



Palo Verde Nuclear  
Generating Station

Gregg R. Overbeck  
Senior Vice President  
Nuclear

TEL (623) 393-5148  
FAX (623) 393-6077

**10 CFR 50.90**

Mail Station 7602  
P.O. Box 52034  
Phoenix, AZ 85072-2034

102-04930-GRO/TNW/RJR  
April 25, 2003

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Mail Station P1-37  
Washington, DC 20555-0001

Dear Sirs:

**Subject: Palo Verde Nuclear Generating Station (PVNGS)  
Units 1, 2 and 3  
Docket Nos. STN 50-528/529/530  
Request for a License Amendment to Revise Technical  
Specification 5.3, Unit Staff Qualifications**

Pursuant to 10 CFR 50.90, Arizona Public Service Company (APS) hereby requests an amendment to Technical Specification (TS) Section 5.3, "Unit Staff Qualifications," for the Palo Verde Nuclear Generating Station (PVNGS) Units 1, 2 and 3. The proposed change will revise requirements that have been superseded due to the accreditation of the licensed operator training program by the Institute of Nuclear Power Operations.

In accordance with the PVNGS Quality Assurance Program, the Plant Review Board and the Offsite Safety Review Committee have reviewed and concurred with this proposed amendment. By copy of this letter, this submittal is being forwarded to the Arizona Radiation Regulatory Agency (ARRA) pursuant to 10CFR 50.91(b)(1).

The proposed amendment is similar to the change approved for the Peach Bottom Atomic Power Station, Unit 2 on September 17, 2002, and Wolf Creek Generating Station on November 26, 2002. Approval of this amendment application is requested by April 2004. Once approved, this amendment will be implemented within 90 days.

No commitments are being made to the NRC by this letter.

Should you have any questions, please contact Thomas N. Weber at (623) 393-5764.

Sincerely,

GRO/TNW/RJR/kg

A member of the **STARS** (Strategic Teaming and Resource Sharing) Alliance

Callaway • Comanche Peak • Diablo Canyon • Palo Verde • South Texas Project • Wolf Creek

A001

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Unit 1, 2 and 3 Request for a License Amendment to Revise Technical  
Specification 5.3, Unit Staff Qualifications”

Page 2

Enclosures:

1. Notarized Affidavit
2. Evaluation of the proposed amendment request

Attachments:

1. Proposed Technical Specification Changes (mark-up)
2. Proposed Technical Specification Changes (retyped)
3. Associated Changes to The Updated Final Safety Analysis Report  
(for information only)

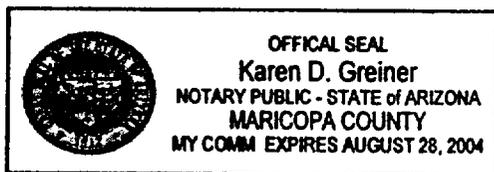
cc: E. W. Merschoff (w/attachments)  
J. N. Donohew (w/attachments)  
N. L. Salgado (w/attachments)  
A. V. Godwin (w/attachments)

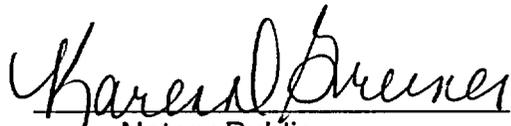
STATE OF ARIZONA        )  
                                          ) ss.  
COUNTY OF MARICOPA    )

I, Gregg R. Overbeck, represent that I am Senior Vice President – Nuclear, that the foregoing document has been signed by me on behalf of Arizona Public Service Company with full authority to do so, and that to the best of my knowledge and belief, the statements made therein are true and correct.

  
\_\_\_\_\_  
Gregg R. Overbeck

Sworn To Before Me This 25<sup>th</sup> Day Of April, 2003.



  
\_\_\_\_\_  
Notary Public

---

Notary Commission Stamp

**ENCLOSURE 2**

**Evaluation of Proposed Amendment Request  
Technical Specification 5.3, Unit Staff Qualifications**

## **Evaluation of Proposed Amendment Request Technical Specification 5.3, Unit Staff Qualifications**

### **1.0 DESCRIPTION**

This letter is a request to amend Operating Licenses NPF-41, NPF-51, and NPF-74 for Palo Verde Nuclear Generating Station Units 1, 2, and 3.

