for all other positions remained with ANSI N18.1-1971.

The sections endorsed by the RG pertain to licensed operators, the RPM, and the STA positions. By this application, Entergy is requesting to adopt the 1981 standard as endorsed by the NRC in RG 1.8 Revision 2 for the RPM. Licensed operators are excluded from the scope of the standard commitments since licensed operators will

continue to be qualified in accordance with 10 CFR 55. This exclusion remains consistent with the NRC Safety Evaluation for the Entergy consolidated QAPM (Reference 7), which stated, "In addition, more restrictive requirements are still in place in Technical Specifications, and other regulations where appropriate (e.g., licensed operator qualifications).

Requirements to meet the 1981 standard for positions other than the RPM are not requested as those sections are not endorsed by the RG. Changes to the STA qualification requirements are discussed later in section 3.2 of this request.

b. The 1987 Standard (not endorsed by a RG)

A revision of ANSI/ANS-3.1-1981 was issued on May 19, 1987 as ANSI/ANS-3.1-1987. The 1987 standard contained changes that resulted from actions taken by the NRC and industry since the 1981 standard in selection and training practices including information from the "Policy Statement on Engineering Expertise on Shift," issued on October 28, 1985. The revision also recognized issuance of the March 20, 1985, "Commission Policy Statement on Training and Qualifications of Nuclear Power Plant Personnel". The NRC later developed a rule addressing requirements for the training and qualification of nuclear power plant personnel (10 CFR 50.120). This rule became effective on May 23, 1993 and superseded the Policy Statement on training and qualifications.

The 1987 standard was not endorsed by an NRC RG and is not requested by Entergy.

c. The 1993 Standard (endorsed by RG 1.8 Revision 3 with additions and exceptions)

ANSI/ANS-3.1-1993 was issued on April 23, 1993. The revised standard reflects actions of the NRC and industry since 1987, including the requirement to use the systematic approach to training (SAT) process to establish and maintain training programs for certain positions. RG 1.8 Revision 3 endorses ANSI/ANS-3.1-1993, with certain additions and exceptions. Section D, "Implementation" provides the NRC's plans for using the RG and notes that no backfitting is intended or approved in connection with the issuance of this guide.

Section D states that the RG will be used in the evaluation of submittals in connection with applications for construction permits, standard design certifications and design approvals, and combined operating licenses. The guide may also be used to evaluate submittals voluntarily initiated by operating reactor licensees who propose modifications that go beyond the current licensing basis if there is a clear connection between the proposed modifications and this guidance.

This submittal is not in connection with a construction permit, standard design certification, or combined operating license. The 1993 standard includes additional detailed experience requirements that more appropriately apply to a new plant as the RG implies. For example, there are new collective experience requirements at the Manager Level, the Middle Manager Level and First Line Supervisor level. In addition, many positions have on-site and special nuclear power plant experience requirements. For example, the Technical Manager must have been on-site for six months and have

experienced (a) one month of operation above 20% power, (b) one month of routine refueling outage, and (c) initial plant startup testing or post refueling outage startup testing. These additional requirements present an undue administrative burden of documenting compliance and do not add an appreciable value for a mature operating organization. Therefore, Entergy has elected not to voluntarily adopt this later standard other than for the Shift Technical Advisor position.

3.2 Changes to Shift Technical Advisor (STA) Requirements

3.2.1 Background

The NRC requested by Generic Letters GL80061 (PWRs) and GL80062 (BWRs), TMI-2 Lessons Learned, that licensees amend their TS to incorporate additional requirements established as a result of the review of the Three Mile Island Unit 2 accident. Included therein were model TS changes that the NRC had determined to be acceptable. The NRC provided the following TS model for adding the Shift Technical Advisor to the shift manning.

Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions, except for (1) the (Radiation Protection Manager) who shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975 [and (2) the Shift Technical Advisor who shall have a bachelor's degree or equivalent in a scientific or engineering discipline with specific training in plant design, and response and analysis of the plant for transients and accidents.]

The change to the TS was necessary since ANSI N18.1-1971 did not include requirements for the STA. Likewise, ANSI/ANS 3.1-1978 did not include requirements for the STA. Subsequently, the NRC "Policy Statement on Engineering Expertise on Shift," was published in the Federal Register (50 FR 43621) on October 28, 1985. Many licensees added a requirement to the TS to meet the Commission Policy Statement which provided the option of a dual role STA by combining the functions of the STA with one of the required senior operators. In fact the current improved TS NUREGs refer to the Commission Policy Statement. For example, NUREG-1434 states:

An individual shall provide advisory technical support to the unit operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. This individual shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift.

STA qualification requirements were added to ANSI/ANS 3.1-1981 and later endorsed by the NRC in Regulatory Guide 1.8, Revision 2, 1987 with some exceptions and clarifications. The RG and ANS standard included additional requirements beyond the Commission Policy statement. The most recent standard for STA qualifications is ANSI/ANS 3.1-1993, as endorsed by RG 1.8, Revision 3, 2000.

There are a variety of ways that the Entergy plants' TS currently specify the requirements for the STA. Most are generally consistent with the improved standard TS and commit to the Commission Policy Statement for STA requirements. The Grand Gulf TS contains the above STA requirement to meet the Commission Policy Statement in section 5.2.2.f (Unit Staff) but also contains a requirement in section 5.3.1 (Unit Staff Qualifications) for the STA to meet the

education and experience requirements of ANSI/ANS 3.1-1981 as endorsed by RG 1.8, Revision 2, 1987.

For standardization, Entergy is proposing to commit all plants to the latest standard (i.e., ANSI/ANS 3.1-1993 as endorsed by RG 1.8, Rev. 3, 2000).

3.2.2 Proposed Change in STA Qualifications

ANSI/ANS 3.1-1993 as endorsed by RG 1.8, Rev. 3 are more prescriptive than the Commission Policy Statement. The additional requirements are:

a. *STA Active Status*

Both the Commission Policy Statement and RG 1.8 Rev. 3 specify that the STA should assume an active role in shift activities. However, the RG further defines the active role as performing at least three shifts per quarter as the STA. If the STA has not maintained an "active" status, then the STA must receive training sufficient to ensure that the STA is cognizant of facility and procedure changes that occurred during the absence.

b. *Qualifications*

The Commission Policy Statement briefly requires the following training: 1) training in the response and analysis of the plant transients and accidents and 2) training in plant design and layout, including the capabilities of instrumentation and controls in the control room.

