REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:8108270274 DOC.DATE: 81/08/20 NOTARIZED: YES DOCKET #
FACIL:STN-50-528 Palo Verde Nuclear Station, Unit 1, Arizona Publi 05000528
STN-50-529 Palo Verde Nuclear Station, Unit 2, Arizona Publi 05000529
STN-50-530 Palo Verde Nuclear Station, Unit 3, Arizona Publi 05000530

AUTH.NAME AUTHOR AFFILIATION
VAN BRUNT,E.E. Arizona Public Service Co.
RECIP.NAME RECIPIENT AFFILIATION
TEDESCO,R.L. Assistant Director for Licensing

SUBJECT: Forwards response to Quality Assurance Branch 810714 request for add'l info re facility SER.

DISTRIBUTION CODE: B001S COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 32
TITLE: PSAR/FSAR AMDTS and Related Correspondence

NOTES:Standardized Plant.1 cy:C Grimes 05000528
Standardized Plant.1 cy:C Grimes 05000529
Standardized Plant.1 cy:C Grimes 05000530

| | RECIPIENT ID CODE/NAME | COPIES LTTR | COPIES ENCL | RECIPIENT ID CODE/NAME | COPIES LTTR | COPIES ENCL |
|---|---|---|---|---|---|---|
| ACTION: | A/D LICENSNG | 1 | 0 | LIC BR #3 BC | 1 | 0 |
| | LIC BR #3 LA | 1 | 0 | KERRIGAN,J. 04 | 1 | 1 |
| INTERNAL: | ACCID EVAL BR26 | 1 | 1 | AUX SYS BR 27 | 1 | 1 |
| | CHEM ENG BR 11 | 1 | 1 | CONT SYS BR 09 | 1 | 1 |
| | CORE PERF BR 10 | 1 | 1 | EFF TR SYS BR12 | 1 | 1 |
| | EMRG PRP DEV 35 | 1 | 1 | EMRG PRP LIC 36 | 3 | 3 |
| | EQUIP QUAL BR13 | 3 | 3 | FEMA-REP DIV 39 | 1 | 1 |
| | GEOSCIENCES 28 | 2 | 2 | HUM FACT ENG 40 | 1 | 1 |
| | HYD/GEO BR 30 | 2 | 2 | I&C SYS BR 16 | 1 | 1 |
| | I&E 06 | 3 | 3 | LIC GUID BR 33 | 1 | 1 |
| | LIC QUAL BR 32 | 1 | 1 | MATL ENG BR 17 | 1 | 1 |
| | MECH ENG BR 18 | 1 | 1 | MPA | 1 | 0 |
| | OELD | 1 | 0 | OP LIC BR 34 | 1 | 1 |
| | POWER SYS BR 19 | 1 | 1 | PROC/TST REV 20 | 1 | 1 |
| | QA BR 21 | 1 | 1 | RAD ASSESS BR22 | 1 | 1 |
| | REAC SYS BR 23 | 1 | 1 | REG FILE 01 | 1 | 1 |
| | SIT ANAL BR 24 | 1 | 1 | STRUCT ENG BR25 | 1 | 1 |
| EXTERNAL: | ACRS 41 | 16 | 16 | LPDR 03 | 1 | 1 |
| | NRC PDR 02 | 1 | 1 | NSIC 05 | 1 | 1 |
| | NTIS | 1 | 1 | | | |

SEP 1 1981 MAY

TOTAL NUMBER OF COPIES REQUIRED: LTTR ~~62~~ 63 ENCL ~~57~~ 58

ARIZONA PUBLIC SERVICE COMPANY

P.O. BOX 21666 - PHOENIX, ARIZONA 85036

August 20, 1981
ANPP-18717 - JMA/KWG

RECEIVED
AUG 26 1981
U.S. NUCLEAR REGULATORY COMMISSION

Mr. R. L. Tedesco
Assistant Director for Licensing
Division of Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Palo Verde Nuclear Generating Station (PVNGS) Units 1, 2 and 3
Docket Nos. STN-50-528/529/530
File: 81-056-026; G.1.10

Reference: Your letter of July 14, 1981: Request for Additional Information - Palo Verde Nuclear Generating Station

Dear Mr. Tedesco:

Please find attached our responses to the Quality Assurance Branch (260) questions transmitted in the referenced letter. We are providing this information in an effort to assist you in timely preparation of your SER.

If you have any questions, please contact me.

Very truly yours,

E. E. Van Brunt

E. E. Van Brunt, Jr.
APS Vice President,
Nuclear Projects
ANPP Project Director

EEVBJr/KWG/av
Attachment
cc: J. Kerrigan (w/a)
P. Hourihan (w/a)
A. C. Gehr (w/a)

B001
s
1/1

STATE OF ARIZONA )
) ss.
COUNTY OF MARICOPA)

I, Edwin E. Van Brunt, Jr. represent that I am Vice President Nuclear Projects of Arizona Public Service Company, that the foregoing document has been signed by me on behalf of Arizona Public Service Company with full authority so to do, that I have read such document and know its contents, and that to the best of my knowledge and belief, the statements made therein are true.

Edwin E. Van Brunt

Edwin E. Van Brunt, Jr.

Sworn to before me this 20 day of August, 1981.