This amendment request would revise TS 5.3, "Unit Staff Qualification," to update requirements that have been superseded due to the accreditation of the licensed operator training program by the Institute of Nuclear Power Operations and promulgation of the revised 10 CFR 55, "Operators' Licenses", which became effective on May 26, 1987 (Reference 1).

Included for information only is the proposed Updated Final Safety Analysis Report change (see Attachment 3).

### **2.0 PROPOSED CHANGE**

The proposed change would revise Technical Specification (TS) 5.3, "Unit Staff Qualifications," to specify an exception that requires licensed operators to comply with the requirements of the National Academy for Nuclear Training guidelines for initial training and qualification in lieu of Regulatory Guide 1.8, September 1975 and ANSI/ANS 3.1-1978.

TS 5.3.1 will be revised to state:

Each member of the unit staff, with the exception of operator license applicants, shall meet or exceed the minimum qualifications of Regulatory Guide 1.8, September 1975 and ....

The following new TS, 5.3.2, will be added:

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 letter 102-04930-GRO/TNW/RJR, dated April 25, 2003.

The current TS, 5.3.2, will be renumbered to 5.3.3.

The proposed TS change would provide the needed flexibility for license candidates to complete the licensed operator training program when:

1. They meet the experience eligibility requirements of an accredited program consistent with 10 CFR 55.31, but

2. may not meet the American National Standards Institute/American Nuclear Society 3.1-1978 (Reference 6) or Regulatory Guide 1.8, Revision 2, experience requirements referenced in the current TS 5.3.1.

### 3.0 BACKGROUND

On March 20, 1985, the NRC issued the Commission Policy Statement on Training and Qualification of Nuclear Power Plant Personnel (Reference 2) which endorsed the training accreditation program developed by the Institute of Nuclear Power Operations (INPO), in association with its National Academy for Nuclear Training (NANT). Subsequently, in NRC Generic Letter 87-07, "Information Transmittal of Final Rulemaking for Revisions to Operator Licensing 10 CFR 55 and Conforming Amendments," (Reference 3) and NUREG-1262, "Answers to Questions at Public Meetings Regarding Implementation of Title 10, Code of Federal Regulations, Part 55 on Operators' Licenses," (Reference 4), the NRC indicated it would accept a licensee's licensed operator training program if it is accredited and based on a systematic approach to training. This accreditation obviates the need to conform to the guidance of either ANSI N18.1-1971 (Reference 5) or ANSI/ANS 3.1-1978 (Reference 6). Reference 4 notes that References 5 and 6 may be superseded by INPO accreditation in accordance with the revised 10 CFR 55, and that licensees may submit a request to the NRC for an administrative change to their Technical Specifications (TS) to revise or delete, as appropriate, the TS requirements which have been superseded.

In addition, the NRC has published NRC Regulatory Issue Summary (RIS) 2001-01, "Eligibility of Operator License Applicants," dated January 18, 2001 (Reference 7), "...to familiarize addressees with the NRC's current guidelines for the qualification and training of reactor operator (RO) and senior operator (SO) license applicants." This document again acknowledges that 10 CFR 55.31(a)(4), as amended on March 25, 1987, states that, "...the Commission may accept a certification that the applicant has successfully completed a Commission-approved training program that is based on a systems approach to training...." RIS 2001-01 further makes the following statements:

"...a facility licensee's training program would be considered approved by the NRC when it is accredited by the National Nuclear Accrediting Board (NNAB)."

"The fact that every licensee has voluntarily obtained and periodically renewed the accreditation of its licensed operator training program suggests that every facility licensee is implementing the experience and education guidelines endorsed by the NNAB. The NRC staff understands that the current version of those guidelines are outlined by the National Academy for Nuclear Training (NANT) in its 'Guidelines for Initial Training

and Qualification of Licensed Operators,' (NANT 2000 guidelines) which were issued in January 2000."