ANSI/ANS 3.1-1993 as endorsed by RG 1.8, Rev. 3, provides more specific qualification requirements. The following requirements are clarifications to or in addition to the Commission Policy Statement requirements:

- Section 4.1.4, "Training" requires the systematic approach to training (SAT) process described in 6.2.1 to be used to establish and maintain training programs for the Shift Technical Advisor.
- Section 4.6.2, "Shift Technical Advisor" specifies the following qualification requirements:

Education: Baccalaureate in engineering or related science.

Minimum experience for the position:

Nuclear Power Plant	1 yr
which shall include	
On-site	0.50 yr

Special Requirements: Training in

- (1) Response to accidents and analysis of plant transients,
- (2) Application of engineering principles to protection of the core,
- (3) Mitigation of plant accidents, and

(4) Basis of plant design and systems.

Concerning the education requirements, section 4.1.1.1 of ANSI/ANS 3.1-1993 allows alternatives to degree requirements provided that the alternatives are evaluated on a case-by-case basis, and approved and documented by the owner organization. RG 1.8, Revision 3 endorsed this allowance except for individuals assigned to positions in Quality Assurance and Quality Control. Therefore, this allowance may be applied to the STA position.

The proposed TS change requiring the STA to meet RG 1.8, Revision 3 is generally more restrictive than the current requirements that only meet the Commission Policy Statement. Therefore, the proposed changes enhance the STA qualifications and are therefore acceptable.

3.2.3 Clarification of STA Staffing Periods

Some of the Entergy plants' TS currently include a clarification as to which MODES of operation the STA must be on-shift serving in the STA role. For example, the ANO Unit 1 and Unit 2 TS state:

In MODES 1, 2, 3, or 4, an individual shall provide advisory technical support for the operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. This individual shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift.

Similar clarifications are contained in the TS for Indian Point 2 and 3, James A. FitzPatrick (during MODE 1, 2, or 3), and Vermont Yankee (during Plant Startup and Normal Operations). The clarification is consistent with the intent of the requirement as stated in NUREG-0737 and will be added to each site's TS for clarification and consistency. NUREG-0737, *Clarification of TMI Action Plan Requirements*, states:

Until these requirements for eliminating the STA position have been established, the staff continues to require that, in addition to the staffing requirements specified in its July 31, 1980 letter (as revised by item I.A.1.3 of this enclosure), an STA be available for duty on each operating shift when a plant is being operated in Modes 1-4 for a PWR and Modes 1-3 for a BWR. At other times, an STA is not required to be on duty.

For fleet standardization and clarification of the intended requirements, the following wording is proposed for the PWRs:

In MODES 1, 2, 3, or 4, an individual shall provide advisory technical support to the operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. This individual shall meet the qualifications specified by ANSI/ANS 3.1-1993 as endorsed by RG 1.8, Rev. 3, 2000.

Entergy proposes the following wording for the BWRs:

In MODES 1, 2, or 3, an individual shall provide advisory technical support to the operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. This individual shall meet the qualifications specified by ANSI/ANS 3.1-1993 as endorsed by RG 1.8, Rev. 3, 2000.

The above wording concerning the applicable MODES is modified for two plants (i.e., Pilgrim and Vermont Yankee) to be consistent with their custom TS nomenclatures for the different plant modes. The addition of the wording to the TS to clarify the STA staffing periods are administrative and are consistent with the intent as expressed in NUREG-0737 and are therefore acceptable.

3.2.3 Change to Titles

Some of the Entergy plants use specific position titles such as "The Shift Technical Advisor" rather than the generic wording contained in the more recent standard TS. For those plants that use specific titles, the wording will be revised to match the improved standard TS wording. Thus, "The Shift Technical Advisor" will be changed to "An individual" and "Shift Superintendent" will be changed to "operations shift crew". These are administrative changes only and have no impact on current implementation.

3.3 **Change to RPM Qualifications**

Currently the qualification requirements for the RPM are specified in the TS. However, as discussed in section 2.1 above, Entergy proposes that the QAPM be the single document for specifying exceptions to prevent conflicts or confusion in the future. Therefore the RPM qualification exception will be relocated to the QAPM.

While most of the plants' TS specify that the RPM must meet or exceed the qualifications of Regulatory Guide (RG) 1.8, 1975, the Grand Gulf TS specifies that the RPM shall meet or exceed the education and experience requirements of ANSI/ANS 3.1-1981 as endorsed by RG 1.8, Revision 2, 1987. Entergy proposes to relocate this exception to ANSI/ANS 3.1-1978 from the TS to the QAPM and apply the same requirements to all plants in the Entergy fleet. Since RG 1.8, Revision 2, is the latest standard to which any of the Entergy plants are committed; this standard (which endorses ANSI/ANS 3.1-1981) would now apply to all of the Entergy plants. The relocated exception would read:

- a. *The radiation protection manager shall meet or exceed the qualifications of Regulatory Guide 1.8, Revision 2, 1987.*

Below is a comparison of the requirements of RG 1.8, 1975 to RG 1.8, Revision 2, 1987. Differences are noted below and categorized as Administrative (no change in requirements), Less Restrictive, or More Restrictive.

3.3.1 Education Requirements: (*administrative change*)

RG 1.8, September 1975 states that the RPM should have a bachelor's degree *or the equivalent* in a science or engineering subject, including some formal training in

radiation protection. RG 1.8, Revision 2, 1987 states that the RPM should have a Bachelor Degree in a science or engineering subject, including formal training in radiation protection. Although the Rev 2 of the RG does not use the term "or equivalent" when referring to a Bachelor's Degree, section 4.1 of ANSI/ANS-3.1-1981 as endorsed by the RG provides an allowance for the RPM to be qualified without a Bachelor Degree. The ANSI states:

Individuals who do not possess the formal educational requirements specified in this section shall not be automatically eliminated where other factors provide sufficient demonstration of their abilities. These other factors shall be evaluated on a case by-case basis and approved and documented by the plant manager...