Robert T. [illegible]

Notary Public

My Commission expires:

My Commission Expires Jan. 29, 1985

18717

RESPONSE TO

REQUEST FOR ADDITIONAL INFORMATION

PALO VERDE NUCLEAR GENERATING STATION

QUESTION 17A.50 (NRC Question 260.50) (17.2.2 and 3.2)

The response to NRC Question 260.10 states: "Item 16 in Table 3.2-1 indicates that 10 CFR 50 Appendix B does not apply to the fire protection system." Clarify in Table 3.2-1 that the pertinent requirements of Appendix B (i.e., those specified in BTP ASB9.5-1) do apply.

RESPONSE: The response is given in the amended response to NRC Question 260.10. (17A.10) (attached)

QUESTION 17A.51 (NRC Question 260.51) (17.2.2)

The response to NRC Question 260.12 is not responsive to the extent that it does not address notification of the QA Branch of QA program changes. Clarify that the QA Branch will be so notified.

RESPONSE: The response is included in amended section 17.2.2.5. (attached)

QUESTION 17A.52 (NRC Question 260.52) (17.2.2 and 1.8)

The APS exception to position C.2 of Regulatory Guide 1.64 is acceptable only with the following additional controls:

a) The justification (for design verification by a designer's immediate supervisor) is individually documented and approved in advance, and

b) Quality Assurance audits cover frequency and effectiveness of use of supervisors as design verifiers to guard against abuse.

Include these controls in the exception or describe other controls to assure that the exception does not become the norm.

RESPONSE: The response is included in amended section 1.8. (attached)

QUESTION 17A.53 (NRC Question 260.53) (17.2.2 and 1.8)

The APS response to Part 14 of NRC Question 260.13 indicates that implementation of Regulatory Guide 1.94, Rev. 1, is not required since the construction permit for PVNGS was docketed October 7, 1974. However, the application for an operating license was docketed on June 18, 1980; and, in accordance with Rev. 1 of the Standard Review Plan (NUREG-75/087), we require a commitment to Rev. 1 of Regulatory Guide 1.94 for operations phase activities that are comparable to activities during the construction phase. Provide such a commitment with any alternatives, exceptions or clarifications you believe are required.

RESPONSE: The response is given in the amended response to NRC Question 260.13 (17A.13) Part 11. attached

QUESTION 17A.54 (NRC Question 260.54) (17.2.2 and 1.8)

The exceptions stated in response to Regulatory Guide 1.144 are acceptable if not abused. That is, auditing as described without an audit plan or without a pre-audit conference may occasionally be desirable. Describe controls that APS will provide to assure that the exceptions do not become the norm.

RESPONSE: The response is included in amended section 1.8.

attached

QUESTION 17A.55 (NRC Question 260.55) (17.2.3)

The response to NRC Question 260.19 is not responsive. Respond to the question which is slightly reworded below.

Describe how APS plans to differentiate between design documents which require formal design review by interdisciplinary or multi-organizational teams and those which can be reviewed by a single individual. Provide a list of typical examples of each. Include such documents as specifications, calculations, computer programs, system descriptions, SAR when used as a design document, and drawings including flow diagrams, piping and instrument diagrams, control logic diagrams, electrical single-line diagrams, structural systems for major facilities, site arrangements, and equipment locations.

RESPONSE: Normally, documents such as specifications, calculations, computer programs, system descriptions, SAR when used as a design document, and drawings including flow diagrams, piping and instrument diagrams, control logic diagrams, electrical single-line diagrams, structural systems for major facilities, site arrangements, and equipment locations will require interdisciplinary review by multiple reviewers. The responsible engineer or supervising engineer will determine the level of review required based upon the importance to safety of the items or systems under consideration, the complexity of the design and the similarity with previously proven designs. The Corporate Quality Assurance Department or the Operations Quality Assurance Department will verify the effectiveness of design control measures through periodic audits as described in Section 17.2.18.

QUESTION 17A.56 (NRC Question 260.56) (17.2.6)

The response to NRC Question 260.25 lists a number of documents which are reviewed for conformance to QA program requirements by the Operations or Corporate QA Department. The list omits design specifications; design, manufacturing, construction, and installation drawings; as-built documentation; test procedures; and design changes. Although the list is a "such as" list, the omission of these documents can be interpreted to mean that they will not be so reviewed by an APS QA organization. It is the staff position that they should be. Commit to meet this position or provide an alternative for our evaluation.

RESPONSE: The response is included in amended section 17.2.6. attached

QUESTION 17A.57 (NRC Question 260.57) (17.2.6)

The response to NRC Question 260.26 regarding the control of obsolete and superseded documents indicates that changes will be sent with instructions to holders of controlled copies. Describe the follow-up which will be done to assure the instructions are followed.

RESPONSE: The response is included in amended section 17.2.6. In addition, the Corporate Quality Assurance Department and the Operations Quality Assurance Department shall verify the effectiveness of document control measures through periodic audits as described in section 17.2.18. attached

QUESTION 17A.58 (NRC Question 260.58 (17.2.6)

The response to NRC Question 260.27 is not responsive. If different types of documents and different originating organizations may have different methods of identifying the applicable document revision, describe the different methods and the documents to which they apply.

RESPONSE: The response is included in amended Section 17.2.6. attached

QUESTION 17A.59 (NRC Question 260.59) (17.2.7 and 17.2.4)

It is the staff position that the procurement of spare and replacement parts should be subject to the latest pertinent QA program controls; i.e., the approved operational QA program. Commit to meet this position or provide an alternative for our evaluation (see response to NRC Question 260.29).