"...the NANT's guidelines for education and experience (those that were in effect in 1987 or those that were issued in January 2000) outline acceptable methods for implementing the Commission's regulations in this area."

"The staff encourages all facility licensee's to review their requirements and commitments related to RO and SO education and experience and to update their documentation (e.g., FSAR, TS, and training program descriptions) to enhance consistency and minimize confusion."

As such, Arizona Public Service Company requests the NRC approve the methods described in the current NANT, "Guidelines for Initial Training and Qualifications of Licensed Operators," for meeting the education and experience eligibility requirements at the Palo Verde Nuclear Generating Station.

#### 4.0 TECHNICAL ANALYSIS

Licensed operator qualifications and training can have an indirect impact on accidents previously evaluated. However, the NRC considered this impact during the rulemaking process, and by promulgation of the revised 10 CFR 55 rule, determined that this impact remains acceptable when licensees have an accredited licensed operator training program that is based on a systems approach to training. The NRC has concluded in References 4 and 7 that the standards and guidelines applied by INPO in their training accreditation program are equivalent to those put forth or endorsed by the NRC. Therefore, maintaining an INPO accredited, systems based licensed operator training program is equivalent to maintaining an NRC approved licensed operator training program which conforms with applicable NRC Regulatory Guides or NRC endorsed industry standards.

Base on the above discussion, the licensed operator qualification and training program will continue to comply with the requirements of 10 CFR 55 and will not affect plant design, hardware, system operation, or procedures. The Palo Verde Nuclear Generating Station licensed operator training program is accredited by INPO and is based on a systems approach to training.

#### 5.0 REGULATORY SAFETY ANALYSIS

##### 5.1 No Significant Hazards Consideration

Arizona Public Service 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 change involve a significant increase in the probability or consequences of an accident previously evaluated?

No. The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed Technical Specification (TS) change is an administrative change to clarify the current requirements for licensed operator qualifications and licensed operator training program. These changes conform to the current requirements of 10 CFR 55. The TS requirements for all other unit staff qualifications remain unchanged.

Although licensed operator qualifications and training may have an indirect impact on accidents previously evaluated, the NRC considered this impact during the rulemaking process, and by promulgation of the revised 10 CFR 55 rule, concluded that this impact remains acceptable as long as the licensed operator training program is certified to be accredited and is based on a systems approach to training. Palo Verde's licensed operator training program is accredited by INPO and is based on a systems approach to training.

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

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

No. The proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed TS change is an administrative change to clarify the current requirements for licensed operator qualifications and licensed operator training program and to conform to the revised 10 CFR 55. The TS requirements for all other unit staff qualifications remain unchanged.

As noted above, although licensed operator qualifications and training may have an indirect impact on the possibility of a new or different kind of accident from any accident previously evaluated, the NRC considered this impact during the rulemaking process, and by promulgation of the revised rule, concluded that this impact remains acceptable as long as the licensed operator training program is certified to be accredited and based on a systems approach to training. As previously noted, Palo Verde's licensed operator training program is accredited by INPO and is based on a systems approach to training.

Additionally, the proposed TS change does not affect plant design, hardware, system operation, or procedures. Thus, the proposed amendment request does not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

No. The proposed amendment does not involve a significant reduction in a margin of safety.

The proposed TS change is an administrative change to clarify the current requirements applicable to licensed operator qualifications and licensed operator-training program. This change is consistent with the requirements of 10 CFR 55. The TS qualification requirements for all other unit staff remain unchanged.

Licensed operator qualifications and training can have an indirect impact on a margin of safety. However, the NRC considered this impact during the rulemaking process, and by promulgation of the revised 10 CFR 55 determined that this impact remains acceptable when licensees maintain a licensed operator training program that is accredited and based on a systems approach to training. As noted previously, Palo Verde's licensed operator training program is accredited by INPO and is based on a systems approach to training.

The NRC has concluded, as stated in NUREG-1262, "Answers to Questions at Public Meetings Regarding Implementation of Title 10, Code of Federal Regulations, Part 55 on Operators' Licenses," that the standards and guidelines applied by INPO in their training accreditation program are equivalent to those put forth or endorsed by the NRC. As a result, maintaining an INPO accredited, systems approach based licensed operator training program is equivalent to maintaining NRC approved licensed operator training program which conform with applicable NRC Regulatory Guides or NRC endorsed industry standards. The margin of safety is maintained by virtue of maintaining an INPO accredited licensed operator training program.