The ANSI standard list examples of positive factors that may be considered in making the evaluation of an acceptable alternative to the educational requirements. The Entergy QAPM also lists criteria that may be considered equivalent to a Bachelor Degree. This criteria will remain in the QAPM unchanged and is considered to meet the alternative requirements allowed by the ANSI standard.

Therefore, there are no actual changes to the education requirements (neither less restrictive nor more restrictive).

3.3.2 Experience requirements (*less restrictive and more restrictive*)

a) *Less Restrictive*

RG 1.8, September 1975 states that the RPM should have at least five years of professional experience in applied radiation protection and that at least three years of this professional experience should be in applied radiation protection work in a nuclear facility dealing with radiological problems similar to those encountered in nuclear power stations, preferably in an actual nuclear power station.

RG 1.8, Revision 2, 1987 (Section 4.4.4 of ANSI/ANS-3.1-1981) requires the RPM to have four years of experience in applied radiation protection and that three years of this professional level experience be in applied radiation protection work in a nuclear facility dealing with radiological problems similar to those encountered in nuclear power plants, preferably in a nuclear power plant.

This change is less restrictive in that the total professional experience requirement for the RPM is reduced from five years to four years.

b) *More Restrictive*

There are three more restrictive requirements.

- RG 1.8 – 1975 allows a master's degree to be considered equivalent to one year of professional experience, and a doctor's degree may be considered equivalent

to two years of professional experience where course work related to radiation protection is involved. This allowance is not contained in RG 1.8 – 1987 or the endorsed ANSI standard.

- ANSI/ANS-3.1-1981 includes new more prescriptive requirements for the 3 years experience at a nuclear facility. The ANSI states that during the 3 years, the individual shall participate in the radiation protection section of an operating nuclear power plant during the following periods.

(1) Routine refueling outage (1 to 2 months).

(2) Two months operation above 20 percent power.

Six months experience shall be onsite.

- ANSI/ANS-3.1-1981 includes new requirements for the individual who temporarily replaces the radiation protection group leader. The ANSI states that the replacement must have a Bachelor Degree in a science or engineering subject and two years experience, one of which shall be nuclear power plant experience. As noted above under Item 1 – Education Requirements, alternatives to the Bachelor Degree as allowed for the RPM may also be applied to the temporary replacement.

3.4 New Paragraph for Licensed Operators

10 CFR 55.4 provides a definition which states: “Actively performing the functions of an operator or senior operator means that an individual has a position on the shift crew that requires the individual to be licensed as defined in the facility’s technical specifications, and that the individual carries out and is responsible for the duties covered by that position.” By letter dated April 9, 1997 (C. Grimes to J. Davis), the NRC recommended adding new paragraph 5.3.2 to ensure that there is no misunderstanding when complying with 10 CFR 55.4. The Technical Specification Task Force (TSTF) agreed to add the new paragraph in the ITS NUREGs. This change completes the link between the 10 CFR definition, “*as defined in the facility’s technical specifications*” and the TS. The change is administrative and does not alter or otherwise affect how Entergy implements the 10 CFR requirements for licensed operators.

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

Regulatory criteria and guidance are contained in 10 CFR 50.36, *Technical Specifications*; 10 CFR 55, *Operators’ Licenses*, NUREG-0800, “Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition” and Regulatory Guide (RG) 1.8, “Qualification and Training of Personnel for Nuclear Power Plants.”

4.1.1 Regulatory Requirements

The Commission's regulatory requirements related to the contents of TS are set forth in 10 CFR 50.36. Paragraph 50.36 (c)(5) *Administrative Controls* requires the TS to contain provisions relating to organization and management, procedures, recordkeeping, review and audit, and reporting necessary to assure operation of the facility in a safe manner. In accordance with 10 CFR 50.36, the NRC staff and the industry developed ISTS NUREGs that meet 10 CFR 50.36 requirements. The ISTS NUREGs require that the minimum qualifications for members of the unit staff be specified by use of an overall qualification statement referencing an ANSI Standard acceptable to the NRC staff or by specifying individual position qualifications. To standardize the qualifications requirements for the fleet, Entergy is requesting that the TS for each plant be revised as applicable to reference an overall ANSI standard (ANSI/ANS 3.1-1978) that has previously been found acceptable for seven of Entergy's plants as well as many other non-Entergy plants. In addition, individual position qualifications are specified for the RPM and the STA which have also previously been found acceptable by the staff.

10 CFR 50.54 requires each power plant subject to 10 CFR 50 Appendix B to implement a quality assurance program and section 50.54(a)(3) allows licensees to make changes to their quality assurance program so long as those changes do not reduce commitments and the licensee submits a copy of the changes to the NRC. The current Entergy QAPM specifies the use of ANSI/ANS 3.1-1978 standards for unit staff qualifications. The proposed TS changes are made to be consistent with the QAPM. In addition, Entergy proposes to relocate exceptions to the standard from the TS to the QAPM. For example the RPM qualifications, which are an exception to the standard, will be relocated to the QAPM. Changes to the exceptions following relocation would be limited by 10 CFR 50.54 to those that do not reduce commitments or that receive NRC approval prior to implementation.

10 CFR 55, *Operator's Licenses*, establish procedures and criteria for the issuance of licenses to operators and senior operators, provide for the terms and conditions upon which the Commission will issue or modify these licenses, and provide for the terms and conditions to maintain and renew these licenses. Section 55.4 provides a definition which states: "Actively performing the functions of an operator or senior operator means that an individual has a position on the shift crew that requires the individual to be licensed as defined in the facility's technical specifications, and that the individual carries out and is responsible for the duties covered by that position." A new paragraph is added to applicable TS to ensure the TS are consistent with the regulation. The new paragraph is also consistent with the NRC approved ITS NUREGs.