RESPONSE: Response is included in amended section 17.2.4.3. attached

QUESTION 17A.60 (NRC Question 260.60) (17.2.9)

The response to NRC Question 260.35 indicates the Operations QA Department reviews and approves special process procedures developed by APS. It is the staff position that an APS QA Department should also verify (at least on an audit basis) the determination of whether a process is or is not a special process. Commit to meet this position or provide an alternative for our evaluation.

RESPONSE: Amended section 17.2.9 indicates that the Operations QA Department will verify the determination of whether a process is or is not a special process. Such verification will be accomplished through monitoring, inspection, checking, auditing or review as described in section 17.2.2.3.2. attached

QUESTION 17A.61 (NRC Question 260.61) (17.2.1)

Section 17.2.1.3.2 indicates the Operations QA Manager "receives functional and technical guidance direction from the Corporate QA Manager", and Figure 17.2-1 has a dashed line between these two positions which the legend indicates as "functional and technical guidance." (Emphasis added) It is the staff position that the organization shown is acceptable if "guidance" is eliminated from the first quotation and changed to "direction" in the second. Commit to meet this position or provide an alternative for our evaluation.

RESPONSE: The response is included in amended sections 17.2.1.1.6 and 17.2.1.3.2 and Figure 17.2-1. These responses more correctly define Arizona Public Service Company's Quality Assurance responsibilities. attached

QUESTION 17A.9 (NRC Question 260.9) (17.2.2)

Provide a commitment that the QA program will be applied to the development, control, and use of computer programs and describe its application.

RESPONSE: Response is included in amended section 17.2.2.2.

QUESTION 17A.10 (NRC Question 260.10) (17.2.2 and 3.2)

Table 17.2-1 indicates that the Fire Protection QA Program is met as part of the QA Program under 10 CFR Part 50, Appendix B. Item 16 in Table 3.2-1 of the FSAR indicates that the PVNGS QA Program does not apply to the fire protection system. Clarify.

RESPONSE: Amended table 17.2-1 indicates that the quality
4 assurance program during the operations phase complies with the quality assurance program guidelines of Appendix A to (BTP) APCSB 9.5-1. Application of the quality assurance program to fire protection program activities is described in amended section 17.2.2.2. Amended ~~Item 16 in~~ Table 3.2-1 indicates that pertinent requirements of 10 CFR 50, Appendix B ~~does not apply~~ are applied to ~~the~~ fire protection ~~system.~~ program activities during the operations phase.

QUESTION 17A.11 (NRC Question 260.11) (17.2.2)

Provide a commitment that special equipment, environmental conditions, skills, and processes will be provided as necessary.

RESPONSE: The response is included in amended section 17.2.2.1.

Table 3.2-1
QUALITY CLASSIFICATION OF STRUCTURES, SYSTEMS AND COMPONENTS (Sheet 22A of 36) 4

| Principal Components | Location | Principal Construction Codes and Standards | Seismic Category | PVNGS Quality Assurance Class | Regulatory Guide 1.26 Quality Group Classification | ANSI N18.2 Safety Class |
|---|---|---|---|---|---|---|
| ESF switchgear room normal AHU | | | | | | |
| Fan | CB | na | na | na | na | na |
| Filter | CB | na | na | na | na | na |
| Cooling coil | CB | B31.1 | na | na | na | NNS |
| Heating coil | CB | na | na | na | na | na |
| Duct work | CB | SMACNA | na | na | na | na |
| Dampers | CB | SMACNA | na | na | na | na |
| Supports and hangers | CB | na | (h) | (h) | na | NNS |
| Battery room normal exhaust fans | CE | na | na | na | na | na |
| Smoke exhaust system | | | | | | |
| Fan | CE | na | na | na | na | na |
| Dampers | CE | SMACNA | na | na | na | na |
| Ductwork | CB | SMACNA | na | na | na | na |
| 16. Fire protection system | | | | | | |
| Water system components | All | NFPA/ANI(t) | na | ~~na~~ (y) | na | NNS |
| Gas ($CO_2$ and Halon 1301) system components | AB,CB | NFPA/ANI | na | ~~na~~ (y) | na | NNS |
| Support and hangers | All | na | (h) | (h) | na | NNS |

4

Table 3.2-1

QUALITY CLASSIFICATION OF STRUCTURES, SYSTEMS AND COMPONENTS (Sheet 36 of 36) 4

7. Letter of parentheses (continued)

(s) The gas stripper is designed and constructed to Seismic Category I requirements; however, this portion of the CVCS is not required to be Seismic Category I by Regulatory Guide 1.29.

(t) Process solenoid valves will be constructed in accordance with manufacturer's standards.

(u) Since this system is not required to function during an SSE, the CHRS is designed to remain functional after an SSE but not during an SSE.

(v) Designed to appropriate industry standards.

(w) External to the diesel engine package.

(x) Seismic Category I applies to cable trays and supports.

(y) The pertinent requirements of 10 CFR 50, Appendix B, (i.e., those specified in APPENDIX A ~~to~~ (BTP) APCSB 9.5- are applied to operations phase activities associated with fire protection systems and equipment used or installed in areas housing safety related equipment, and other areas where an unsuppressed fire could potentially damage safety related structures, systems or components.