In addition, the NRC has published NRC Regulatory Issue Summary 2001-01, "Eligibility of Operator License Applicants," dated January 18, 2001, "to familiarize addressees with the NRC's current guidelines for the qualification and training of reactor operator (RO) and senior operator (SO) license applicants." This document again acknowledges that the INPO National Academy for Nuclear Training (NANT) guidelines for education and experience, outline acceptable methods for implementing the NRC's regulations in this area.

Therefore, there is no change in the analysis results and the proposed amendment request does not involve a significant reduction in a margin of safety.

Based on the above, APS concludes that the activities associated with the proposed amendment(s) present no significant hazards consideration under the standards set forth in 10 CFR 50.92 "Issuance of Amendment," (c) and, accordingly, a finding of "no significant hazards consideration" is justified.

## 5.2 Applicable Regulatory Requirements/Criteria

10 CFR 55.4 defines systems approach to training to mean a training program that includes the following five elements:

1. Systematic analysis of the jobs to be performed.
2. Learning objectives derived from the analysis, which describe desired performance after training.
3. Training design and implementation based on the learning objectives.
4. Evaluation of trainee mastery of the objectives during training.
5. Evaluation and revision of the training based on the performance of trained personnel in the job setting.

10 CFR 55.31(a)(4) specifies in part that the Commission may accept certification that the applicant has successfully completed a Commission-approved training program that is based on a systems approach to training and that uses a simulation facility acceptable to the Commission under 10 CFR 55.45(b). NRC Generic Letter 87-07 and NUREG-1262, indicated that the NRC would accept a licensee's licensed operator training program if it is accredited and based on a systems approach to training.

The Palo Verde licensed operator-training program is accredited by INPO and is based on a systems approach to training. The licensed operator qualifications and training program will continue to comply with the requirements of 10 CFR 55.

In conclusion there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner. There is also reasonable assurance that such activities will be conducted in compliance with the Commission's regulations, and that the issuance of the proposed amendment will not be inimical to the common defense and security or to the health and safety of the public.

## 6.0 ENVIRONMENTAL CONSIDERATION

APS has determined that the proposed amendment involves no changes in the amount or type of effluent that may be released offsite, and results in no increase in individual or cumulative occupational radiation exposure. As described above, the proposed TS amendment involves no significant hazards consideration and, as such, meets the eligibility criteria for categorical exclusion set forth in Section (c)(9) of 10 CFR 51.22 "Criterion for Categorical Exclusion."

## 7.0 REFERENCES

1. Volume 52, Federal Register, Page 9453 (52 FR 9453), dated March 25, 1987.
2. "Commission Policy Statement on Training and Qualification of Nuclear Power Plant Personnel," 50 FR 11147, dated March 20, 1985.
3. NRC Generic Letter 87-07, "Information Transmittal of Final Rulemaking for Revisions to Operator Licensing 10 CFR 55 and Conforming Amendments," dated March 19, 1987.
4. NUREG-1262, "Answers to Questions at Public Meetings Regarding Implementation of Title 10, Code of Federal Regulations, Part 55, "Operators' Licenses," published November 1987.
5. ANSI N18. 1-1971, "Selection and Training of Nuclear Power Plant Personnel."
6. ANS/ANS 3.1-1978, "Selection, Qualification and Training of Personnel for Nuclear Power Plants.
7. NRC Regulatory Issue Summary 2001-01, "Eligibility of Operator License Applicants," dated January 18, 2001.