4.1.2 Regulatory Guidance

NUREG-0800, SRP, section 17.3 specifies that personnel assigned to implement elements of the QA program be capable of performing their assigned tasks. The QAPM and the TS continue to specify unit staff qualifications to ensure personnel are qualified for their position and assigned tasks associated with the position.

Regulatory Guide 1.8, "Qualification and Training of Personnel for Nuclear Power Plants," provides guidance regarding qualifications and training for nuclear power plant personnel.

The latest revision of the RG (Revision 3) endorses ANSI/ANS-3.1-1993, "Selection, Qualification, and Training of Personnel for Nuclear Power Plants," with certain additions and exceptions. Certain regulatory positions in the RG reflect the previous endorsement of ANSI/ANS-3.1-1981 by Revision 2 of RG 1.8 (April 1987). Section D, "Implementation" provides the NRC's plans for using the RG and notes that no backfitting is intended or approved in connection with the issuance of this guide. Section D states that the RG will be used in the evaluation of submittals in connection with applications for construction permits, standard design certifications and design approvals, and combined operating licenses. The guide may also be used to evaluate submittals voluntarily initiated by operating reactor licensees who propose modifications that go beyond the current licensing basis if there is a clear connection between the proposed modifications and this guidance. This submittal is not in connection with a construction permit, standard design certification, or combined operating license. For reasons discussed in section 3.1.3, Entergy has elected not to voluntarily adopt this revision of the RG other than for the STA position.

Entergy is requesting that Revision 2 of the RG be referenced for RPM qualifications. Revision 2 endorsed section 4.4.4, "Radiation Protection" of ANSI/ANS-3.1-1981. Endorsement of most other positions remained with ANSI N18.1-1971. Entergy plans to reference ANSI/ANS-3.1-1978 for other unit staff qualifications rather than the 1981 standard. Although the 1978 standard was not endorsed by the RG, it has been approved for use by more than twenty plants, including seven of Entergy's nuclear plants.

4.2 Precedent

As discussed previously, Entergy is proposing to standardize the overall qualification requirements for the Entergy fleet by referencing ANSI Standard ANSI/ANS 3.1-1978 in each plant's TS. The following plants already contain a reference to the 1978 standard for overall unit staff qualifications: Arkansas Nuclear One - Units 1 and 2, Grand Gulf, Indian Point - Units 2 and 3, River Bend, and Waterford Unit 3. Some of these plants had replaced the reference to the 1971 standard with the 1978 standard through license amendments as previously discussed in section 3.1.1.

In addition to the Entergy plants, the NRC approved the reference to the 1978 standard in the TS for other licensee plants, including Callaway; Clinton; Diablo Canyon – Units 1 and 2; Duane Arnold; Limerick – Units 1 and 2; Nine Mile Point – Unit 2; Oconee - Units 1, 2, and 3; Oyster Creek; Palo Verde – Units 1, 2, and 3; St. Lucie – Units 1 and 2; Three Mile Island; and Wolf Creek.

The reference to ANSI/ANS-3.1-1981 as endorsed by RG 1.8, Revision 2 for the RPM qualification requirements was approved for GGNS by amendment 51 dated December 5, 1988 (Reference 8). Since this is the latest standard to which any Entergy plant is required to comply, Entergy request that each of the remaining plants TS be changed to reference the same standard as GGNS.

The proposed new paragraph that defines licensed operators consistent with 10 CFR 55.4 is consistent with the approved ITS NUREGs 1430, 1431, 1432, 1433, and 1434. This change was added by TSTF-258 at the request of the NRC staff. The following Entergy plants currently include this paragraph in the TS: Palisades Nuclear Plant, Indian Point 2, Indian Point 3, and James A. FitzPatrick.

Entergy is not aware of any other licensees that require the STA position to meet the qualification standards of ANSI/ANS 3.1-1993 as endorsed by RG 1.8, Rev. 3, 2000.

4.3 No Significant Hazards Consideration Determination

The proposed amendments would change the Technical Specifications (TS) for each Entergy nuclear plant to standardize unit staff qualification requirements across the Entergy fleet. Specifically, Entergy proposes that each plant's TS be revised as needed to: 1) specify ANSI/ANS 3.1-1978 for unit staff qualification requirements and relocate exceptions to the Quality Assurance Program Manual (QAPM), 2) specify ANSI/ANS 3.1-1993 as endorsed by Regulatory Guide 1.8, Revision 3, 2000 for the Shift Technical Advisor (STA) qualification requirements, 3) add a new paragraph that defines licensed operators consistent with 10 CFR 55.4 and, 4) make administrative changes for clarification and consistency.

Entergy has evaluated whether or not a significant hazards consideration is involved with the proposed amendment(s) 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.

The proposed changes involve the revision or relocation of administrative requirements associated with unit staff qualifications and will not impact the design, operation, testing, performance, or reliability of any plant system or component. The TS changes will require plants currently required to be qualified per ANSI N18.1-1971 to be qualified to the later standard of ANSI/ANS 3.1-1978. The changes do not affect licensed operator qualifications or training, which will continue to comply with applicable regulations. Qualification requirements for the Shift Technical Advisor (STA) are revised to comply with a later standard that provides more prescriptive qualifications and ensures that the STA maintains an active status. The changes do not affect operating procedures or operator response to any accidents previously evaluated in the Updated Final Safety Analysis Report (UFSAR).

Therefore, the proposed change does 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 amendment is administrative in nature and does not introduce any credible new failure mechanisms, malfunctions, or accident initiators. The changes will not alter the plant configuration, require new plant equipment to be installed, alter accident analysis assumptions, introduce any new accident initiators, or affect the function of plant systems or the manner in which systems are operated, maintained, modified, tested, or inspected.

Therefore, the proposed change does 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 amendment involves the revision or relocation of administrative requirements associated with unit staff qualifications. The proposed change is administrative in nature and does not involve any physical changes to the plant or alter the manner in which plant systems are operated, maintained, modified, tested, or inspected. The proposed change does not alter the manner in which safety limits, limiting safety system settings or limiting conditions for operation are determined. The safety analysis acceptance criteria are not affected by this change. The proposed change will not result in plant operation in a configuration outside the design basis. The proposed change does not adversely affect systems that respond to safely shutdown the plant and to maintain the plant in a safe shutdown condition.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, Entergy concludes that the proposed amendments do not involve a 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.