4 17.2.2.5 Program Documentation

Operations Quality Assurance Program policies and practices are described in this section.

Prior to receipt of the Operating License for the PVNGS,
4 revisions to this operations quality assurance program
description will be made in accordance with Nuclear
4 Projects Department procedures for control of the FSAR.

Following receipt of the Operating License for the PVNGS, revisions to section 17.2 will be made in accordance with the PVNGS Operating Organization procedures for control of the FSAR. Such procedures shall require notification to the NRC (cc: QA Branch) of changes to the QA program, as
4 described in section 17.2, prior to implementation, and organizational changes within 30 days after announcement. Editorial changes and personnel reassignments which are not substantive do not require NRC notification.

Various other documents, including instructions, procedures, and manuals, delineate quality-related activities carried out by various organizations within APS. Requirements for preparation, review, approval, revision, issuance, and distribution are delineated in
4 controlling procedures. Table 17.2-2 is a cross-reference of the requirements of 10CFR50, Appendix B, to the procedures contained in the Operations Quality Assurance Program Manual.

REGULATORY GUIDE 1.64: Quality Assurance Requirements for the Design of Nuclear Power Plants (Revision 2, June 1976)

RESPONSE

For operations phase activities that are comparable to activities occurring during the construction phase, the position of Regulatory Guide 1.64 is accepted with the following exception to position C.2 of the Regulatory Guide:

Supervisory personnel may perform design verification under exceptional circumstances as documented and approved by the next level of supervision, if:

INSERT

APS interprets ANSI N45.2.11-1974 sections 3.1 and 4.1 as follows:

A. Section 3.1. This section implies that all necessary design input (as listed in section 3.2) should be available prior to the start of a design activity. In practice, certain design activities are initiated before the firm input requirements are available. (For example, foundation designs prepared based on preliminary information or equipment sizes and mounting and embedded conduit run based on preliminary estimates of circuit requirements). The design phase QA program is structured to assure that all necessary design input is available before completion of final design of the work affected by the input and that final design input is available for use in verification of the final design.

B. Section 4.1 Design Process General. Paragraph 3 implies traceability back from final design to the source of design input. In practice, a literal interpretation of this is not always possible. For example, final design drawings do not identify the related calculations. This paragraph is interpreted to mean

INSERT:

1. The justification (for design verification by a designer's immediate supervisor) is individually documented and approved in advance, and

2. Quality Assurance audits cover frequency and effectiveness of use of supervisors as design verifiers to guard against abuse.

(14) Regulatory Guide 1.144 - Include APS Position on Rev. 0, January 1979. (Note that this Reg. Guide references ANSI N45.2.12-1977 as listed in table 17.2-1.)

(15) Regulatory Guide 1.146 - Include APS Position on Rev. 0, August 1980. (Note that this Reg. Guide references ANSI N45.2.23-1978 as listed in table 17.2-1.)

RESPONSE:

(1) The response is included in amended section 1.8.

(2) The response is included in amended section 1.8.

(3) The response is included in amended section 1.8.

(4) The response is included in amended section 1.8.

(5) The response is included in amended section 1.8. 4

(6) The response is included in amended section 1.8.

(7) The response is included in amended section 1.8.

(8) The response is included in amended section 1.8.

(9) The response is included in amended section 1.8.

(10) The response is included in amended section 1.8.

(11) *The response is included in amended section 1.8.* ~~The construction permit for PVNGS Units 1, 2 and 3 was docketed October 7, 1974. Therefore implementation of Regulatory Guide 1.94, Rev. 1 is not required. The quality assurance requirements for installation, inspection, and testing of structural concrete and structural steel during construction and comparable activities during the operations phase are discussed in Section 3.8.~~

RESPONSE

Information contained in Regulatory Guide 1.92 is utilized as discussed in sections 3.7 and 3.9.

REGULATORY GUIDE 1.93: Availability of Electric Power Sources (Revision 0, December 1974)

RESPONSE

The position of Regulatory Guide 1.93 is accepted (refer to section 16.3/4).

INSERT

REGULATORY GUIDE 1.95: Protection of Nuclear Power Plant Control Room Operators Against an Accidental Chlorine Release (Revision 0, February 1975)

RESPONSE

The position of Regulatory Guide 1.95 is accepted.

REGULATORY GUIDE 1.97: Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident

RESPONSE

PVNGS compliance with the recommendations of Draft Revision 2 to Regulatory Guide 1.97 (issued for public comment December 4, 1979) will be addressed subsequent to its issuance reflecting public comments.

REGULATORY GUIDE 1.99: Effects of Residual Elements on Predicted Radiation Damage to Reactor Vessel Materials (Revision 1, April 1977)

INSERT:

REGULATORY GUIDE 1.94: Quality Assurance Requirements for Installation, Inspection and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants (Revision 1, April 1976)

RESPONSE: For operations phase activities that are comparable to activities during the construction phase, the position of Regulatory Guide 1.94 is accepted. Refer to Section 3.8.

- Regulatory Guide 1.63, Electrical Penetration Assemblies in Containment Structures for Light-Water-Cooled Nuclear Power Plants

- Regulatory Guide 1.64, Quality Assurance Requirements for the Design of Nuclear Power Plants

- Regulatory Guide 1.69, Concrete Radiation Shields for Nuclear Power Plants

- Regulatory Guide 1.76, Design Basis Tornado for Nuclear Power Plants

INSERT

Exceptions to and interpretations of these regulatory guides are given in section 1.8.