Similar amendment requests have been approved for the following facilities:

<u>Facility</u>	<u>Amendment #(s)</u>	<u>Approval Date</u>	<u>Submittal Date</u>
Peach Bottom	245/249	09/17/2002	08/01/2001
Wolf Creek	150	11/26/2002	9/27/02, 6/27/02, 9/19/02

**Marked-up Technical Specifications Pages**

Units 1, 2, and 3: Pages 5.3-1

**Retyped Technical Specifications Pages**

Units 1, 2, and 3: Pages 5.3-1

## 5.0 ADMINISTRATIVE CONTROLS

### 5.3 Unit Staff Qualifications

---

5.3.1 Each member of the unit staff, with the exception of operator license applicants, shall meet or exceed the minimum qualifications of Regulatory Guide 1.8, September 1975 and ANSI/ANS 3.1-1978, except the Director, Site Radiation Protection shall meet or exceed the qualification of Regulatory Guide 1.8, September 1975, and the Shift Technical Advisor shall have a bachelor's degree or equivalent in a scientific or engineering discipline with specific training in plant design and plant operating characteristics, including transients and accidents.

~~5.3.2~~ 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 letter 102-04930-GRO/TNW/RJR, dated April 25, 2003.

5.3.23 For the purpose of 10 CFR 55.4, a licensed senior reactor operation (SRO) and a licensed reactor operator (RO) are those individuals who, in addition to meeting the requirements of TS 5.3.12, perform the functions described in 10 CFR 50.54(m).

---

5.0 ADMINISTRATIVE CONTROLS

5.3 Unit Staff Qualifications

---

- 5.3.1 Each member of the unit staff with the exception of operator license applicants, shall meet or exceed the minimum qualifications of Regulatory Guide 1.8, September 1975 and ANSI/ANS 3.1-1978, except the Director, Site Radiation Protection shall meet or exceed the qualification of Regulatory Guide 1.8, September 1975, and the Shift Technical Advisor shall have a bachelor's degree or equivalent in a scientific or engineering discipline with specific training in plant design and plant operating characteristics, including transients and accidents.
- 5.3.2 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 letter 102-04930-GRO/TNW/RJR, dated April 25, 2003.
- 5.3.3 For the purpose of 10 CFR 55.4, a licensed senior reactor operation (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).
-

**Associated Changes To the PVNGS Updated Final safety Analysis Report**  
(Information Only)

### 13.1.3 QUALIFICATIONS OF NUCLEAR PLANT PERSONNEL

#### 13.1.3.1 Qualification Requirements

The station technical specifications, specific regulations, and the recommendations of Regulatory Guide 1.8, Personnel Selection and Training, and ANSI/ANS 3.1-1978, Selection and Training of Nuclear Power Plant Personnel, are used as the basis for establishing minimum qualifications for nuclear power plant personnel, with the exception of operator license applicants. For those individuals not already qualified by experience and training/education in the designated craft or discipline, and for which ANSI/ANS 3.1-1978 permits the use of related training to meet certain qualifications (e.g., sections 3.2.4 and 5.3.1-5.3.4), appropriate training shall be provided to develop the proficiency required for safe and competent job performance. Note that there is no specific time correlation for the duration of this training when used in lieu of the education or experience specified in the Standard.

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 letter 102-04930-GRO/TNW/RJR, dated April 25, 2003.

The Shift Technical Advisor shall have a bachelor's degree or equivalent in a scientific or engineering discipline with specific training in plant design and plant operating characteristics, including transients and accidents.

Other specific exceptions to ANSI/ANS 3.1-1978 are as follows:

- A. Exception is taken to the educational requirements of ANSI/ANS 3.1, paragraph 4.6.1 *Engineer in Charge*. Equivalent technical expertise is demonstrated by possession of a Professional Engineering License; or successful completion of the Engineer in Training examination; or successful completion of 80 semester credit hours of technical portions of an engineering or physical science program; or a combination of any Bachelor's Degree and a current or previously held Senior Reactor Operator License.
- B. The experience requirements of NUREG 1021, Rev. 8, ES-202, "Preparing and Reviewing Operator License Applications" are satisfied in lieu of experience requirements of ANSI/ANS 3.1, paragraph 4.3.1, *Supervisors Requiring NRC Licenses*, for individuals filling the temporary position of LSRO.
- C. Exception is taken to the degree requirement in ANSI/ANS 3.1, paragraph 4.4.4 *Radiation Protection*. At least two but a maximum of four of the required