4.4 Conclusions

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 the proposed changes, (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.

5.0 ENVIRONMENTAL CONSIDERATION

The proposed change 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 change 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 change.

6.0 REFERENCES

1. Letter dated November 6, 1998 from J. N. Hannon, USNRC to M.R. Kansler, EOI, "Consolidation of Quality assurance (QA) Programs"

2. Letter dated October 29, 2001, from William Reckley, USNRC, to Craig G Anderson, EOI, "Arkansas Nuclear One, Unit No. 1 – Issuance of Amendment RE: The Conversion to Improved Technical Specifications" (ML013050554).
3. Letter dated September 28, 2004, from Thomas Alexion, USNRC, to Jeffrey S. Forbes, EOI, "Arkansas Nuclear One, Unit No. 2 – Issuance of Amendment RE: Revision of Administrative Controls" (ML042720521).
4. Letter dated April 23, 2003, from David H. Jaffe, USNRC, to William A. Eaton, EOI, "Grand Gulf Nuclear Station, Unit No. 1 – Issuance of Amendment RE: Corrections and Clarifications to certain Requirements and Information" (ML031130220).
5. Memorandum dated November 30, 2001, "Summary of Meeting on September 19, 2001, with Entergy Nuclear Operations, Inc., Concerning a Planned Program to Develop a Common Quality Assurance Manual for the Northern Nuclear Power Plants and Entergy Nuclear Generating Company Power Plants" (ML012730016, ML013370482, and ML013340223).
6. Letter dated August 16, 2007, from John P. Boska, USNRC, to Michael Balduzzi, ENO, "Indian Point Nuclear Generating Unit Nos. 2 and 3 – Issuance of Amendment RE: Proposed changes to Technical Specifications: Miscellaneous Editorial Changes Including TSTF-485 (ML071990307).
7. Letter dated November 6, 1998, from J. N. Hannon, USNRC, to M.R. Kansler, EOI, "Consolidation of Quality assurance (QA) Programs".
8. Letter dated December 5, 1988, from L. L. Kitner, USNRC, to W. T. Cottle, System Energy Resources, Inc. (Entergy), "Issuance of Amendment No. 51 to facility Operating License No. NPF-29 - Grand Gulf Nuclear Station, Unit 1, Regarding Unit Operations Personnel Qualifications" (ML021430385).

Attachment 1
Proposed Technical Specification Changes
(Marked-up Pages)

Technical Specification Unit Staff Qualification Changes for Arkansas Nuclear One – Unit 1, Arkansas Nuclear One – Unit 2, Grand Gulf Nuclear Station, Indian Point Nuclear Generating Unit No. 2, Indian Point Nuclear Generating Unit No. 3, James A. FitzPatrick Nuclear Power Plant, Palisades Nuclear Plant, Pilgrim Nuclear Power Station, River Bend Station, Waterford 3 Steam Electric Station, and Vermont Yankee Nuclear Power Station

<u>Plant</u>	<u>TS Pages</u>
1. Arkansas Nuclear One – Unit 1	5.0-3 and 5.0-4
2. Arkansas Nuclear One – Unit 2	6-2 and 6-3
3. Grand Gulf	5.0-4 and 5.0-5
4. Indian Point 2	5.2-2 and 5.3-1
5. Indian Point 3	5.0-4 and 5.0-5
6. James A. FitzPatrick	5.2-2 and 5.3-1
7. Palisades	5.0-3 and 5.0-4
8. Pilgrim	5.0-3 and 5.0-4
9. River Bend	5.0-4 and 5.0-5
10. Waterford 3 Steam Electric Station	6-6, 6-6a, and 6-7
11. Vermont Yankee	256 and 257

INSERTS FOR TS PAGE MARKUPS

INSERT A

Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI/ANS 3.1-1978 for comparable positions with exceptions specified in the Entergy Quality Assurance Program Manual (QAPM).

INSERT B1

5.3.2 For the purpose of 10 CFR 55.4, a licensed Senior Reactor Operator (SRO) and a licensed Reactor Operator (RO) are those individuals who, in addition to meeting the requirements of Specification 5.3.1, perform the functions described in 10 CFR 50.54(m).

INSERT B2

6.3.2 For the purpose of 10 CFR 55.4, a licensed Senior Reactor Operator (SRO) and a licensed Reactor Operator (RO) are those individuals who, in addition to meeting the requirements of Specification 6.3.1, perform the functions described in 10 CFR 50.54(m).

INSERT B3

2. For the purpose of 10 CFR 55.4, a licensed Senior Reactor Operator (SRO) and a licensed Reactor Operator (RO) are those individuals who, in addition to meeting the requirements of Specification 6.2.C.1, perform the functions described in 10 CFR 50.54(m).

INSERT C (BWRs)

When in MODES 1, 2, or 3 an individual shall provide advisory technical support to the unit operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operations of the unit. This individual shall meet the qualifications specified by ANSI/ANS 3.1-1993 as endorsed by RG 1.8, Rev. 3, 2000.

INSERT D (PWRs)

When in MODES 1, 2, 3, or 4 an individual shall provide advisory technical support to the unit operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operations of the unit. This individual shall meet the qualifications specified by ANSI/ANS 3.1-1993 as endorsed by RG 1.8, Rev. 3, 2000.

INSERT E (Vermont Yankee)

When the unit is in Plant Startup or Normal Operation an individual shall provide advisory technical support to the unit operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operations of the unit. This individual shall meet the qualifications specified by ANSI/ANS 3.1-1993 as endorsed by RG 1.8, Rev. 3, 2000.