- NRC (AEC) Publication TID 25021, Nuclear Reactors and Earthquakes, is used for computing hydrodynamic loads imposed on the refueling canal walls.

- Industry Standards

  Nationally recognized industry standards, such as those published by American Society for Testing and Materials (ASTM), are used whenever possible to describe material properties, testing procedures, fabrication, and construction methods.

- Bechtel Power Corporation Topical Reports (Applicable titles, dates, and revisions are provided in section 1.6.

  - BC-TOP-1
  - BC-TOP-3-A
  - BC-TOP-4-A
  - BC-TOP-5-A
  - BC-TOP-7

INSERT:

- Regulatory Guide 1.94, Quality Assurance Requirements for Installation Inspection, and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants.

TABLE 17.2-1

QUALITY ASSURANCE STANDARDS AND GUIDES
COMPLIANCE MATRIX (Sheet 3 of 4)

| NRC Regulatory Guides | Standard | Title | Clarifications and Exceptions |
|---|---|---|---|
| 1.64 | ANSI N45.2.11 | Quality Assurance Requirements for the Design of Nuclear Power Plants | Refer to section 1.8 |
| 1.68 | | Initial Test Programs for Water-Cooled Nuclear Power Plants | Refer to section 1.8 |
| 1.68.2 | | Initial Start-Up Test Program to Demonstrate Remote Shut-down Capability for Water-Cooled Nuclear Power Plants | Refer to section 1.8 |
| 1.70 | | Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants - LWR Edition | Refer to section 1.8 |
| 1.74 | ANSI N45.2.10 | Quality Assurance Terms and Definitions | Refer to section 1.8 |
| 1.88 | ANSI N45.2.9 | Collection, Storage and Maintenance of Nuclear Power Plant Quality Assurance Records | Refer to section 1.8 |
| 1.94 | ANSI N45.2.5 | Quality Assurance Requirements for Installation, Inspection, and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants | Refer to section 1.8 |

RESPONSE

The position of Regulatory Guide 1.141 is accepted (refer to section 6.2.4).

REGULATORY GUIDE 1.144: Auditing of Quality Assurance Programs for Nuclear Power Plants (Revision 1, September 1980)

RESPONSE

The requirements of the referenced standard (ANSI N45.2.12-1977) as modified and interpreted in the position of Regulatory Guide 1.144 are applied to the APS quality assurance program for operations phase activities, with the following exception~~s~~

4 to Section 4.3.1:

~~A. Section 4.2.1: A written individual audit plan may not be prepared for each audit. However, all information required for the written plan will be included in audit schedules, notification letters, checklists, reports, procedures or other audit records.~~

~~B. Section 4.3.1.~~ A formal Pre-Audit Conference may not be required for some routine internal audits where informal pre-audit communication is determined to be adequate.

INSERT

REGULATORY GUIDE 1.145: Atmospheric Dispersion Models for Potential Accident Consequence Assessments at Nuclear Power Plants (August 1979)

1

INSERT:

The manager of the auditing organization will monitor the performance of audits, through review of audit reports, to ensure that informal pre-audit communication is utilized only in cases where such informal communication is adequate.

- Design Changes
- Nonconformance Reports
- Audit Reports
- Minutes of the Safety Audit Committee Meetings

design specifications; design, manufacturing, construction, and installation drawi.
Quality related documents such as procurement documents; quality assurance manuals; maintenance, modification, and operating procedures; selected sections of the FSAR; inspection and testing instructions; nonconformance reports; as-built documentation; test procedures; design changes; and audit reports shall be reviewed ~~for conformance to quality assurance program requirements~~ by the Operations Quality Assurance Department or the Corporate Quality Assurance Department when necessary to verify conformance to quality assurance program requirements. 4

Changes to documents can be requested by any reviewing or using organization or individual. Such changes are subject to the same level of review and approval as the original documents.

Approved changes are included in instructions, procedures, and drawings prior to implementation of the change. Changes to documents, with instructions, as appropriate, for destruction, marking, or return of the superceded documents, shall be issued to holders of controlled copies. INSERT 1 Uncontrolled copies shall be marked to indicate their status. 4

Administrative procedures may prescribe measures to temporarily change station procedures if the intent of the original procedure is not altered and the changes comply with requirements of the Technical Specifications.

INSERT 2
Administrative controls assure that documents are reviewed and approved prior to use, are used by the personnel performing the activity, that there are means for determining the status of a document, and that controls preclude the use of outdated or superseded documents.

INSERT 1:

Document control measures shall include provisions for holders of controlled copies to acknowledge receipt of changes and, when appropriate, indicate compliance with instructions for handling superseded documents.

INSERT 2:

The Nuclear Records Management System (RMS), maintained by APS Nuclear Projects, shall establish Control Logs and Distribution Lists which shall be maintained to control issuance of documentation such as Procedures, Instructions, Procurement Documentation, Technical Manuals, Specifications, and/or Drawings. These logs and lists shall identify the revision status of the applicable documents and the latest changes to the documents. These logs and/or lists shall be made available to the working locations for use in determining current document status. Procedures shall provide control measures which address obsolete, superseded or unapproved documentation. In addition, control logs and lists shall be reviewed and updated periodically to maintain them in a current status.

APS Manuals, such as the Operations Quality Assurance Program Manual, the Palo Verde Nuclear Generating Station Manual, and the Nuclear Projects Department Project Procedures Manual, contain Indexes, Table of Contents or Lists of Effective Pages, which are updated periodically to ensure the Manual's revisions are kept current.

inspectable and controllable; there are adequate acceptance and rejection criteria; and, the procurement document has been prepared, reviewed, and approved in accordance with Operations Quality Assurance Program requirements.

B. Quality-related procurement documents initiated offsite will be reviewed and approved by qualified Nuclear Engineering and Corporate Quality Assurance personnel. The review will cover the same areas as stated in A. above. 4

C. Technical and quality changes to procurement documents are subject to at least the same level of review and approval as the original document.

The review and approval of procurement documents are documented prior to contract award and are available for verification in accordance with section 17.2.17.

17.2.4.3 Control of Procurement Documents

Procurement documents are controlled in accordance with the document control practices established in section 17.2.6, stored in accordance with section 17.2.17, and reviewed and approved in accordance with the minimum requirements established in this section.

The quality assurance program will ensure that procurement documents for spare or replacement parts of safety-related structures, systems, and components contain technical and quality requirements at least equivalent to those used for the original equipment or acceptable alternatives, and that such procurements are subject to the latest QA program controls. 4

(c) The interpretation regarding section 5.2.17 of ANSI N18.7 is acceptable with the understanding that all deviations are documented and corrected.

(5) Regulatory Guide 1.37 - Reference to the Bechtel position during construction should be replaced by the APS position for comparable activities during the operations phase.

(6) Regulatory Guide 1.38 -

(a) Commitment should be to Revision 2, May 1977.

(b) Same as (5) above.

(7) Regulatory Guide 1.39 - Same as (5) above.

4 (8) Regulatory Guide 1.58 - Commitment should be to Rev. 1, September 1980.

(9) Regulatory Guide 1.64 -

(a) Commitment should be to Revision 2, June 1976.

(b) Same as (5) above.

(10) Regulatory Guide 1.88 - Commitment should be to Rev. 2, October 1976.

Question 260.13

(11) Regulatory Guide 1.94 - Include APS Position on Rev. 1, April 1976.

(12) Regulatory Guide 1.116 - Include APS Position on Rev. O-R, May 1977.

(13) Regulatory Guide 1.123 - Include APS Position on Rev. 1, July 1977.

the equivalent. Evidence of verification shall be documented. For special processes not covered by existing codes or standards or where quality requirements exceed the requirements of established codes and standards, the procedures for qualifying personnel, procedures or equipment shall be defined in the procurement documents or shall be submitted for review prior to use.

Each department within APS shall be responsible for evaluating each of the processes it performs to determine if they fall under the controls of this section. INSERT Each department shall
4 develop its own procedures and qualification requirements in accordance with this section. The Operations Quality Assurance Department shall review and approve special process procedures developed by APS.

Documentation of procedures and personnel qualification shall be maintained current by the vendor. The Manager of Nuclear
5 Operations shall be responsible for maintaining such documentation for PVNGS personnel involved in performing special process activities.

## 17.2.10 INSPECTION

### 17.2.10.1 General

4 The Operations Quality Assurance Program requires that an inspection program be developed and implemented to verify conformance of quality-related activities and activities affecting safety-related structures and components with the applicable requirements. This program is accomplished in accordance with written procedures, instructions, or drawings by qualified inspection personnel, when required, other than those performing or directly supervising the activity being inspected, and the results are documented.

The inspection program provides for indirect control by monitoring processing methods, personnel, and equipment when direct inspection is not possible.

INSERT:

The determination of whether a process is or is not a special process shall be verified by the Operations Quality Assurance Department.

where necessary. The Electric Operations Vice President has the authority to stop PVNGS activities which are not accomplished in compliance with applicable license and/or regulatory requirements. The Electric Operations Vice President's day-to-day responsibilities for the operation of the PVNGS has been delegated to the PVNGS Plant Manager, including the
4 responsibility for proper implementation of the quality assurance program. The Electric Operations Vice President and the Nuclear Projects Management Vice President jointly approve the Operations Quality Assurance Program Manual.

17.2.1.1.5 Safety Audit Committee (SAC)

The organizational structure, administrative requirements, responsibilities, and authorities of the Safety Audit Committee are detailed in section 16.6.

17.2.1.1.6 Corporate Quality Assurance Manager

4 The Corporate Quality Assurance Manager is responsible for development of the Operations Quality Assurance Program and to verify effective implementation of the Operations Quality Assurance Program. He reports directly to the Nuclear Projects Management Vice President, but has access to the Electric Operations Vice President and the Operations Executive Vice President for matters related to quality assurance.

The Corporate Quality Assurance Manager directs the activities of the Corporate Quality Assurance Department and provides functional direction and technical guidance to the Operations Quality
4 Assurance Manager. The Corporate Quality Assurance Manager has overall responsibility for the quality assurance program including audits and quality verification.

The Corporate Quality Assurance Manager has been given the authority, by the President and Chief Executive Officer, to maintain open lines of communication with individuals and groups having responsibilities related to the operation of

### 17.2.1.3.2 Operations Quality Assurance Manager

The Operations Quality Assurance Manager has been delegated
the responsibility by the Plant Manager for verifying the
effective implementation of the onsite quality assurance
program. He receives functional direction and technical guidance ~~direc-
tion~~ from the Corporate Quality Assurance Manager. INSERT The
4 Operations Quality Assurance Manager has sufficient authority
and organizational freedom to identify quality problems,
initiate, recommend or provide solutions, through designated
channels; and verify implementation of solutions. He is free
of non-QA duties such that he can give full attention to
assuring that the onsite quality assurance program is being
effectively implemented.

### 17.2.1.3.3 Operations Quality Assurance Department

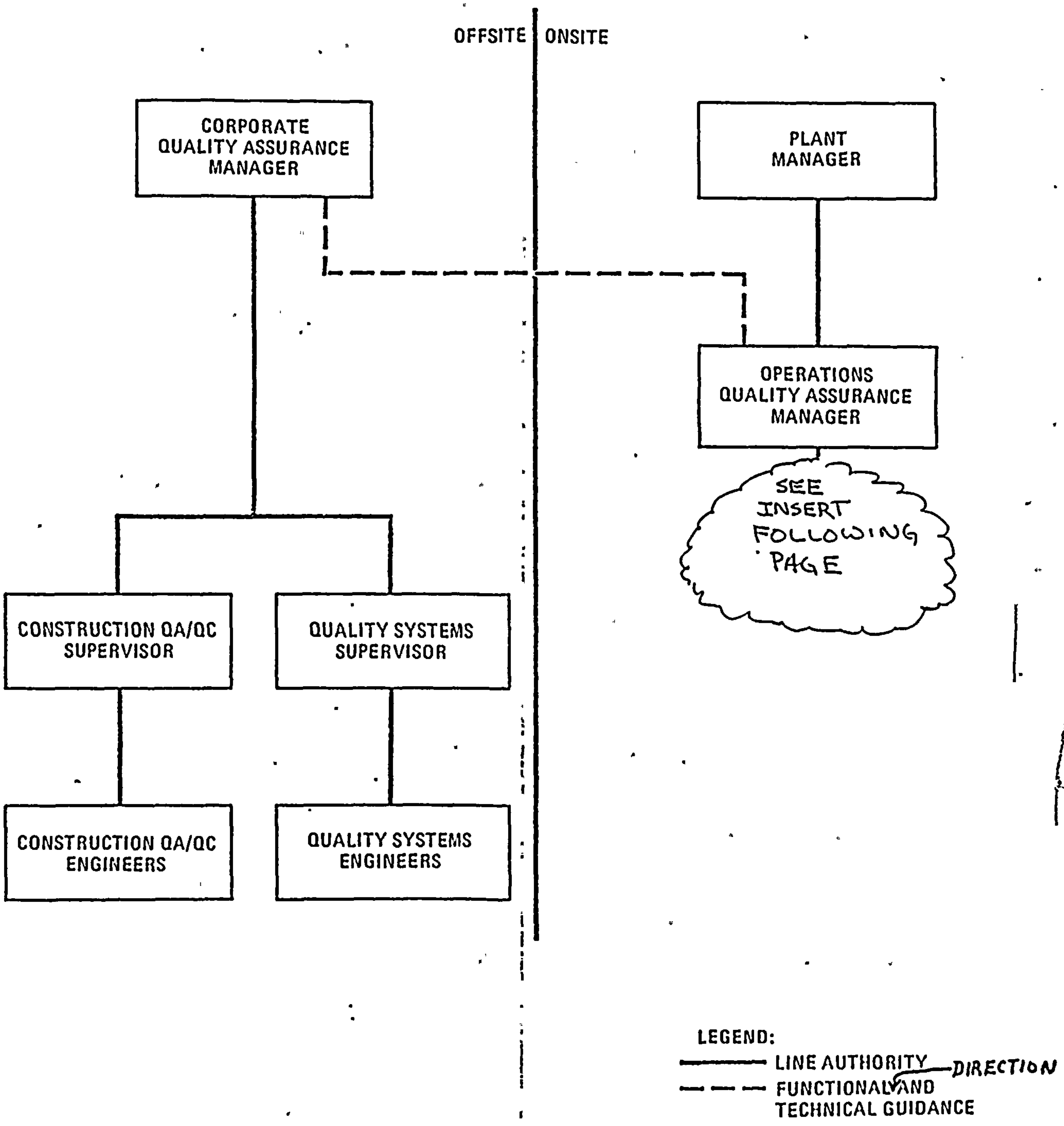
The Operations Quality Assurance Department is directed by
the Operations Quality Assurance Manager who reports
4 directly to the Plant Manager. The Operations Quality
Assurance Department ensures that the requirements of the
Operations Quality Assurance Program are incorporated in the
onsite quality assurance program, and that they are incorpo-
rated into plans and procedures for activities affecting
4 quality and are implemented properly. The Operations Quality
Assurance Department is responsible for verifying, through
inspections, monitoring, and audits, the conformance of
quality-related activities to specified requirements and
procedures and reports on the effectiveness of the QA program
4 to the Plant Manager. The responsibilities of the Operations
Quality Assurance Department include the following:

A. Verify that quality-related station procedures conform to QA program requirements.

B. Verify the implementation of quality-related procedures through audits, monitoring, and inspection of station activities.

INSERT:

The Operations Quality Assurance Manager reports directly to the Manager of Nuclear Operations, but has access to the Electric Operations Vice President and the Operations Executive Vice President for matters related to quality assurance.

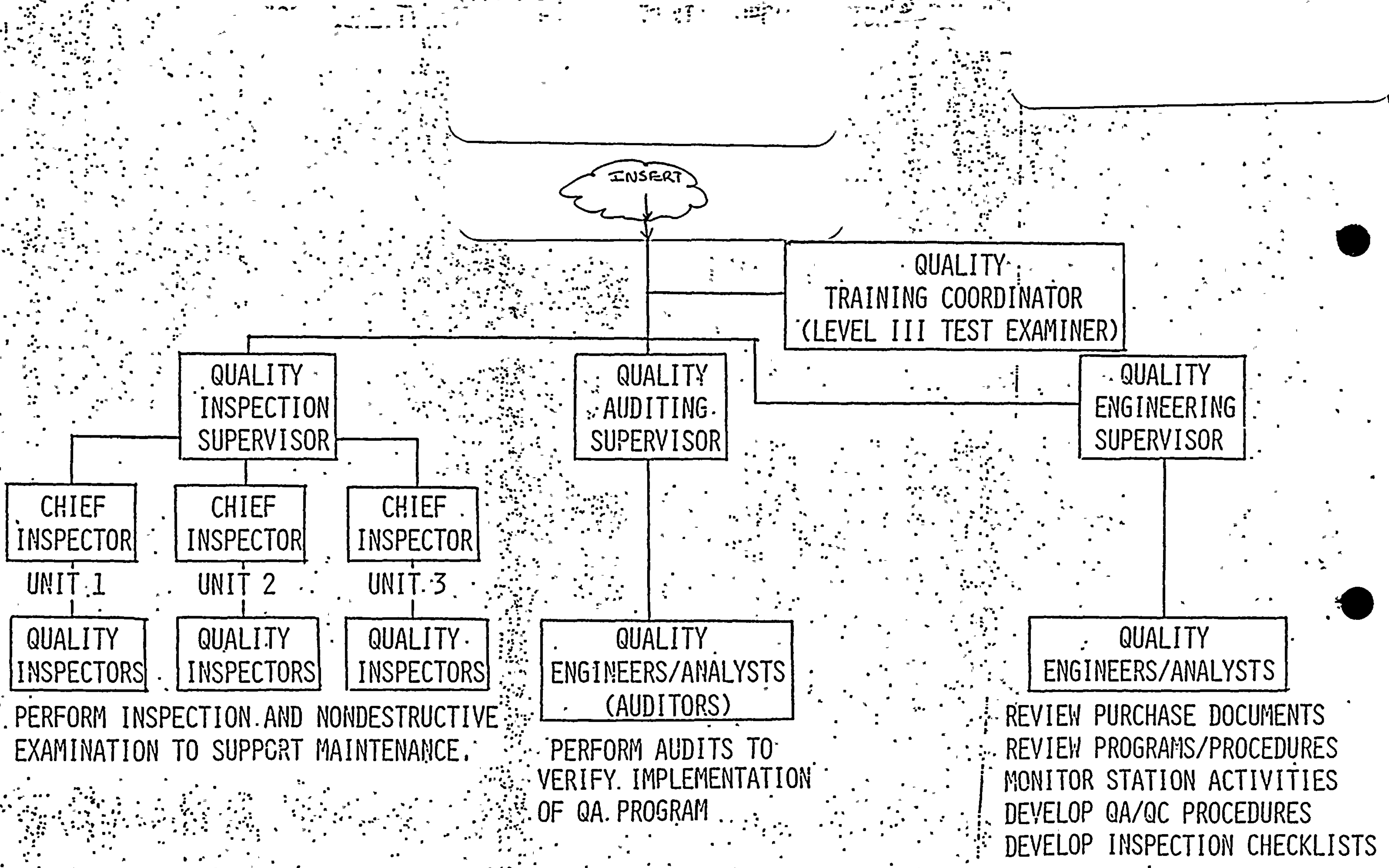



4

Palo Verde Nuclear Generating Station
FSAR

CORPORATE QUALITY ASSURANCE
AND OPERATIONS
QUALITY ASSURANCE ORGANIZATIONS

Figure 17.2-1


INSERT
QUALITY TRAINING COORDINATOR (LEVEL III TEST EXAMINER)
QUALITY INSPECTION SUPERVISOR
QUALITY AUDITING SUPERVISOR
QUALITY ENGINEERING SUPERVISOR
CHIEF INSPECTOR
UNIT 1
CHIEF INSPECTOR
UNIT 2
CHIEF INSPECTOR
UNIT 3
QUALITY INSPECTORS
QUALITY INSPECTORS
QUALITY INSPECTORS
QUALITY ENGINEERS/ANALYSTS (AUDITORS)
QUALITY ENGINEERS/ANALYSTS
PERFORM INSPECTION AND NONDESTRUCTIVE EXAMINATION TO SUPPORT MAINTENANCE.
PERFORM AUDITS TO VERIFY IMPLEMENTATION OF QA PROGRAM
REVIEW PURCHASE DOCUMENTS
REVIEW PROGRAMS/PROCEDURES
MONITOR STATION ACTIVITIES
DEVELOP QA/QC PROCEDURES
DEVELOP INSPECTION CHECKLISTS