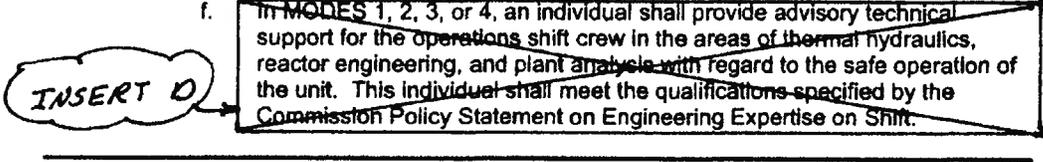
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ENOC-11-00025
Attachment 1 of Enclosure 2
Page 3 of 26

INSERT F (Pilgrim)

When the unit is in an operational mode other than Cold Shutdown or Refueling, an individual shall provide advisory technical support to the unit operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operations of the unit. This individual shall meet the qualifications specified by ANSI/ANS 3.1-1993 as endorsed by RG 1.8, Rev. 3, 2000.

5.0 ADMINSTRATIVE CONTROLS

5.2 Organization

- c. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) for one unit, one control room, and 5.2.2.a and 5.2.2.f for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements.
- d. An individual qualified in radiation protection procedures shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.
- e. The operations manager or assistant operations manager shall hold an SRO license.
- f.  In MODES 1, 2, 3, or 4, an individual shall provide advisory technical support for the operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. This individual shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift.

5.0 ADMINISTRATIVE CONTROLS

5.3 Unit Staff Qualifications

5.3.1

~~Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI ANS 3.1 - 1978 for comparable positions, except for the designated radiation protection manager, who shall meet or exceed the minimum qualifications of Regulatory Guide 1.8, September 1975.~~

INSERT A

INSERT B1

ADMINISTRATIVE CONTROLS

6.2.2 UNIT STAFF

- a. A non-licensed operator shall be on site when fuel is in the reactor and two additional non-licensed operators shall be on site when the reactor is in MODES 1, 2, 3, or 4.
- b. The minimum shift crew composition for licensed operators shall meet the minimum staffing requirements of 10 CFR 50.54(m)(2)(i) for one unit, one control room.
- c. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) for one unit, one control room, and 6.2.2.a and 6.2.2.f for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements.
- d. An individual qualified in radiation protection procedures shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.
- e. The operations manager or the assistant operations manager shall hold a SRO license.
- f.

~~In MODES 1, 2, 3, or 4, an individual shall provide advisory technical support for the operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. This individual shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift.~~

INSERT D

ADMINISTRATIVE CONTROLS

6.3 UNIT STAFF QUALIFICATIONS

INSERT A

6.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI ANS 3.1-1978 for comparable positions, except for the designated radiation protection manager, who shall meet or exceed the minimum qualifications of Regulatory Guide 1.8, September 1975.

6.4 PROCEDURES

INSERT B2

- 6.4.1 Written procedures shall be established, implemented, and maintained covering the following activities:
- a. The applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978;
 - b. The emergency operating procedures required to implement the requirements of NUREG-0737 and NUREG-0737, Supplement 1, as stated in Section 7.1 of Generic Letter 82-33;
 - c. Fire Protection Program implementation;
 - d. All programs specified in Specification 6.5; and
 - e. Modification of core protection calculator (CPC) addressable constants. These procedures shall include provisions to ensure that sufficient margin is maintained in CPC type I addressable constants to avoid excessive operator interaction with the CPCs during reactor operation.

Modifications to the CPC software (including changes of algorithms and fuel cycle specific data) shall be performed in accordance with the most recent version of "CPC Protection Algorithm Software Change Procedure," CEN-39(A)-P, which has been determined to be applicable to the facility. Additions or deletions to CPC addressable constants or changes to addressable constant software limit values shall not be implemented without prior NRC approval.

5.2 Organization

5.2.2 Unit Staff (continued)

e. The operations manager or at least one operations middle manager shall hold an SRO license.

f. ~~The Shift Technical Advisor (STA) shall provide advisory technical support to the shift superintendent in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. In addition, the STA shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift.~~

INSERT C

5.0 ADMINISTRATIVE CONTROLS

5.3 Unit Staff Qualifications

5.3.1

~~Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI/ANS-3.1-1978, except as clarified in the Quality Assurance Program Manual, for comparable positions as modified by Specification 5.2.2.1, except for the radiation protection manager and the STA, who shall meet or exceed the education and experience requirements of ANSI/ANS 3.1-1981 as endorsed by Regulatory Guide 1.8, Revision 2, 1987.~~

INSERT A

INSERT B1

5.2 Organization

5.2.2 Unit Staff (continued)

- b. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and 5.2.2.a and 5.2.2.f for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements.
- c. A radiation protection technician shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.
- d. Not Used

- e. The operations manager or assistant operations manager shall hold an SRO license.

INSERT 10

- f. ~~An individual shall provide advisory technical support to the unit operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. This individual shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift. This position must be manned only when in MODES 1, 2, 3, or 4.~~

5.0 ADMINISTRATIVE CONTROLS

5.3 Unit Staff Qualifications

-
- 5.3.1 ~~Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI/ANS 3.1-1978 for comparable positions, except for the following:~~
- a. ~~The radiation protection manager shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975, and~~
 - b. ~~The operations manager shall meet or exceed the minimum qualifications of ANSI/ANS 3.1-1978 except for the SRO license requirement which shall be in accordance with Technical Specification 5.2.2.e.~~
- 5.3.2 For the purpose of 10 CFR 55.4, a licensed Senior Reactor Operator (SRO) and a licensed reactor operator (RO) are those individuals who, in addition to meeting the requirements of TS 5.3.1, perform the functions described in 10 CFR 50.54(m).
-

INSERT
A

5.2 Organization

5.2.2 Unit Staff (continued)

e. The operations manager or assistant operations manager shall hold an SRO license.

f. ~~An individual shall provide advisory technical support to the unit operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. This individual shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift. This position must be manned in Mode 1, 2, 3 or 4 only.~~

INSERT D

5.0 ADMINISTRATIVE CONTROLS

5.3 Unit Staff Qualifications

5.3.1

~~Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI/ANS 3.1-1978 for comparable positions, except for the following:~~

- ~~a. The radiation protection manager shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975; and~~
- ~~b. The operations manager shall meet or exceed the minimum qualifications of ANSI/ANS 3.1-1978 except for the SRO license requirement which shall be in accordance with Technical Specification 5.2.2.e.~~

INSERT
A

5.3.2

For the purpose of 10 CFR 55.4, a licensed Senior Reactor Operator (SRO) and a licensed Reactor Operator (RO) are those individuals who, in addition to meeting the requirements of TS 5.3.1, perform the functions described in 10 CFR 50.54(m).

5.2 Organization

5.2.2 Plant Staff (continued)

- b. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and 5.2.2.a and 5.2.2.f for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements.
- c. A radiation protection technician shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.
- d. Deleted
- e. The operations manager or assistant operations manager shall hold an SRO license.

f. ~~When the plant is in MODE 1, 2, or 3, an individual shall provide advisory technical support to the shift supervisor (SS) in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the plant. This individual shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift, published in the October 28, 1985 Federal Register (50 FR 43621).~~

INSERT C

5.0 ADMINISTRATIVE CONTROLS

5.3 Plant Staff Qualifications

5.3.1

~~Each member of the plant staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions except for the radiation protection manager, who shall meet or exceed the qualifications of Regulatory Guide 1.8, Revision 1, September 1975.~~

INSERT A

5.3.2

For the purpose of 10 CFR 55.4, a licensed Senior Reactor Operator (SRO) and a licensed Reactor Operator (RO) are those individuals who, in addition to meeting the requirements of TS 5.3.1, perform the functions described in 10 CFR 50.54(m).

5.2 Organization

5.2.2 Plant Staff (continued)

- c. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i), and 5.2.2.a and 5.2.2.g for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the requirements.
- d. A radiation safety technician shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.
- e. Not Used
- f. The operations manager or an assistant operations manager shall hold an SRO license. The individual holding the SRO license shall be responsible for directing the activities of the licensed operators.

g. ~~An individual shall provide advisory technical support to the plant operations shift crew in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the plant. This individual shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift (Published in Federal Register 50 FR 43621, October 28, 1985).~~

INSERT 0

5.0 ADMINISTRATIVE CONTROLS

5.3 Plant Staff Qualifications

5.3.1

INSERT A

~~Each member of the plant staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions except for the education and experience eligibility requirements for operator license applicants, and changes thereto, shall be those previously reviewed and approved by the NRC, specifically those referenced in NRC Safety Evaluation dated October 24, 2003.~~

5.3.2

(Deleted)

~~The radiation safety manager shall meet the qualifications of a Radiation Protection Manager as defined in Regulatory Guide 1.8, September 1975. For the purpose of this section, "Equivalent," as utilized in Regulatory Guide 1.8 for the bachelor's degree requirement, may be met with four years of any one or combination of the following: (a) Formal schooling in science or engineering, or (b) operational or technical experience and training in nuclear power.~~

5.3.3

(Deleted)

~~The individual, required by Specification 5.2.2g, assigned to provide advisory technical support to the plant operations shift crew, shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift (Published in Federal Register 50 FR 43621, October 28, 1985).~~

5.3.4

(Deleted)

5.3.5

For the purpose of 10 CFR 55.4, a licensed Senior Reactor Operator (SRO) and a licensed reactor operator (RO) are those individuals who, in addition to meeting the requirements of TS 5.3.1, perform the functions described in 10 CFR 50.54(m).

5.2 Organization

5:2.2 Unit Staff (continued)

- b. At least one licensed Reactor Operator (RO) shall be present in the control room when fuel is in the reactor. In addition, while the unit is in an operational mode other than Cold Shutdown or Refuelling, at least one licensed Senior Reactor Operator (SRO) shall be present in the control room.
- c. At least two licensed ROs shall be present in the control room during reactor startup, scheduled reactor shutdown and during recovery from reactor trips.
- d. Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and 5.2.2.a and 5.2.2.1 for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements.
- e. Higher grade licensed operators may take the place of lower grade licensed or unlicensed personnel.
- f. An individual qualified in radiation protection procedures shall be on site when fuel is in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.
- g. Deleted
- h. The operations manager or assistant operations manager shall hold a Senior Reactor Operator License.

i. ~~An individual shall provide advisory technical support to the unit operations shift crew in the areas of engineering and accident assessment. This individual shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift. This individual with a Senior Reactor Operator license may simultaneously serve a required SRO position.~~

INSERT C

5.0 ADMINISTRATIVE CONTROLS

5.3 Unit Staff Qualifications

5.3.1

Each member of the unit staff shall meet or exceed the minimum qualifications as described in the American National Standards Institute N18.1-1971, "Selection and Training of Personnel for Nuclear Power Plants." In addition, the individual performing the function of Radiation Protection Manager shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975.

INSERT A

INSERT B1

5.2 Organization

5.2.2 Unit Staff (continued)

f. The operations manager or at least one operations middle manager shall hold an SRO license.

g. ~~The Shift Technical Advisor (STA) shall provide advisory technical support to the shift superintendent in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. In addition, the STA shall meet the qualifications specified by the Commission Policy Statement on Engineering Expertise on Shift.~~

INSERT C →

5.0 ADMINISTRATIVE CONTROLS

5.3 Unit Staff Qualifications

5.3.1

Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI/ANS 3.1-1978 for comparable positions, except for the radiation protection manager who shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975.

INSERT A

INSERT B1

ADMINISTRATIVE CONTROLS

6.2.3 Not Used

6.2.4 SHIFT TECHNICAL ADVISOR

INSERT D

6.2.4.1 The Shift Technical Advisor shall provide advisory technical support to the Shift Manager in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. The STA shall meet the requirements of either Option 1 or 2 as shown below:

- a. Option 1 - Combined SRO/STA Position. This option is satisfied by assigning an individual with the following qualifications to each operating shift crew as one of the SRO's required by 10 CFR 50.54(m) (2) (i):

*Not responsible for sign-off function.

ADMINISTRATIVE CONTROLS

SHIFT TECHNICAL ADVISOR (Continued)

1. Licensed as a Senior Reactor Operator on the unit and
2. Meets the STA Training Criteria of NUREG-0737, Item I.A.1.1, and one of the following educational alternatives:
 - (a) Bachelor's Degree in Engineering or Science from an accredited institution;
 - (b) Professional Engineers License obtained by the successful completion of the PE examination;
 - (c) Bachelor's Degree in Engineering or Science Technology from an accredited institution including course work in the physical, mathematical, or engineering sciences.

b. Option 2 - Dedicated STA Position. This option is satisfied by placing on each shift a dedicated Shift Technical Advisor (STA) who meets the STA criteria of NUREG-0737, Item I.A.1.1.

Delete page

ADMINISTRATIVE CONTROLS

6.3 UNIT STAFF QUALIFICATIONS

INSERT A

6.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI/ANS 3.1-1978 except that:

- a. The Radiation Protection Superintendent shall meet or exceed the minimum qualifications of Regulatory Guide 1.8, September 1975.
- b. Personnel in the Health Physics, Chemistry and Radwaste Departments shall meet or exceed the minimum qualifications of ANSI N18.1-1971.
- c. The licensed Operators and Senior Operators shall also meet or exceed the minimum qualifications of 10 CFR Part 55.
- d. Personnel in the Nuclear Quality Assurance Department, and other staff personnel who perform inspection, examination, and testing functions, shall meet or exceed the minimum qualifications of Regulatory Guide 1.58, Rev. 1, September 1980. (Endorses ANSI N45.2.6-1978).

INSERT B2

6.4 TRAINING

Not Used

~~6.4.1 A retraining and replacement training program for the unit staff shall be maintained under the direction of the Training Manager-Nuclear and shall meet or exceed the requirements and recommendations of Section 5.2 of ANSI 3.1-1978 and 10 CFR Part 55.~~

6.5 PROGRAMS

The following programs shall be established, implemented, and maintained.

6.5.1 through 6.5.4 will be used later.

6.5.5 COMPONENT CYCLIC OR TRANSIENT LIMIT

This program provides controls to track Technical Requirements Manual Section 5.7 cyclic and transient occurrences to ensure that components are maintained within the design limits.

6.5.6 Will be used later.

6.5.7 REACTOR COOLANT PUMP FLYWHEEL INSPECTION PROGRAM

This program shall provide for the inspection of each reactor coolant pump flywheel per the recommendation of Regulatory Position C.4.b of Regulatory Guide 1.14, Revision 1, August 1975. The volumetric examination per Regulatory Position C.4.b.1 will be performed on approximately 10-year intervals.

VYNPS

6.2 ORGANIZATION (Cont'd)

4. The individuals who train the operating staff, carry out health physics, or perform quality assurance functions may report to the appropriate on-site manager; however, these individuals shall have sufficient organizational freedom to ensure their independence from operating pressures.

B. Unit Staff

The unit staff organization shall include the following:

1. A non-licensed operator shall be assigned when the reactor contains fuel and an additional non-licensed operator shall be assigned during Plant Startup and Normal Operation.
2. At least one licensed Reactor Operator (RO) or one licensed Senior Reactor Operator (SRO) shall be present in the control room when fuel is in the reactor.
3. When the unit is in Plant Startup or Normal Operation, at least one licensed Senior Reactor Operator (SRO) and one licensed Reactor Operator (RO), or two licensed Senior Reactor Operators, shall be present in the control room.
4. Shift crew composition shall meet the requirements stipulated herein and in 10 CFR 50.54(m). Shift crew composition may be less than the minimum requirement of 10 CFR 50.54(m)(2)(i) and Specifications 6.2.B.1 and 6.2.B.8 for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members, provided immediate action is taken to restore the shift crew composition to within the minimum requirements.
5. An individual qualified in radiation protection procedures shall be present on-site when there is fuel in the reactor. The position may be vacant for not more than 2 hours, in order to provide for unexpected absence, provided immediate action is taken to fill the required position.
6. Administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform safety related functions (e.g., licensed SROs, licensed ROs, radiation protection technicians, auxiliary operators, and key maintenance personnel).
7. The operations manager or an assistant operations manager shall hold an SRO license.
8.

While the unit is in Plant Startup or Normal Operation, a shift engineer shall provide advisory technical support to the shift supervisor.
--

INSERT E

VYNPS

6.2 ORGANIZATION (Cont'd)

C. Unit Staff Qualifications

1. INSERT A

INSERT B3

~~Each member of the unit staff shall meet or exceed the minimum qualifications of the American National Standards Institute N-18.1-1971, "Selection and Training of Personnel for Nuclear Power Plants," except for the radiation protection manager who shall meet the qualifications of Regulatory Guide 1.8, Revision 1 (September 1975) and the shift engineer, who shall have a bachelor's degree or equivalent in a scientific or engineering discipline with specific training in plant design, and response and analysis of the plant for transients and accidents.~~

6.3 ACTION TO BE TAKEN IF A SAFETY LIMIT IS EXCEEDED

Applies to administrative action to be followed in the event a safety limit is exceeded.

If a safety limit is exceeded, the reactor shall be shutdown immediately.

6.4 PROCEDURES

Written procedures shall be established, implemented, and maintained covering the following activities:

- A. Normal startup, operation and shutdown of systems and components of the facility.
- B. Refueling operations.
- C. Actions to be taken to correct specific and foreseen potential malfunctions of systems or components, suspected Primary System leaks and abnormal reactivity changes.
- D. Emergency conditions involving potential or actual release of radioactivity.
- E. Preventive and corrective maintenance operations which could have an effect on the safety of the reactor.
- F. Surveillance and testing requirements.
- G. Fire protection program implementation.
- H. Process Control Program in-plant implementation.
- I. Off-Site Dose Calculation Manual implementation.

6.5 HIGH RADIATION AREA

As provided in paragraph 20.1601(c) of 10 CFR 20, the following controls shall be applied to high radiation areas in place of the controls required by paragraphs 20.1601(a) and 20.1601(b) of 10 CFR 20:

- A. High Radiation Areas with dose rates greater than 0.1 rem/hour at 30 centimeters, but not exceeding 1.0 rem/hour at 30 centimeters from the radiation source or from any surface penetrated by the radiation: