

October 30, 1987

Docket Nos.: STN 50-528, STN 50-529
and STN 50-530

Mr. E. E. Van Brunt, Jr.
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Dear Mr. Van Brunt:

SUBJECT: ISSUANCE OF AMENDMENT NO. 25 TO FACILITY OPERATING LICENSE NO. NPF-41, AMENDMENT NO. 14 TO FACILITY OPERATING LICENSE NO. NPF-51, AND AMENDMENT NO. 3 TO FACILITY OPERATING LICENSE NO. NPF-65, FOR THE PALO VERDE NUCLEAR GENERATING STATION, UNITS 1, 2 AND 3, RESPECTIVELY (TAC NOS. 65939, 65940 AND 65941)

The Commission has issued the subject Amendments, which are enclosed, to the Facility Operating Licenses for Palo Verde Nuclear Generating Station, Units 1, 2 and 3. The Amendments consist of changes to the Technical Specifications (Appendix A to each license) in response to your application transmitted by letter dated August 10, 1987, as supplemented by letters dated September 22 and October 15, 1987.

The Amendments revise Section 6 of the Technical Specifications for each of the three Palo Verde Units to incorporate changes reflecting a revised organizational structure for the Palo Verde plant.

A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's next regular bi-weekly Federal Register notice.

Sincerely,

Original signed by:
E. A. Licitra

E. A. Licitra, Senior Project Manager
Project Directorate V
Division of Reactor Projects - III,
IV, V and Special Projects

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Enclosures:

1. Amendment No. 25 to NPF-41
2. Amendment No. 14 to NPF-51
3. Amendment No. 3 to NPF-65
4. Safety Evaluation

cc: See next page

DRSP/PDV
EALicitra:cd
10/26/87

DRSP/PDV
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10/26/87

OGC
[Signature]
10/30/87

DRSP/PDV
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Mr. E. E. Van Brunt, Jr.
Arizona Nuclear Power Project

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

ARIZONA PUBLIC SERVICE COMPANY, ET AL.

DOCKET NO. STN 50-528

PALO VERDE NUCLEAR GENERATING STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 25
License No. NPF-41

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment, dated August 10, 1987, as supplemented by letters dated September 22 and October 15, 1987, by the Arizona Public Service Company (APS) on behalf of itself and the Salt River Project Agricultural Improvement and Power District, El Paso Electric Company, Southern California Edison Company, Public Service Company of New Mexico, Los Angeles Department of Water and Power, and Southern California Public Power Authority (licensees), complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the enclosure to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-41 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 25, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this license. APS shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of issuance. The changes in the Technical Specifications are to become effective within 120 days of issuance of the amendment. In the period between issuance of the amendment and the effective date of the new Technical Specifications, the licensees shall adhere to the Technical Specifications existing at the time. The period of time during changeover shall be minimized.

FOR THE NUCLEAR REGULATORY COMMISSION



George W. Knighton, Director
Project Directorate V
Division of Reactor Projects - III,
IV, V and Special Projects

Enclosure:
Changes to the Technical
Specification

Date of Issuance: October 30, 1987

ENCLOSURE TO LICENSE AMENDMENT

AMENDMENT NO. 25 TO FACILITY OPERATING LICENSE NO. NPF-41

DOCKET NO. STN 50-528

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change. Also to be replaced are the following overleaf pages to the amended pages.

<u>Amendment Pages</u>	<u>Overleaf Pages</u>
XVI	XV
6-1	-
6-2	-
6-3	-
6-4	-
6-6	6-5
6-7	-
6-8	-
6-9	-
6-10	-
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ADMINISTRATIVE CONTROLS

6.1 RESPONSIBILITY

6.1.1 The Plant Manager shall be responsible for overall unit operation and shall delegate in writing the succession to this responsibility during his absence.

6.1.2 The Shift Supervisor, or during his absence from the Control Room, a designated individual per Table 6.2-1, shall be responsible for the Control Room command function. A management directive to this effect, signed by the Vice President-Nuclear Production shall be reissued to all station personnel on an annual basis.

6.2 ORGANIZATION

OFFSITE

6.2.1 The offsite organization for unit management and technical support shall be as shown in Figure 6.2-1.

UNIT STAFF

6.2.2.1 The unit organization shall be as shown in Figure 6.2-2 and:

- a. Each on-duty shift shall be composed of at least the minimum shift crew composition shown in Table 6.2-1.
- b. At least one licensed Reactor Operator shall be in the Control Room when fuel is in the reactor. In addition, while the reactor is in MODE 1, 2, 3, or 4, at least one licensed Senior Reactor Operator shall be in the Control Room.
- c. A radiation protection technician* shall be onsite when fuel is in the reactor.
- d. All CORE ALTERATIONS shall be observed and directly supervised by either a licensed Senior Reactor Operator or Senior Reactor Operator Limited to Fuel Handling who has no other concurrent responsibilities during this operation.
- e. A site Fire Team of at least five members shall be maintained onsite at all times*. The Fire Team shall not include the Shift Supervisor, the STA, nor the 3 other members of the minimum shift crew necessary for safe shutdown of the unit and any personnel required for other essential functions during a fire emergency.

6.2.2.2 The unit staff working hours shall be as follows:

- a. Administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform safety-related functions; e.g., Senior Reactor Operators, Reactor Operators, radiation protection technicians, auxiliary operators, and key maintenance personnel.

*The radiation protection technician and Fire Team composition may be less than the minimum requirements for a period of time not to exceed 2 hours, in order to accommodate unexpected absence, provided immediate action is taken to fill the required positions.

ADMINISTRATIVE CONTROLS

UNIT STAFF (Continued)

- b. Adequate shift coverage shall be maintained without routine heavy use of overtime. The objective shall be to have operating personnel work a nominal 40-hour week while the plant is operating. However, in the event that unforeseen problems require substantial amounts of overtime to be used, or during extended periods of shutdown for re-fueling, major maintenance, or major plant modifications, on a temporary basis, the following guidelines shall be followed (this excludes the STA working hours):
- 1) An individual should not be permitted to work more than 16 hours straight, excluding shift turnover time.
 - 2) An individual should not be permitted to work more than 16 hours in any 24-hour period, nor more than 24 hours in any 48-hour period, nor more than 72 hours in any 7-day period, all excluding shift turnover time.
 - 3) A break of at least 8 hours should be allowed between work periods, including shift turnover time.
 - 4) Except during extended shutdown periods, the use of overtime should be considered on an individual basis and not for the entire staff on a shift.
- c. Any deviation from the above guidelines shall be authorized by the Assistant Vice President-Nuclear Production Support, Director, Standards and Technical Support or the Plant Manager or their designees who are at the manager level or above, or higher levels of management, in accordance with established procedures and with documentation of the basis for granting the deviation. Controls shall be included in the procedures such that individual overtime in their respective groups shall be reviewed monthly by these authorized individuals or their designees to assure that excessive hours have not been assigned. Routine deviation from the above guidelines is not authorized.

ADMINISTRATIVE CONTROLS

UNIT STAFF (Continued)

- b. Adequate shift coverage shall be maintained without routine heavy use of overtime. The objective shall be to have operating personnel work a nominal 40-hour week while the plant is operating. However, in the event that unforeseen problems require substantial amounts of overtime to be used, or during extended periods of shutdown for refueling, major maintenance, or major plant modifications, on a temporary basis, the following guidelines shall be followed (this excludes the STA working hours):
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*1. LOCATED ONSITE

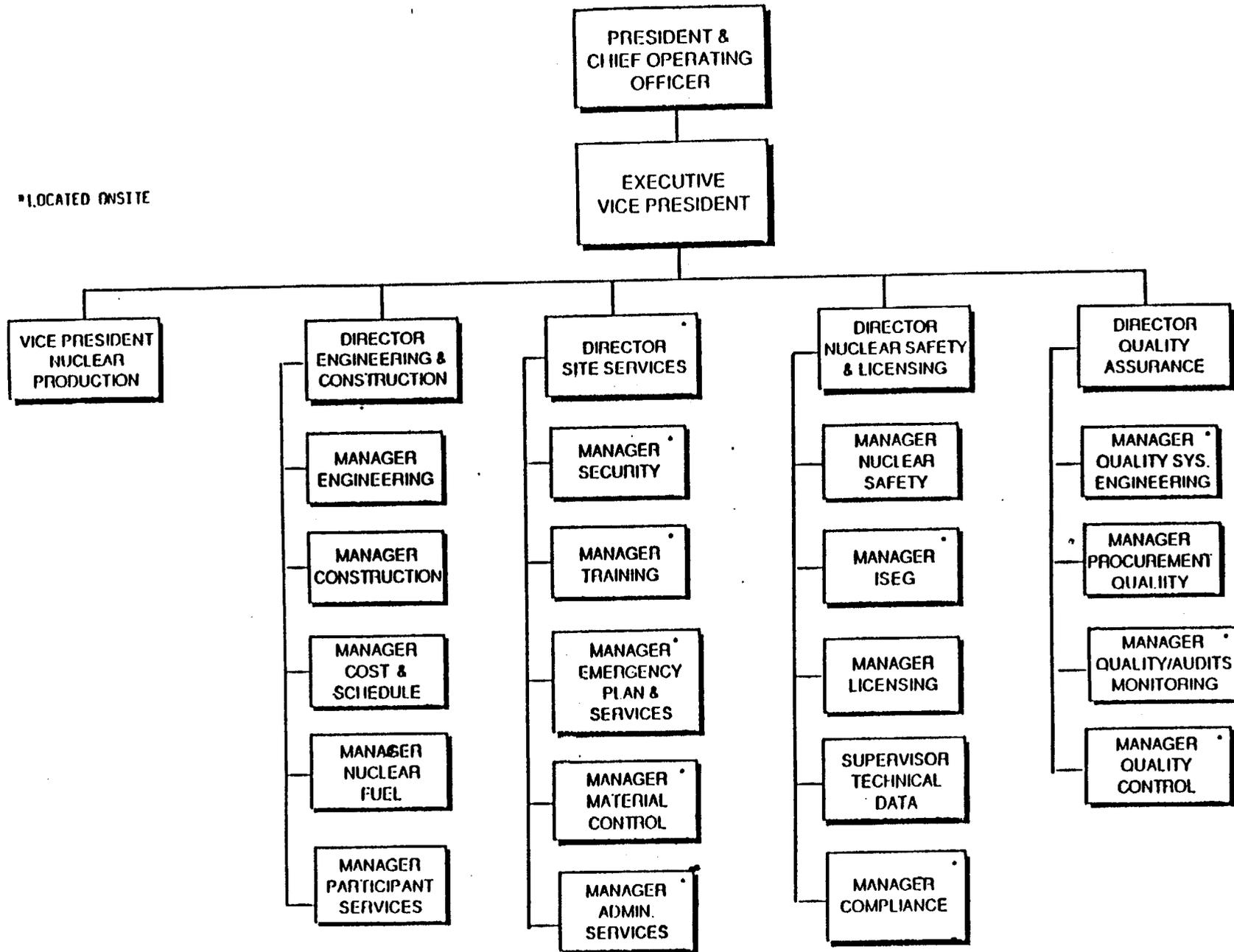
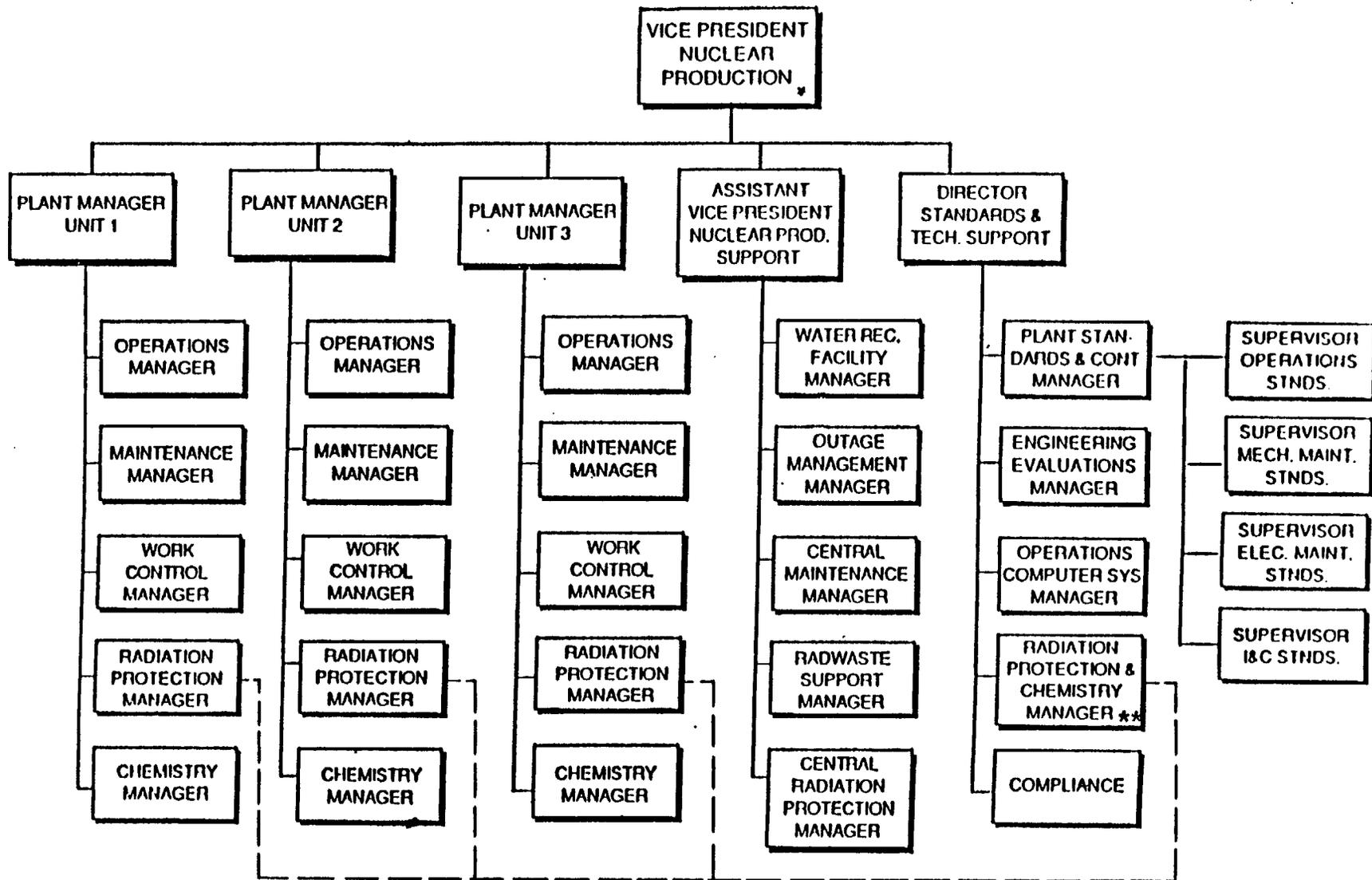


FIGURE 6.2-1
OFFSITE ORGANIZATION



— MATRIX

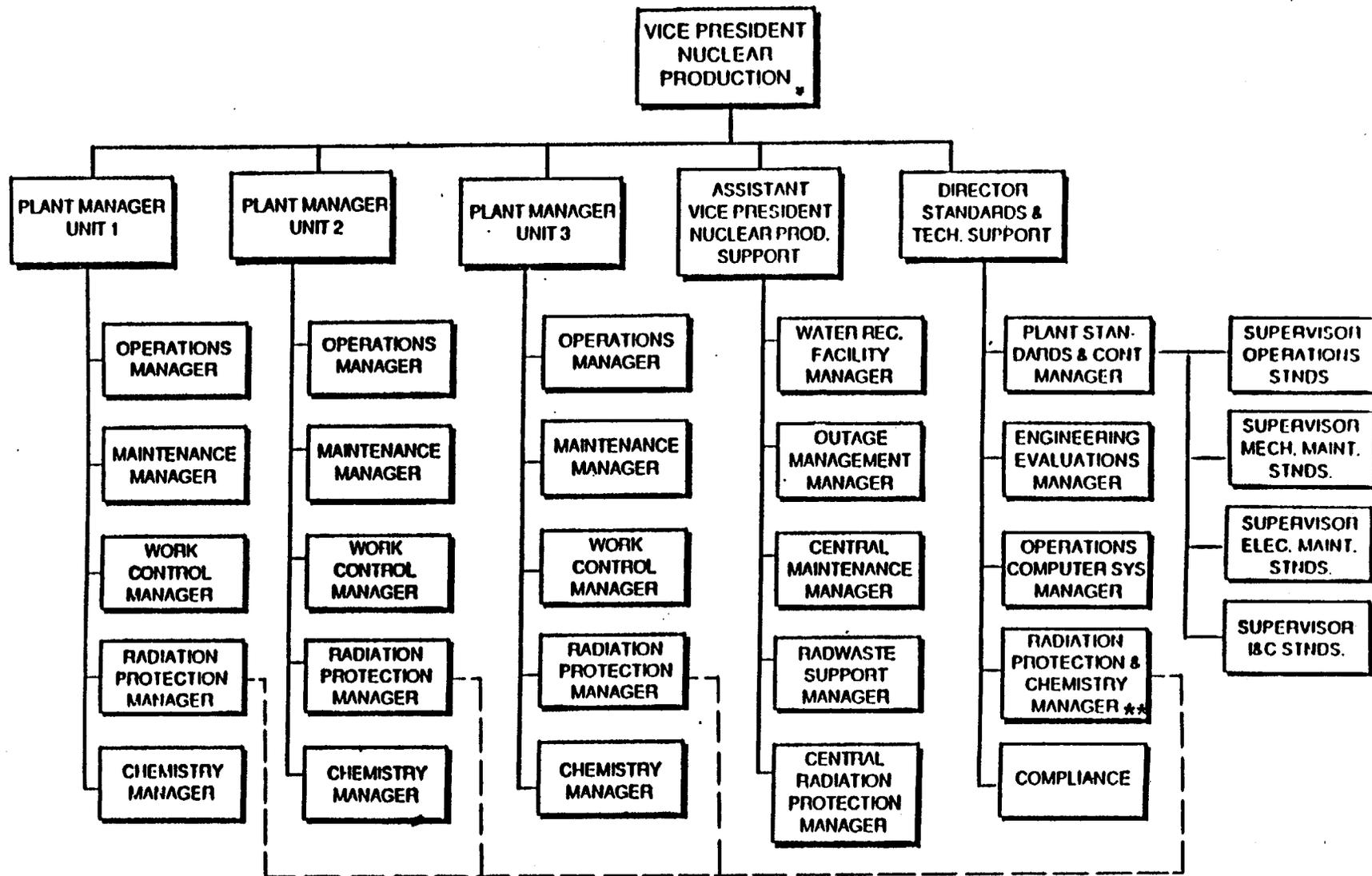
*Located Offsite

**Designated Regulatory Guide 1.8 "Radiation Protection Manager"

---Dotted Lines Indicate Programmatic Procedural Direction and Problem Resolution

FIGURE 6.2-2

ONSITE ORGANIZATION



—MATRIX

*Located Offsite

**Designated Regulatory Guide 1.8 "Radiation Protection Manager"

---Dotted Lines Indicate Programmatic Procedural Direction and Problem Resolution

FIGURE 6.2-2

ONSITE ORGANIZATION

TABLE 6.2-1

MINIMUM SHIFT CREW COMPOSITION

POSITION	NUMBER OF INDIVIDUALS REQUIRED TO FILL POSITION	
	MODE 1, 2, 3, OR 4	MODE 5 OR 6
SS	1	1
SRO	1	None
RO	2	1
AO	2	1
STA	1	None

- SS - Shift Supervisor with a Senior Reactor Operators License
- SRO - Individual with a Senior Reactor Operators License
- RO - Individual with a Reactor Operators License
- AO - Nuclear Operator I or II
- STA - Shift Technical Advisor

Except for the Shift Supervisor, the Shift Crew Composition may be one less than the minimum requirements of Table 6.2-1 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 of Table 6.2-1. This provision does not permit any shift crew position to be unmanned upon shift change due to an oncoming shift crewman being late or absent.

During any absence of the Shift Supervisor from the Control Room while the unit is in MODE 1, 2, 3, or 4, an individual (other than the Shift Technical Advisor) with a valid Senior Operator license shall be designated to assume the Control Room command function. During any absence of the Shift Supervisor from the Control Room while the unit is in MODE 5 or 6, an individual with a valid Senior Operator or Operator license shall be designated to assume the Control Room command function.

ADMINISTRATIVE CONTROLS

6.2.3 INDEPENDENT SAFETY ENGINEERING GROUP (ISEG)

FUNCTION

6.2.3.1 The ISEG shall function to examine plant operating characteristics, NRC issuances, industry advisories, Licensee Event Reports, and other sources of plant design and operating experience information, including plants of similar design, which may indicate areas for improving plant safety.

COMPOSITION

6.2.3.2 The ISEG shall be composed of at least five, dedicated, full-time engineers located on site. Each shall have a Bachelor's Degree in engineering or related science and at least two years professional level experience in his field.

RESPONSIBILITIES

6.2.3.3 The ISEG shall be responsible for maintaining surveillance of plant activities to provide independent verification* that these activities are performed correctly to reduce human errors as much as practical, and to detect potential nuclear safety hazards.

AUTHORITY

6.2.3.4 The ISEG shall make detailed recommendations for revised procedures, equipment modifications, maintenance activities, operations activities or other means of improving plant safety to the Director, Nuclear Safety and Licensing, Plant Manager, and the Manager, Nuclear Safety Group (NSG).

RECORDS

6.2.3.5 Records of activities performed by the ISEG shall be prepared, maintained, and forwarded each calendar month to the Director, Nuclear Safety and Licensing.

6.2.4 SHIFT TECHNICAL ADVISOR

6.2.4.1 The Shift Technical Advisor (STA) shall provide advisory technical support to the Shift Supervisor in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. The STA shall be onsite and shall be available in the control room within 10 minutes whenever one or more units are in MODE 1, 2, 3, or 4.

6.3 UNIT STAFF QUALIFICATIONS

6.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANS 3.1-1978 and Regulatory Guide 1.8, September 1975, except for the Radiation Protection and Chemistry Manager who shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975, and 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 plant operating characteristics, including transients and accidents.

*Not responsible for sign-off function.

ADMINISTRATIVE CONTROLS

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*Not responsible for sign-off function.

ADMINISTRATIVE CONTROLS

6.4 TRAINING

6.4.1 A training program for the unit staff shall be maintained under the direction of the Director, Site Services or his designee and shall meet or exceed the requirements and recommendations of Section 5.0 of ANS 3.1-1978 and Appendix A of 10 CFR Part 55 and the supplemental requirements specified in Sections A and C of Enclosure 1 of the March 28, 1980 NRC letter to all licensees, and shall include familiarization with relevant industry operational experience.

6.5 REVIEW AND AUDIT

6.5.1 PLANT REVIEW BOARD (PRB)

FUNCTION

6.5.1.1 The Plant Review Board shall function to advise the Plant Manager on all matters related to nuclear safety.

COMPOSITION

6.5.1.2 The PRB shall be composed of the following personnel:

Member:	Engineering Evaluations Manager
Member:	Operations Standards Supervisor
Member:	Mechanical Maintenance Standards Supervisor
Member:	Electrical Maintenance Standards Supervisor
Member:	Operations Managers for Unit 1, Unit 2, Unit 3
Member:	STA Supervisor
Member:	I&C Standards Supervisor
Member:	Radiation Protection and Chemistry Manager
Member:	Quality Systems/Engineering Manager

The Vice President-Nuclear Production shall designate the Chairman and Vice-Chairmen in writing. The Chairman and Vice-Chairmen may be from outside the members listed above provided that they meet ANSI Standard 3.1, 1978.

ALTERNATES

6.5.1.3 All alternate members shall be appointed in writing by the PRB Chairman to serve on a temporary basis; however, no more than two alternates shall participate as voting members in PRB activities at any one time.

MEETING FREQUENCY

6.5.1.4 The PRB shall meet at least once per calendar month and as convened by the PRB Chairman, Vice-Chairmen, or his designated alternate.

ADMINISTRATIVE CONTROLS

QUORUM

6.5.1.5 The quorum of the PRB necessary for the performance of the PRB responsibility and authority provisions of these Technical Specifications shall consist of the Chairman, Vice-Chairmen, or his designated alternate and five members including alternates.

RESPONSIBILITIES

6.5.1.6 The PRB shall be responsible for:

- a. Review of all administrative control procedures and changes.
- b. Review of all proposed changes to Appendix "A" Technical Specifications.
- c. Investigation of all violations of the Technical Specifications including the preparation and forwarding of reports covering evaluation and recommendations to prevent recurrence to the Nuclear Safety Group (NSG).
- d. Review of REPORTABLE EVENTS requiring 24-hour written notification to the Commission.
- e. Review of unit operations to detect potential nuclear safety hazards.
- f. Performance of special reviews, investigations or analyses and reports thereon as requested by the Vice President-Nuclear Production.
- g. Review and documentation of judgment concerning prolonged operation in bypass, channel trip, and/or repair of defective protection channels of process variables placed in bypass since the last PRB meeting.

AUTHORITY

6.5.1.7 The PRB shall:

- a. Render determinations in writing with regard to whether or not each item considered under Specification 6.5.1.6c. above constitutes an unreviewed safety question.
- b. Provide written notification within 24 hours to the Vice President-Nuclear Production, Plant Manager and NSG of disagreement between the PRB and the Plant Manager; however, the Plant Manager shall have responsibility for resolution of such disagreements pursuant to Specification 6.1.1 above.

RECORDS

6.5.1.8 The PRB shall maintain written minutes of each PRB meeting that, at a minimum, document the results of all PRB activities performed under the responsibility and authority provisions of these Technical Specifications. Copies shall be provided to the Plant Manager, Vice President-Nuclear Production and NSG.

ADMINISTRATIVE CONTROLS

QUORUM

6.5.1.5 The quorum of the PRB necessary for the performance of the PRB responsibility and authority provisions of these Technical Specifications shall consist of the Chairman, Vice-Chairmen, or his designated alternate and five members including alternates.

RESPONSIBILITIES

6.5.1.6 The PRB shall be responsible for:

- a. Review of all administrative control procedures and changes.
- b. Review of all proposed changes to Appendix "A" Technical Specifications.
- c. Investigation of all violations of the Technical Specifications including the preparation and forwarding of reports covering evaluation and recommendations to prevent recurrence to the Nuclear Safety Group (NSG).
- d. Review of REPORTABLE EVENTS requiring 24-hour written notification to the Commission.
- e. Review of unit operations to detect potential nuclear safety hazards.
- f. Performance of special reviews, investigations or analyses and reports thereon as requested by the Vice President-Nuclear Production.
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- b. Provide written notification within 24 hours to the Vice President-Nuclear Production, Plant Manager and NSG of disagreement between the PRB and the Plant Manager; however, the Plant Manager shall have responsibility for resolution of such disagreements pursuant to Specification 6.1.1 above.

RECORDS

6.5.1.8 The PRB shall maintain written minutes of each PRB meeting that, at a minimum, document the results of all PRB activities performed under the responsibility and authority provisions of these Technical Specifications. Copies shall be provided to the Plant Manager, Vice President-Nuclear Production and NSG.

ADMINISTRATIVE CONTROLS

6.5.2 TECHNICAL REVIEW AND CONTROL ACTIVITIES

6.5.2.1 The Director, Standards and Technical Support shall assure that each procedure and program required by Specification 6.8 and other procedures which affect nuclear safety, and changes thereto, is prepared by a qualified individual/organization. Each such procedure, and changes thereto, shall be reviewed by an individual/group other than the individual/group which prepared the procedure, or changes thereto, but who may be from the same organization as the individual/group which prepared the procedure, or changes thereto.

6.5.2.2 Phase I - IV tests described in the FSAR that are performed by the plant operations staff shall be approved by the Director, Standards and Technical Support or the Engineering Evaluations Manager as previously designated by the Vice President-Nuclear Production. Test results shall be approved by the Director, Standards and Technical Support or the Engineering Evaluations Manager.

6.5.2.3 Proposed modifications to unit nuclear safety-related structures, systems and components shall be designed by a qualified individual/organization. Each such modification shall be reviewed by an individual/group other than the individual/group which designed the modification, but who may be from the same organization as the individual/group which designed the modification. Proposed modifications to nuclear safety-related structures, systems and components shall be approved prior to implementation by the Plant Manager; or by the Director, Standards and Technical Support as previously designated by the Vice President-Nuclear Production.

6.5.2.4 Individuals responsible for reviews performed in accordance with 6.5.2.1, 6.5.2.2, and 6.5.2.3 shall be members of the station nuclear production supervisory staff, previously designated by the Vice President-Nuclear Production to perform such reviews. Each such review shall include a determination of whether or not additional, cross-disciplinary, review is necessary. If deemed necessary, such review shall be performed by the appropriate designated review personnel.

6.5.2.5 Proposed tests and experiments which affect station nuclear safety and are not addressed in the FSAR or Technical Specifications shall be reviewed by the Vice President-Nuclear Production.

6.5.2.6 The station security program and implementing procedures shall be reviewed. Recommended changes shall be approved by the Director, Site Services or designate alternate and transmitted to the Vice President-Nuclear Operations and to the NSG.

6.5.2.7 The station emergency plan and implementing procedures shall be reviewed. Recommended changes shall be approved by the Director, Site Services or designate alternate and transmitted to the Vice President-Nuclear Production and to the NSG.

6.5.2.8 The Director, Standards and Technical Support shall assure the performance of a review by a qualified individual/organization of every unplanned onsite release of radioactive material to the environs including the preparation and forwarding of reports covering the evaluation, recommendations and disposition of the corrective action to prevent recurrence.

ADMINISTRATIVE CONTROLS

TECHNICAL REVIEW AND CONTROL ACTIVITIES (Continued)

6.5.2.9 The Director, Standards and Technical Support shall assure the performance of a review by a qualified individual/organization of changes to the PROCESS CONTROL PROGRAM, OFFSITE DOSE CALCULATION MANUAL, radwaste treatment systems, and the Pre-planned Alternate Sampling Program.

6.5.2.10 Reports documenting each of the activities performed under Specifications 6.5.2.1 through 6.5.2.9 above shall be maintained. Copies shall be provided to the Vice President-Nuclear Production and the Nuclear Safety Group.

6.5.3 NUCLEAR SAFETY GROUP (NSG)

FUNCTION

6.5.3.1 The NSG shall function to provide independent review and shall be responsible for the audit of designated activities in the areas of:

- a. nuclear power plant operations
- b. nuclear engineering
- c. chemistry and radiochemistry
- d. metallurgy
- e. instrumentation and control
- f. radiological safety
- g. mechanical and electrical engineering
- h. quality assurance practices

COMPOSITION

6.5.3.2 The NSG shall consist of a Manager and at least four staff specialists. The Manager shall have a Bachelor's Degree in Engineering or the Physical Sciences. He will also have a minimum of 10 years experience in the power field with at least 3 of those years in the nuclear field. The NSG Manager will have at least 2 years of supervisor/managerial experience. Each staff specialist will have at least one of the following requirements:

- a. Eight years experience in one of the designated areas in Specification 6.5.3.1. One of these 8 years will be at Palo Verde Nuclear Generating Station.
- b. Bachelor's Degree in Engineering or a related science and 3 years of professional experience.

CONSULTANTS

6.5.3.3 Consultants shall be utilized as determined by the NSG Manager to provide expert advice to the NSG.

REVIEW

6.5.3.4 The NSG shall review:

- a. The safety evaluations program and its implementation for (1) changes to procedures, equipment, systems or facilities within the power block, and (2) tests or experiments completed under the provision of 10 CFR 50.59, to verify that such actions did not constitute an unreviewed safety question;

ADMINISTRATIVE CONTROLS

TECHNICAL REVIEW AND CONTROL ACTIVITIES (Continued)

6.5.2.9 The Director, Standards and Technical Support shall assure the performance of a review by a qualified individual/organization of changes to the PROCESS CONTROL PROGRAM, OFFSITE DOSE CALCULATION MANUAL, radwaste treatment systems, and the Pre-planned Alternate Sampling Program.

6.5.2.10 Reports documenting each of the activities performed under Specifications 6.5.2.1 through 6.5.2.9 above shall be maintained. Copies shall be provided to the Vice President-Nuclear Production and the Nuclear Safety Group.

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- a. Eight years experience in one of the designated areas in Specification 6.5.3.1. One of these 8 years will be at Palo Verde Nuclear Generating Station.
- b. Bachelor's Degree in Engineering or a related science and 3 years of professional experience.

CONSULTANTS

6.5.3.3 Consultants shall be utilized as determined by the NSG Manager to provide expert advice to the NSG.

REVIEW

6.5.3.4 The NSG shall review:

- a. The safety evaluations program and its implementation for (1) changes to procedures, equipment, systems or facilities within the power block, and (2) tests or experiments completed under the provision of 10 CFR 50.59, to verify that such actions did not constitute an unreviewed safety question;

ADMINISTRATIVE CONTROLS

REVIEW (Continued)

- b. Proposed changes to procedures, equipment, systems or facilities within the power block which involve an unreviewed safety question as defined in 10 CFR 50.59;
- c. Proposed tests or experiments which involve an unreviewed safety question as defined in 10 CFR 50.59;
- d. Proposed changes to Technical Specifications or this Operating License;
- e. Violations of codes, regulations, orders, Technical Specifications, license requirements, or of internal procedures or instructions having nuclear safety significance;
- f. Significant operating abnormalities or deviations from normal and expected performance of unit equipment that affect nuclear safety;
- g. All REPORTABLE EVENTS requiring 24 hours written notification;
- h. All recognized indications of an unanticipated deficiency in some aspect of design or operation of structures, systems, or components that could affect nuclear safety; and
- i. Reports and meeting minutes of the PRB.

AUDITS

6.5.3.5 Audits of unit activities shall be performed under the cognizance of the NSG. These audits shall encompass:

- a. The conformance of unit operation to provisions contained within the Technical Specifications and applicable license conditions at least once per 12 months.
- b. The performance, training, and qualifications of the unit staff at least once per 12 months.
- c. The results of actions taken to correct deficiencies occurring in unit equipment, structures, systems, or method of operation that affect nuclear safety at least once per 6 months.
- d. The performance of activities required by the Operational Quality Assurance Program to meet the criteria of Appendix B, 10 CFR Part 50, at least once per 24 months.
- e. Any other area of unit operation considered appropriate by the NSG or the Vice President-Nuclear Production.
- f. The fire protection programmatic controls including the implementing procedures at least once per 24 months by qualified licensee QA personnel.

ADMINISTRATIVE CONTROLS

AUDITS (Continued)

- g. The fire protection equipment and program implementation at least once per 12 months utilizing either a qualified offsite licensee fire protection engineer or an outside independent fire protection consultant. An outside independent fire protection consultant shall be used at least every third year.
- h. The radiological environmental monitoring program and the results thereof at least once per 12 months.
- i. The OFFSITE DOSE CALCULATION MANUAL and implementing procedures at least once per 24 months.
- j. The PROCESS CONTROL PROGRAM and implementing procedures for processing and packaging of radioactive wastes at least once per 24 months.
- k. The performance of activities required by the Operations Quality Assurance Criteria Manual to meet the provisions of Regulatory Guide 1.21, Revision 1, June 1974 and Regulatory Guide 4.1, Revision 1, April 1975 at least once per 12 months.
- l. The Pre-planned Alternate Sampling Program and implementing procedures at least once per 24 months.

AUTHORITY

6.5.3.6 The NSG shall report to and advise the Director, Nuclear Safety and Licensing on those areas of responsibility specified in Specifications 6.5.3.4 and 6.5.3.5.

RECORDS

6.5.3.7 Records of NSG activities shall be prepared and maintained. Report of reviews and audits shall be prepared monthly for the Director, Nuclear Safety and Licensing who will distribute it to the Vice President-Nuclear Production, Plant Manager, and to the management positions responsible for the areas audited.

6.6 REPORTABLE EVENT ACTION

6.6.1 The following actions shall be taken for REPORTABLE EVENTS:

- a. The Commission shall be notified and a report submitted pursuant to the requirements of Section 50.73 to 10 CFR Part 50, and
- b. Each REPORTABLE EVENT requiring 24 hours written notification shall be reviewed by the PRB, and the results of this review shall be submitted to the Manager of Nuclear Safety Group and the Vice President-Nuclear Production.

ADMINISTRATIVE CONTROLS

AUDITS (Continued)

- g. The fire protection equipment and program implementation at least once per 12 months utilizing either a qualified offsite licensee fire protection engineer or an outside independent fire protection consultant. An outside independent fire protection consultant shall be used at least every third year.
- h. The radiological environmental monitoring program and the results thereof at least once per 12 months.
- i. The OFFSITE DOSE CALCULATION MANUAL and implementing procedures at least once per 24 months.
- j. The PROCESS CONTROL PROGRAM and implementing procedures for processing and packaging of radioactive wastes at least once per 24 months.
- k. The performance of activities required by the Operations Quality Assurance Criteria Manual to meet the provisions of Regulatory Guide 1.21, Revision 1, June 1974 and Regulatory Guide 4.1, Revision 1, April 1975 at least once per 12 months.
- l. The Pre-planned Alternate Sampling Program and implementing procedures at least once per 24 months.

AUTHORITY

6.5.3.6 The NSG shall report to and advise the Director, Nuclear Safety and Licensing on those areas of responsibility specified in Specifications 6.5.3.4 and 6.5.3.5.

RECORDS

6.5.3.7 Records of NSG activities shall be prepared and maintained. Report of reviews and audits shall be prepared monthly for the Director, Nuclear Safety and Licensing who will distribute it to the Vice President-Nuclear Production, Plant Manager, and to the management positions responsible for the areas audited.

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6.6.1 The following actions shall be taken for REPORTABLE EVENTS:

- a. The Commission shall be notified and a report submitted pursuant to the requirements of Section 50.73 to 10 CFR Part 50, and
- b. Each REPORTABLE EVENT requiring 24 hours written notification shall be reviewed by the PRB, and the results of this review shall be submitted to the Manager of Nuclear Safety Group and the Vice President-Nuclear Production.

ADMINISTRATIVE CONTROLS

6.7 SAFETY LIMIT VIOLATION

6.7.1 The following actions shall be taken in the event a Safety Limit is violated:

- a. The NRC Operations Center shall be notified by telephone as soon as possible and in all cases within 1 hour. The Vice President-Nuclear Production, Plant Manager and Manager of Nuclear Safety Group shall be notified within 24 hours.
- b. A Safety Limit Violation Report shall be prepared. The report shall be reviewed by the PRB. This report shall describe (1) applicable circumstances preceding the violation, (2) effects of the violation upon facility components, systems, or structures, and (3) corrective action taken to prevent recurrence.
- c. The Safety Limit Violation Report shall be submitted to the Commission, the Manager of the NSG and the Vice President-Nuclear Production within 14 days of the violation.
- d. Critical operation of the unit shall not be resumed until authorized by the Commission.

6.8 PROCEDURES AND PROGRAMS

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

- a. The applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978, and those required for implementing the requirements of NUREG-0737.
- b. Refueling operations.
- c. Surveillance and test activities of safety-related equipment.
- d. Security Plan implementation.
- e. Emergency Plan implementation.
- f. Fire Protection Program implementation.
- g. Modification of Core Protection Calculator (CPC) Addressable Constants.

NOTE: Modification to the CPC Addressable Constants based on information obtained through the Plant Computer - CPC data link shall not be made without prior approval of the PRB.

- h. PROCESS CONTROL PROGRAM implementation.
- i. OFFSITE DOSE CALCULATION MANUAL implementation.
- j. Quality Assurance Program for effluent and environmental monitoring, using the guidance in Regulatory Guide 1.21, Revision 1, June 1974 and Regulatory Guide 4.1, Revision 1, April 1975.
- k. Pre-planned Alternate Sampling Program implementation.
- l. Secondary water chemistry program implementation.

ADMINISTRATIVE CONTROLS

PROCEDURES AND PROGRAMS (Continued)

NOTE: The licensee shall perform a secondary water chemistry monitoring and control program that is in conformance with the program discussed in Section 10.3.4.1 of the CESSAR FSAR or another NRC approved program.

- m. Post-Accident Sampling System implementation.*
- n. Settlement Monitoring Program implementation.

NOTE: The licensee shall maintain a settlement monitoring program throughout the life of the plant in accordance with the program presented in Table 2.5-18 of the PVNGS FSAR or another NRC approved program.

- o. CEA Reactivity Integrity Program implementation

NOTE: The licensee shall perform, after initial fuel load or after each reload, either a CEA symmetry test or worth measurements of all full-length CEA groups to address Section 4.2.2 of the PVNGS SER dated November 11, 1981.

- p. Fuel Assembly Surveillance Program Implementation

NOTE: The licensee shall perform a fuel assembly surveillance program in conformance with the program discussed in Section 4.2.4 of the PVNGS SER dated November 11, 1981.

6.8.2 Each program or procedure of Specification 6.8.1, and changes thereto, shall be reviewed as specified in Specification 6.5 and approved prior to implementation. Programs, administrative control procedures and implementing procedures shall be approved by the Vice President-Nuclear Production, or designated alternate who is at supervisory level or above. Programs and procedures of Specification 6.8.1 shall be reviewed periodically as set forth in administrative procedures.

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

- a. The intent of the original procedure is not altered.
- b. The change is approved by two members of the plant supervisory staff, at least one of whom is a Shift Supervisor or Assistant Shift Supervisor with an SRO on the affected unit.
- c. The change is documented, reviewed in accordance with Specification 6.5.2 and approved by the Director, Standards and Technical Support or cognizant department head, as designated by the Vice President-Nuclear Production, within 14 days of implementation.

6.8.4 The following programs shall be established, implemented, maintained, and shall be audited under the cognizance of the NSG at least once per 24 months:

- a. Primary Coolant Sources Outside Containment

A program to reduce leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to as low as practical levels. The systems include the recirculation portion of the high pressure safety injection system, the shutdown cooling portion of the low pressure safety injection system, the post-accident sampling subsystem of the

*Not required until prior to exceeding 5% of RATED THERMAL POWER.

ADMINISTRATIVE CONTROLS

PROCEDURES AND PROGRAMS (Continued)

NOTE: The licensee shall perform a secondary water chemistry monitoring and control program that is in conformance with the program discussed in Section 10.3.4.1 of the CESSAR FSAR or another NRC approved program.

- m. Post-Accident Sampling System implementation.*
- n. Settlement Monitoring Program implementation.

NOTE: The licensee shall maintain a settlement monitoring program throughout the life of the plant in accordance with the program presented in Table 2.5-18 of the PVNGS FSAR or another NRC approved program.

- o. CEA Reactivity Integrity Program implementation

NOTE: The licensee shall perform, after initial fuel load or after each reload, either a CEA symmetry test or worth measurements of all full-length CEA groups to address Section 4.2.2 of the PVNGS SER dated November 11, 1981.

- p. Fuel Assembly Surveillance Program Implementation

NOTE: The licensee shall perform a fuel assembly surveillance program in conformance with the program discussed in Section 4.2.4 of the PVNGS SER dated November 11, 1981.

6.8.2 Each program or procedure of Specification 6.8.1, and changes thereto, shall be reviewed as specified in Specification 6.5 and approved prior to implementation. Programs, administrative control procedures and implementing procedures shall be approved by the Vice President-Nuclear Production, or designated alternate who is at supervisory level or above. Programs and procedures of Specification 6.8.1 shall be reviewed periodically as set forth in administrative procedures.

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

- a. The intent of the original procedure is not altered.
- b. The change is approved by two members of the plant supervisory staff, at least one of whom is a Shift Supervisor or Assistant Shift Supervisor with an SRO on the affected unit.
- c. The change is documented, reviewed in accordance with Specification 6.5.2 and approved by the Director, Standards and Technical Support or cognizant department head, as designated by the Vice President-Nuclear Production, within 14 days of implementation.

6.8.4 The following programs shall be established, implemented, maintained, and shall be audited under the cognizance of the NSG at least once per 24 months:

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

ARIZONA PUBLIC SERVICE COMPANY, ET AL.

DOCKET NO. STN 50-529

PALO VERDE NUCLEAR GENERATING STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 14
License No. NPF-51

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment, dated August 10, 1987, as supplemented by letters dated September 22 and October 15, 1987, by the Arizona Public Service Company (APS) on behalf of itself and the Salt River Project Agricultural Improvement and Power District, El Paso Electric Company, Southern California Edison Company, Public Service Company of New Mexico, Los Angeles Department of Water and Power, and Southern California Public Power Authority (licensees), complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

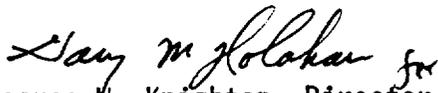
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the enclosure to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-51 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 14, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this license. APS shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of issuance. The changes in the Technical Specifications are to become effective within 120 days of issuance of the amendment. In the period between issuance of the amendment and the effective date of the new Technical Specifications, the licensees shall adhere to the Technical Specifications existing at the time. The period of time during changeover shall be minimized.

FOR THE NUCLEAR REGULATORY COMMISSION


George W. Knighton, Director
Project Directorate V
Division of Reactor Projects - III,
IV, V and Special Projects

Enclosure:
Changes to the Technical
Specification

Date of Issuance: October 30, 1987

ENCLOSURE TO LICENSE AMENDMENT

AMENDMENT NO. 14 TO FACILITY OPERATING LICENSE NO. NPF-51

DOCKET NO. STN 50-529

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change. Also to be replaced are the following overleaf pages to the amended pages.

<u>Amendment Pages</u>	<u>Overleaf Pages</u>
6-1	-
6-2	-
6-3	-
6-4	-
6-6	6-5
6-7	-
6-8	-
6-9	-
6-10	-
6-12	6-11
6-13	-
6-14	-

ADMINISTRATIVE CONTROLS

6.1 RESPONSIBILITY

6.1.1 The Plant Manager shall be responsible for overall unit operation and shall delegate in writing the succession to this responsibility during his absence.

6.1.2 The Shift Supervisor, or during his absence from the Control Room, a designated individual per Table 6.2-1, shall be responsible for the Control Room command function. A management directive to this effect, signed by the Vice President-Nuclear Production shall be reissued to all station personnel on an annual basis.

6.2 ORGANIZATION

OFFSITE

6.2.1 The offsite organization for unit management and technical support shall be as shown in Figure 6.2-1.

UNIT STAFF

6.2.2.1 The unit organization shall be as shown in Figure 6.2-2 and:

- a. Each on-duty shift shall be composed of at least the minimum shift crew composition shown in Table 6.2-1.
- b. At least one licensed Reactor Operator shall be in the Control Room when fuel is in the reactor. In addition, while the reactor is in MODE 1, 2, 3, or 4, at least one licensed Senior Reactor Operator shall be in the Control Room.
- c. A radiation protection technician* shall be onsite when fuel is in the reactor.
- d. All CORE ALTERATIONS shall be observed and directly supervised by either a licensed Senior Reactor Operator or Senior Reactor Operator Limited to Fuel Handling who has no other concurrent responsibilities during this operation.
- e. A site Fire Team of at least five members shall be maintained onsite at all times*. The Fire Team shall not include the Shift Supervisor, the STA, nor the 3 other members of the minimum shift crew necessary for safe shutdown of the unit and any personnel required for other essential functions during a fire emergency.

6.2.2.2 The unit staff working hours shall be as follows:

- a. Administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform safety-related functions; e.g., Senior Reactor Operators, Reactor Operators, radiation protection technicians, auxiliary operators, and key maintenance personnel.

*The radiation protection technician and Fire Team composition may be less than the minimum requirements for a period of time not to exceed 2 hours, in order to accommodate unexpected absence, provided immediate action is taken to fill the required positions.

ADMINISTRATIVE CONTROLS

UNIT STAFF (Continued)

- b. Adequate shift coverage shall be maintained without routine heavy use of overtime. The objective shall be to have operating personnel work a nominal 40-hour week while the plant is operating. However, in the event that unforeseen problems require substantial amounts of overtime to be used, or during extended periods of shutdown for re-fueling, major maintenance, or major plant modifications, on a temporary basis, the following guidelines shall be followed (this excludes the STA working hours):
- 1) An individual should not be permitted to work more than 16 hours straight, excluding shift turnover time.
 - 2) An individual should not be permitted to work more than 16 hours in any 24-hour period, nor more than 24 hours in any 48-hour period, nor more than 72 hours in any 7-day period, all excluding shift turnover time.
 - 3) A break of at least 8 hours should be allowed between work periods, including shift turnover time.
 - 4) Except during extended shutdown periods, the use of overtime should be considered on an individual basis and not for the entire staff on a shift.
- c. Any deviation from the above guidelines shall be authorized by the Assistant Vice President-Nuclear Production Support, Director, Standards and Technical Support or the Plant Manager or their designees who are at the manager level or above, or higher levels of management, in accordance with established procedures and with documentation of the basis for granting the deviation. Controls shall be included in the procedures such that individual overtime in their respective groups shall be reviewed monthly by these authorized individuals or their designees to assure that excessive hours have not been assigned. Routine deviation from the above guidelines is not authorized.

ADMINISTRATIVE CONTROLS

UNIT STAFF (Continued)

- b. Adequate shift coverage shall be maintained without routine heavy use of overtime. The objective shall be to have operating personnel work a nominal 40-hour week while the plant is operating. However, in the event that unforeseen problems require substantial amounts of overtime to be used, or during extended periods of shutdown for refueling, major maintenance, or major plant modifications, on a temporary basis, the following guidelines shall be followed (this excludes the STA working hours):
- 1) An individual should not be permitted to work more than 16 hours straight, excluding shift turnover time.
 - 2) An individual should not be permitted to work more than 16 hours in any 24-hour period, nor more than 24 hours in any 48-hour period, nor more than 72 hours in any 7-day period, all-excluding shift turnover time.
 - 3) A break of at least 8 hours should be allowed between work periods, including shift turnover time.
 - 4) Except during extended shutdown periods, the use of overtime should be considered on an individual basis and not for the entire staff on a shift.
- c. Any deviation from the above guidelines shall be authorized by the Assistant Vice President-Nuclear Production Support, Director, Standards and Technical Support or the Plant Manager or their designees who are at the manager level or above, or higher levels of management, in accordance with established procedures and with documentation of the basis for granting the deviation. Controls shall be included in the procedures such that individual overtime in their respective groups shall be reviewed monthly by these authorized individuals or their designees to assure that excessive hours have not been assigned. Routine deviation from the above guidelines is not authorized.

*1. LOCATED ONSITE

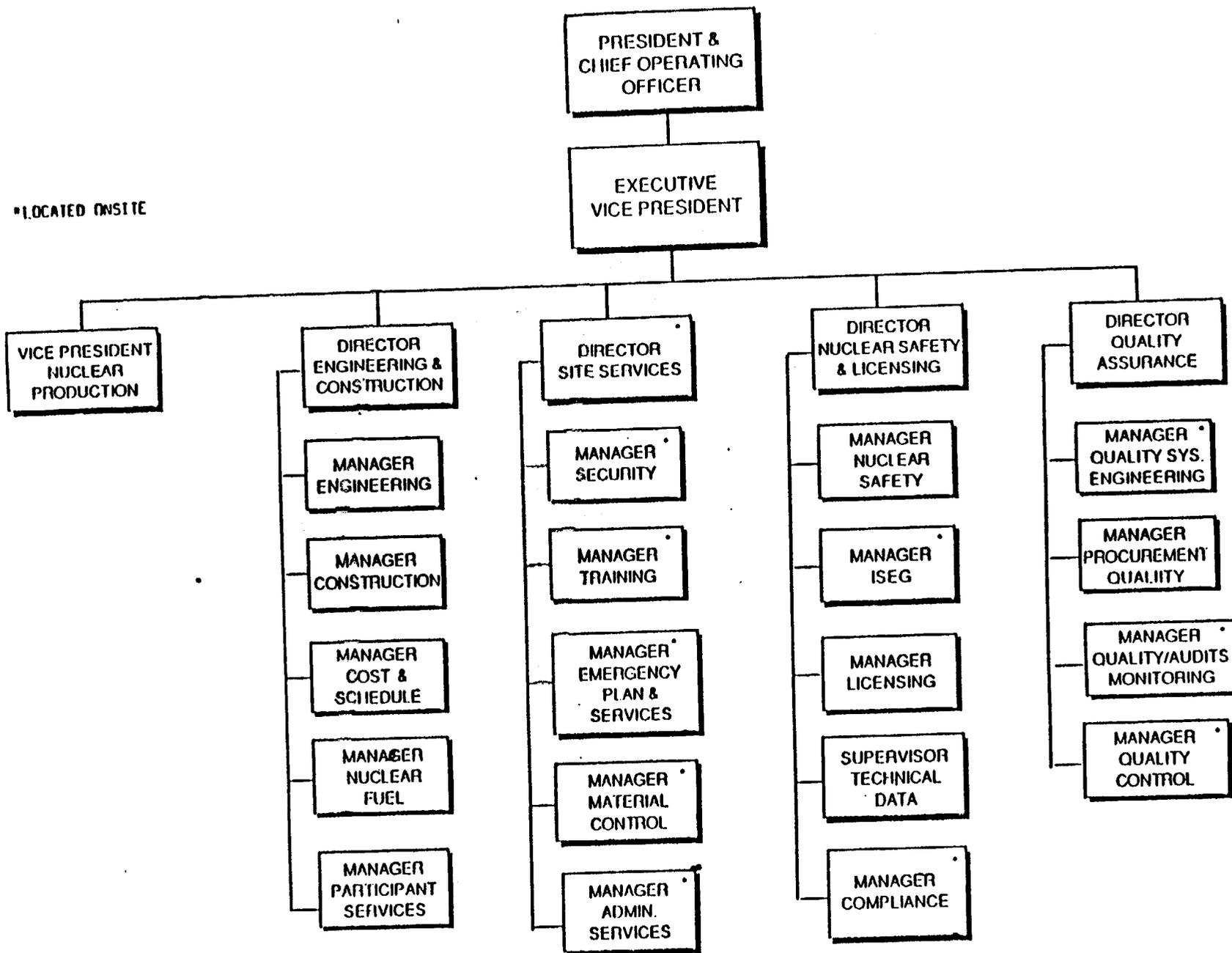
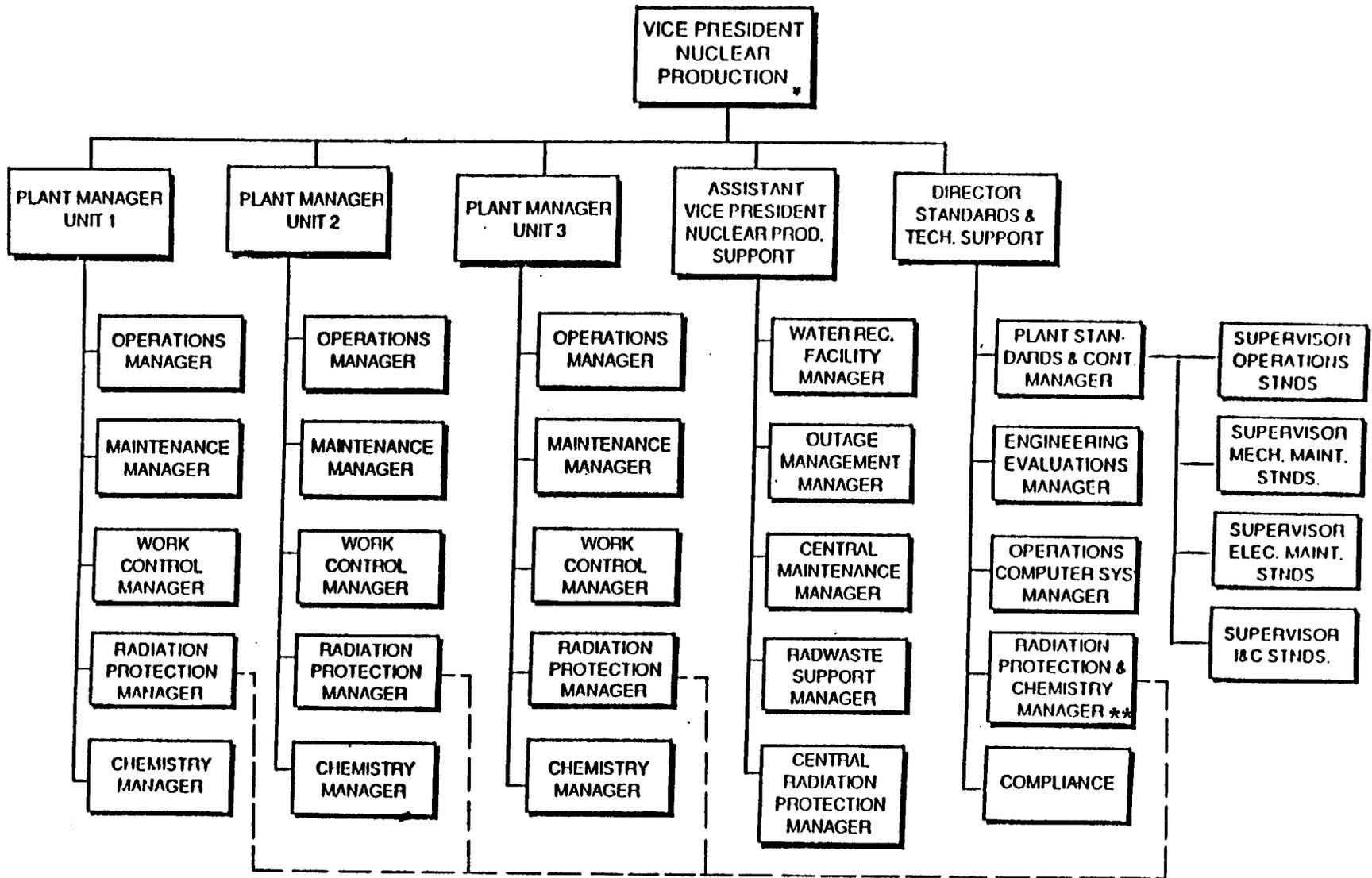
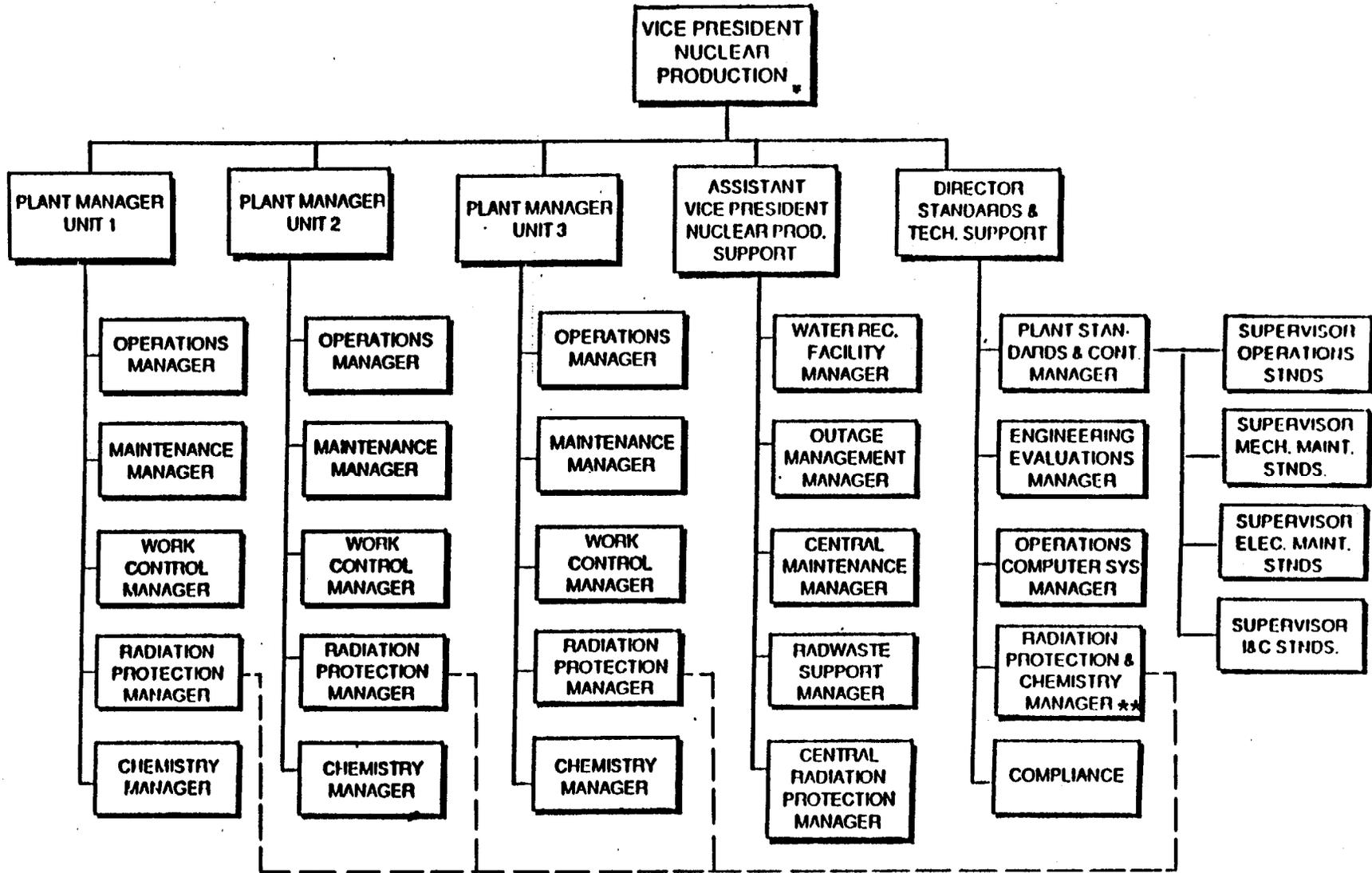


FIGURE 6.2-1
OFFSITE ORGANIZATION



— MATRIX
 *Located Offsite
 **Designated Regulatory Guide 1.8 "Radiation Protection Manager"
 ---Dotted Lines Indicate Programmatic Procedural Direction and Problem Resolution

FIGURE 6.2-2
 ONSITE ORGANIZATION



- MATRIX
- *Located Offsite
- **Designated Regulatory Guide 1.8 "Radiation Protection Manager"
- Dotted Lines Indicate Programmatic Procedural Direction and Problem Resolution

FIGURE 6.2-2
ONSITE ORGANIZATION

TABLE 6.2-1

MINIMUM SHIFT CREW COMPOSITION

POSITION	NUMBER OF INDIVIDUALS REQUIRED TO FILL POSITION	
	MODE 1, 2, 3, OR 4	MODE 5 OR 6
SS	1	1
SRO	1	None
RO	2	1
AO	2	1
STA	1	None

- SS - Shift Supervisor with a Senior Reactor Operators License
- SRO - Individual with a Senior Reactor Operators License
- RO - Individual with a Reactor Operators License
- AO - Nuclear Operator I or II
- STA - Shift Technical Advisor

The Shift Crew Composition may be one less than the minimum requirements of Table 6.2-1 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 of Table 6.2-1. This provision does not permit any shift crew position to be unmanned upon shift change due to an oncoming shift crewman being late or absent.

During any absence of the Shift Supervisor from the Control Room while the unit is in MODE 1, 2, 3, or 4, an individual with a valid Senior Operator license shall be designated to assume the Control Room command function. During any absence of the Shift Supervisor from the Control Room while the unit is in MODE 5 or 6, an individual with a valid Senior Operator or Operator license shall be designated to assume the Control Room command function.

ADMINISTRATIVE CONTROLS

6.2.3 INDEPENDENT SAFETY ENGINEERING GROUP (ISEG)

FUNCTION

6.2.3.1 The ISEG shall function to examine plant operating characteristics, NRC issuances, industry advisories, Licensee Event Reports, and other sources of plant design and operating experience information, including plants of similar design, which may indicate areas for improving plant safety.

COMPOSITION

6.2.3.2 The ISEG shall be composed of at least five, dedicated, full-time engineers located on site. Each shall have a Bachelor's Degree in engineering or related science and at least two years professional level experience in his field.

RESPONSIBILITIES

6.2.3.3 The ISEG shall be responsible for maintaining surveillance of plant activities to provide independent verification* that these activities are performed correctly to reduce human errors as much as practical, and to detect potential nuclear safety hazards.

AUTHORITY

6.2.3.4 The ISEG shall make detailed recommendations for revised procedures, equipment modifications, maintenance activities, operations activities or other means of improving plant safety to the Director, Nuclear Safety and Licensing, Plant Manager, and the Manager, Nuclear Safety Group (NSG).

RECORDS

6.2.3.5 Records of activities performed by the ISEG shall be prepared, maintained, and forwarded each calendar month to the Director, Nuclear Safety and Licensing.

6.2.4 SHIFT TECHNICAL ADVISOR

6.2.4.1 The Shift Technical Advisor (STA) shall provide advisory technical support to the Shift Supervisor in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. The STA shall be onsite and shall be available in the control room within 10 minutes whenever one or more units are in MODE 1, 2, 3, or 4.

6.3 UNIT STAFF QUALIFICATIONS

6.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANS 3.1-1978 and Regulatory Guide 1.8, September 1975, except for the Radiation Protection and Chemistry Manager who shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975, and 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 plant operating characteristics, including transients and accidents.

*Not responsible for sign-off function.

ADMINISTRATIVE CONTROLS

6.2.3 INDEPENDENT SAFETY ENGINEERING GROUP (ISEG)

FUNCTION

6.2.3.1 The ISEG shall function to examine plant operating characteristics, NRC issuances, industry advisories, Licensee Event Reports, and other sources of plant design and operating experience information, including plants of similar design, which may indicate areas for improving plant safety.

COMPOSITION

6.2.3.2 The ISEG shall be composed of at least five, dedicated, full-time engineers located on site. Each shall have a Bachelor's Degree in engineering or related science and at least two years professional level experience in his field.

RESPONSIBILITIES

6.2.3.3 The ISEG shall be responsible for maintaining surveillance of plant activities to provide independent verification* that these activities are performed correctly to reduce human errors as much as practical, and to detect potential nuclear safety hazards.

AUTHORITY

6.2.3.4 The ISEG shall make detailed recommendations for revised procedures, equipment modifications, maintenance activities, operations activities or other means of improving plant safety to the Director, Nuclear Safety and Licensing, Plant Manager, and the Manager, Nuclear Safety Group (NSG).

RECORDS

6.2.3.5 Records of activities performed by the ISEG shall be prepared, maintained, and forwarded each calendar month to the Director, Nuclear Safety and Licensing.

6.2.4 SHIFT TECHNICAL ADVISOR

6.2.4.1 The Shift Technical Advisor (STA) shall provide advisory technical support to the Shift Supervisor in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. The STA shall be onsite and shall be available in the control room within 10 minutes whenever one or more units are in MODE 1, 2, 3, or 4.

6.3 UNIT STAFF QUALIFICATIONS

6.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANS 3.1-1978 and Regulatory Guide 1.8, September 1975, except for the Radiation Protection and Chemistry Manager who shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975, and 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 plant operating characteristics, including transients and accidents.

*Not responsible for sign-off function.

ADMINISTRATIVE CONTROLS

6.4 TRAINING

6.4.1 A training program for the unit staff shall be maintained under the direction of the Director, Site Services or his designee and shall meet or exceed the requirements and recommendations of Section 5.0 of ANS 3.1-1978 and Appendix A of 10 CFR Part 55 and the supplemental requirements specified in Sections A and C of Enclosure 1 of the March 28, 1980 NRC letter to all licensees, and shall include familiarization with relevant industry operational experience.

6.5 REVIEW AND AUDIT

6.5.1 PLANT REVIEW BOARD (PRB)

FUNCTION

6.5.1.1 The Plant Review Board shall function to advise the Plant Manager on all matters related to nuclear safety.

COMPOSITION

6.5.1.2 The PRB shall be composed of the following personnel:

Member:	Engineering Evaluations Manager
Member:	Operations Standards Supervisor
Member:	Mechanical Maintenance Standards Supervisor
Member:	Electrical Maintenance Standards Supervisor
Member:	Operations Managers for Unit 1, Unit 2, Unit 3
Member:	STA Supervisor
Member:	I&C Standards Supervisor
Member:	Radiation Protection and Chemistry Manager
Member:	Quality Systems/Engineering Manager

The Vice President-Nuclear Production shall designate the Chairman and Vice-Chairmen in writing. The Chairman and Vice-Chairmen may be from outside the members listed above provided that they meet ANSI Standard 3.1, 1978.

ALTERNATES

6.5.1.3 All alternate members shall be appointed in writing by the PRB Chairman to serve on a temporary basis; however, no more than two alternates shall participate as voting members in PRB activities at any one time.

MEETING FREQUENCY

6.5.1.4 The PRB shall meet at least once per calendar month and as convened by the PRB Chairman, Vice-Chairmen, or his designated alternate.

ADMINISTRATIVE CONTROLS

QUORUM

6.5.1.5 The quorum of the PRB necessary for the performance of the PRB responsibility and authority provisions of these Technical Specifications shall consist of the Chairman, Vice-Chairmen, or his designated alternate and five members including alternates.

RESPONSIBILITIES

6.5.1.6 The PRB shall be responsible for:

- a. Review of all administrative control procedures and changes.
- b. Review of all proposed changes to Appendix "A" Technical Specifications.
- c. Investigation of all violations of the Technical Specifications including the preparation and forwarding of reports covering evaluation and recommendations to prevent recurrence to the Nuclear Safety Group (NSG).
- d. Review of REPORTABLE EVENTS.
- e. Review of unit operations to detect potential nuclear safety hazards.
- f. Performance of special reviews, investigations or analyses and reports thereon as requested by the Vice President-Nuclear Production.
- g. Review and documentation of judgment concerning prolonged operation in bypass, channel trip, and/or repair of defective protection channels of process variables placed in bypass since the last PRB meeting.

AUTHORITY

6.5.1.7 The PRB shall:

- a. Render determinations in writing with regard to whether or not each item considered under Specification 6.5.1.6c. above constitutes an unreviewed safety question.
- b. Provide written notification within 24 hours to the Vice President-Nuclear Production, Plant Manager and NSG of disagreement between the PRB and the Plant Manager; however, the Plant Manager shall have responsibility for resolution of such disagreements pursuant to Specification 6.1.1 above.

RECORDS

6.5.1.8 The PRB shall maintain written minutes of each PRB meeting that, at a minimum, document the results of all PRB activities performed under the responsibility and authority provisions of these Technical Specifications. Copies shall be provided to the Plant Manager, Vice President-Nuclear Production, and NSG.

ADMINISTRATIVE CONTROLS

QUORUM

6.5.1.5 The quorum of the PRB necessary for the performance of the PRB responsibility and authority provisions of these Technical Specifications shall consist of the Chairman, Vice-Chairmen, or his designated alternate and five members including alternates.

RESPONSIBILITIES

6.5.1.6 The PRB shall be responsible for:

- a. Review of all administrative control procedures and changes.
- b. Review of all proposed changes to Appendix "A" Technical Specifications.
- c. Investigation of all violations of the Technical Specifications including the preparation and forwarding of reports covering evaluation and recommendations to prevent recurrence to the Nuclear Safety Group (NSG).
- d. Review of REPORTABLE EVENTS.
- e. Review of unit operations to detect potential nuclear safety hazards.
- f. Performance of special reviews, investigations or analyses and reports thereon as requested by the Vice President-Nuclear Production.
- g. Review and documentation of judgment concerning prolonged operation in bypass, channel trip, and/or repair of defective protection channels of process variables placed in bypass since the last PRB meeting.

AUTHORITY

6.5.1.7 The PRB shall:

- a. Render determinations in writing with regard to whether or not each item considered under Specification 6.5.1.6c. above constitutes an unreviewed safety question.
- b. Provide written notification within 24 hours to the Vice President-Nuclear Production, Plant Manager and NSG of disagreement between the PRB and the Plant Manager; however, the Plant Manager shall have responsibility for resolution of such disagreements pursuant to Specification 6.1.1 above.

RECORDS

6.5.1.8 The PRB shall maintain written minutes of each PRB meeting that, at a minimum, document the results of all PRB activities performed under the responsibility and authority provisions of these Technical Specifications. Copies shall be provided to the Plant Manager, Vice President-Nuclear Production, and NSG.

ADMINISTRATIVE CONTROLS

6.5.2 TECHNICAL REVIEW AND CONTROL ACTIVITIES

6.5.2.1 The Director, Standards and Technical Support shall assure that each procedure and program required by Specification 6.8 and other procedures which affect nuclear safety, and changes thereto, is prepared by a qualified individual/organization. Each such procedure, and changes thereto, shall be reviewed by an individual/group other than the individual/group which prepared the procedure, or changes thereto, but who may be from the same organization as the individual/group which prepared the procedure, or changes thereto.

6.5.2.2 Phase I - IV tests described in the FSAR that are performed by the plant operations staff shall be approved by the Director, Standards and Technical Support or the Engineering Evaluations Manager as previously designated by the Vice President-Nuclear Production. Test results shall be approved by the Director, Standards and Technical Support or the Engineering Evaluations Manager.

6.5.2.3 Proposed modifications to unit nuclear safety-related structures, systems and components shall be designed by a qualified individual/organization. Each such modification shall be reviewed by an individual/group other than the individual/group which designed the modification, but who may be from the same organization as the individual/group which designed the modification. Proposed modifications to nuclear safety-related structures, systems and components shall be approved prior to implementation by the Plant Manager; or by the Director, Standards and Technical Support as previously designated by the Vice President-Nuclear Production.

6.5.2.4 Individuals responsible for reviews performed in accordance with 6.5.2.1, 6.5.2.2, and 6.5.2.3 shall be members of the station nuclear production supervisory staff, previously designated by the Vice President-Nuclear Production to perform such reviews. Each such review shall include a determination of whether or not additional, cross-disciplinary, review is necessary. If deemed necessary, such review shall be performed by the appropriate designated review personnel.

6.5.2.5 Proposed tests and experiments which affect station nuclear safety and are not addressed in the FSAR or Technical Specifications shall be reviewed by the Vice President-Nuclear Production.

6.5.2.6 The station security program and implementing procedures shall be reviewed. Recommended changes shall be approved by the Director, Site Services or designated alternate and transmitted to the Vice President-Nuclear Production and to the NSG.

6.5.2.7 The station emergency plan and implementing procedures shall be reviewed. Recommended changes shall be approved by the Director, Site Services or designated alternate and transmitted to the Vice President-Nuclear Production and to the NSG.

6.5.2.8 The Director, Standards and Technical Support shall assure the performance of a review by a qualified individual/organization of every unplanned onsite release of radioactive material to the environs including the preparation and forwarding of reports covering the evaluation, recommendations and disposition of the corrective action to prevent recurrence.

ADMINISTRATIVE CONTROLS

TECHNICAL REVIEW AND CONTROL ACTIVITIES (Continued)

6.5.2.9 The Director, Standards and Technical Support shall assure the performance of a review by a qualified individual/organization of changes to the PROCESS CONTROL PROGRAM, OFFSITE DOSE CALCULATION MANUAL, radwaste treatment systems, and the Pre-planned Alternate Sampling Program.

6.5.2.10 Reports documenting each of the activities performed under Specifications 6.5.2.1 through 6.5.2.9 above shall be maintained. Copies shall be provided to the Vice President-Nuclear Production and the Nuclear Safety Group.

6.5.3 NUCLEAR SAFETY GROUP (NSG)

FUNCTION

6.5.3.1 The NSG shall function to provide independent review and shall be responsible for the audit of designated activities in the areas of:

- a. nuclear power plant operations
- b. nuclear engineering
- c. chemistry and radiochemistry
- d. metallurgy
- e. instrumentation and control
- f. radiological safety
- g. mechanical and electrical engineering
- h. quality assurance practices

COMPOSITION

6.5.3.2 The NSG shall consist of a Manager and at least four staff specialists. The Manager shall have a Bachelor's Degree in Engineering or the Physical Sciences. He will also have a minimum of 10 years experience in the power field with at least 3 of those years in the nuclear field. The NSG Manager will have at least 2 years of supervisor/managerial experience. Each staff specialist will have at least one of the following requirements:

- a. Eight years experience in one of the designated areas in Specification 6.5.3.1. One of these 8 years will be at Palo Verde Nuclear Generating Station.
- b. Bachelor's Degree in Engineering or a related science and 3 years of professional experience.

CONSULTANTS

6.5.3.3 Consultants shall be utilized as determined by the NSG Manager to provide expert advice to the NSG.

REVIEW

6.5.3.4 The NSG shall review:

- a. The safety evaluations program and its implementation for (1) changes to procedures, equipment, systems or facilities within the power block, and (2) tests or experiments completed under the provision of 10 CFR 50.59, to verify that such actions did not constitute an unreviewed safety question;

ADMINISTRATIVE CONTROLS

TECHNICAL REVIEW AND CONTROL ACTIVITIES (Continued)

6.5.2.9 The Director, Standards and Technical Support shall assure the performance of a review by a qualified individual/organization of changes to the PROCESS CONTROL PROGRAM, OFFSITE DOSE CALCULATION MANUAL, radwaste treatment systems, and the Pre-planned Alternate Sampling Program.

6.5.2.10 Reports documenting each of the activities performed under Specifications 6.5.2.1 through 6.5.2.9 above shall be maintained. Copies shall be provided to the Vice President-Nuclear Production and the Nuclear Safety Group.

6.5.3 NUCLEAR SAFETY GROUP (NSG)

FUNCTION

6.5.3.1 The NSG shall function to provide independent review and shall be responsible for the audit of designated activities in the areas of:

- a. nuclear power plant operations
- b. nuclear engineering
- c. chemistry and radiochemistry
- d. metallurgy
- e. instrumentation and control
- f. radiological safety
- g. mechanical and electrical engineering
- h. quality assurance practices

COMPOSITION

6.5.3.2 The NSG shall consist of a Manager and at least four staff specialists. The Manager shall have a Bachelor's Degree in Engineering or the Physical Sciences. He will also have a minimum of 10 years experience in the power field with at least 3 of those years in the nuclear field. The NSG Manager will have at least 2 years of supervisor/managerial experience. Each staff specialist will have at least one of the following requirements:

- a. Eight years experience in one of the designated areas in Specification 6.5.3.1. One of these 8 years will be at Palo Verde Nuclear Generating Station.
- b. Bachelor's Degree in Engineering or a related science and 3 years of professional experience.

CONSULTANTS

6.5.3.3 Consultants shall be utilized as determined by the NSG Manager to provide expert advice to the NSG.

REVIEW

6.5.3.4 The NSG shall review:

- a. The safety evaluations program and its implementation for (1) changes to procedures, equipment, systems or facilities within the power block, and (2) tests or experiments completed under the provision of 10 CFR 50.59, to verify that such actions did not constitute an unreviewed safety question;

ADMINISTRATIVE CONTROLS

REVIEW (Continued)

- b. Proposed changes to procedures, equipment, systems or facilities within the power block which involve an unreviewed safety question as defined in 10 CFR 50.59;
- c. Proposed tests or experiments which involve an unreviewed safety question as defined in 10 CFR 50.59;
- d. Proposed changes to Technical Specifications or this Operating License;
- e. Violations of codes, regulations, orders, Technical Specifications, license requirements, or of internal procedures or instructions having nuclear safety significance;
- f. Significant operating abnormalities or deviations from normal and expected performance of unit equipment that affect nuclear safety;
- g. All REPORTABLE EVENTS requiring 24 hours written notification;
- h. All recognized indications of an unanticipated deficiency in some aspect of design or operation of structures, systems, or components that could affect nuclear safety; and
- i. Reports and meeting minutes of the PRB.

AUDITS

6.5.3.5 Audits of unit activities shall be performed under the cognizance of the NSG. These audits shall encompass:

- a. The conformance of unit operation to provisions contained within the Technical Specifications and applicable license conditions at least once per 12 months.
- b. The performance, training, and qualifications of the unit staff at least once per 12 months.
- c. The results of actions taken to correct deficiencies occurring in unit equipment, structures, systems, or method of operation that affect nuclear safety at least once per 6 months.
- d. The performance of activities required by the Operational Quality Assurance Program to meet the criteria of Appendix B, 10 CFR Part 50, at least once per 24 months.
- e. Any other area of unit operation considered appropriate by the NSG or the Vice President-Nuclear Production.
- f. The fire protection programmatic controls including the implementing procedures at least once per 24 months by qualified licensee QA personnel.

ADMINISTRATIVE CONTROLS

AUDITS (Continued)

- g. The fire protection equipment and program implementation at least once per 12 months utilizing either a qualified offsite licensee fire protection engineer or an outside independent fire protection consultant. An outside independent fire protection consultant shall be used at least every third year.
- h. The radiological environmental monitoring program and the results thereof at least once per 12 months.
- i. The OFFSITE DOSE CALCULATION MANUAL and implementing procedures at least once per 24 months.
- j. The PROCESS CONTROL PROGRAM and implementing procedures for processing and packaging of radioactive wastes at least once per 24 months.
- k. The performance of activities required by the Operations Quality Assurance Criteria Manual to meet the provisions of Regulatory Guide 1.21, Revision 1, June 1974 and Regulatory Guide 4.1, Revision 1, April 1975 at least once per 12 months.

AUTHORITY

6.5.3.6 The NSG shall report to and advise the Director, Nuclear Safety and Licensing on those areas of responsibility specified in Specifications 6.5.3.4 and 6.5.3.5.

RECORDS

6.5.3.7 Records of NSG activities shall be prepared and maintained. Report of reviews and audits shall be prepared monthly for the Director, Nuclear Safety and Licensing who will distribute it to the Vice President-Nuclear Production, Plant Manager, and to the management positions responsible for the areas audited.

6.6 REPORTABLE EVENT ACTION

The following actions shall be taken for REPORTABLE EVENTS:

- a. The Commission shall be notified pursuant to the requirements of Section 50.72 to 10 CFR Part 50, and a report submitted pursuant to the requirements of Section 50.73 to 10 CFR Part 50, and
- b. Each REPORTABLE EVENT shall be reviewed by the PRB, and the results of this review shall be submitted to the Manager of Nuclear Safety Group and the Vice President-Nuclear Production.

ADMINISTRATIVE CONTROLS

AUDITS (Continued)

- g. The fire protection equipment and program implementation at least once per 12 months utilizing either a qualified offsite licensee fire protection engineer or an outside independent fire protection consultant. An outside independent fire protection consultant shall be used at least every third year.
- h. The radiological environmental monitoring program and the results thereof at least once per 12 months.
- i. The OFFSITE DOSE CALCULATION MANUAL and implementing procedures at least once per 24 months.
- j. The PROCESS CONTROL PROGRAM and implementing procedures for processing and packaging of radioactive wastes at least once per 24 months.
- k. The performance of activities required by the Operations Quality Assurance Criteria Manual to meet the provisions of Regulatory Guide 1.21, Revision 1, June 1974 and Regulatory Guide 4.1, Revision 1, April 1975 at least once per 12 months.

AUTHORITY

6.5.3.6 The NSG shall report to and advise the Director, Nuclear Safety and Licensing on those areas of responsibility specified in Specifications 6.5.3.4 and 6.5.3.5.

RECORDS

6.5.3.7 Records of NSG activities shall be prepared and maintained. Report of reviews and audits shall be prepared monthly for the Director, Nuclear Safety and Licensing who will distribute it to the Vice President-Nuclear Production, Plant Manager, and to the management positions responsible for the areas audited.

6.6 REPORTABLE EVENT ACTION

The following actions shall be taken for REPORTABLE EVENTS:

- a. The Commission shall be notified pursuant to the requirements of Section 50.72 to 10 CFR Part 50, and a report submitted pursuant to the requirements of Section 50.73 to 10 CFR Part 50, and
- b. Each REPORTABLE EVENT shall be reviewed by the PRB, and the results of this review shall be submitted to the Manager of Nuclear Safety Group and the Vice President-Nuclear Production.

ADMINISTRATIVE CONTROLS

6.7 SAFETY LIMIT VIOLATION

The following actions shall be taken in the event a Safety Limit is violated:

- a. The NRC Operations Center shall be notified by telephone as soon as possible and in all cases within 1 hour. The Vice President-Nuclear Production, Plant Manager and Manager of Nuclear Safety Group shall be notified within 24 hours.
- b. A Safety Limit Violation Report shall be prepared. The report shall be reviewed by the PRB. This report shall describe (1) applicable circumstances preceding the violation, (2) effects of the violation upon facility components, systems, or structures, and (3) corrective action taken to prevent recurrence.
- c. The Safety Limit Violation Report shall be submitted to the Commission, the Manager of the NSG and the Vice President-Nuclear Production within 30 days of the violation.
- d. Critical operation of the unit shall not be resumed until authorized by the Commission.

6.8 PROCEDURES AND PROGRAMS

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

- a. The applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978, and those required for implementing the requirements of NUREG-0737.
- b. Refueling operations.
- c. Surveillance and test activities of safety-related equipment.
- d. Security Plan implementation.
- e. Emergency Plan implementation.
- f. Fire Protection Program implementation.
- g. Modification of Core Protection Calculator (CPC) Addressable Constants--These procedures should 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.

NOTES: (1) Modification to the CPC Addressable Constants based on information obtained through the Plant Computer - CPC data link shall not be made without prior approval of the PRB.

(2) Modifications to the CPC software (including algorithm changes and changes in fuel cycle specific data) shall be performed in accordance with the most recent version of CEN-39(A)-P, "CPC Protection Algorithm Software Change Procedure," that 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.

ADMINISTRATIVE CONTROLS

PROCEDURES AND PROGRAMS (Continued)

- h. PROCESS CONTROL PROGRAM implementation.
- i. OFFSITE DOSE CALCULATION MANUAL implementation.
- j. Quality Assurance Program for effluent and environmental monitoring, using the guidance in Regulatory Guide 1.21, Revision 1, June 1974 and Regulatory Guide 4.1, Revision 1, April 1975.
- k. Pre-planned Alternate Sampling Program implementation.
- l. Secondary water chemistry program implementation.

NOTE: The licensee shall perform a secondary water chemistry monitoring and control program that is in conformance with the program discussed in Section 10.3.4.1 of the CESSAR FSAR or another NRC approved program.

- m. Post-Accident Sampling System implementation.*
- n. Settlement Monitoring Program implementation.

NOTE: The licensee shall maintain a settlement monitoring program throughout the life of the plant in accordance with the program presented in Table 2.5-18 of the PVNGS FSAR or another NRC approved program.

- o. CEA Reactivity Integrity Program implementation

NOTE: The licensee shall perform, after initial fuel load or after each reload, either a CEA symmetry test or worth measurements of all full-length CEA groups to address Section 4.2.2 of the PVNGS SER dated November 11, 1981.

- p. Fuel Assembly Surveillance Program Implementation

NOTE: The licensee shall perform a fuel assembly surveillance program in conformance with the program discussed in Section 4.2.4 of the PVNGS SER dated November 11, 1981.

6.8.2 Each program or procedure of Specification 6.8.1, and changes thereto, shall be reviewed as specified in Specification 6.5 and approved prior to implementation. Programs, administrative control procedures and implementing procedures shall be approved by the Vice President-Nuclear Production, or designated alternate who is at supervisory level or above. Programs and procedures of Specification 6.8.1 shall be reviewed periodically as set forth in administrative procedures.

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

- a. The intent of the original procedure is not altered.
- b. The change is approved by two members of the plant supervisory staff, at least one of whom is a Shift Supervisor or Assistant Shift Supervisor with an SRO on the affected unit.
- c. The change is documented, reviewed in accordance with Specification 6.5.2 and approved by the Director, Standards and Technical Support or cognizant department head, as designated by the Vice President-Nuclear Production, within 14 days of implementation.

*Not required until prior to exceeding 5% of RATED THERMAL POWER.

ADMINISTRATIVE CONTROLS

PROCEDURES AND PROGRAMS (Continued)

- h. PROCESS CONTROL PROGRAM implementation.
- i. OFFSITE DOSE CALCULATION MANUAL implementation.
- j. Quality Assurance Program for effluent and environmental monitoring, using the guidance in Regulatory Guide 1.21, Revision 1, June 1974 and Regulatory Guide 4.1, Revision 1, April 1975.
- k. Pre-planned Alternate Sampling Program implementation.
- l. Secondary water chemistry program implementation.

NOTE: The licensee shall perform a secondary water chemistry monitoring and control program that is in conformance with the program discussed in Section 10.3.4.1 of the CESSAR FSAR or another NRC approved program.

- m. Post-Accident Sampling System implementation.*
- n. Settlement Monitoring Program implementation.

NOTE: The licensee shall maintain a settlement monitoring program throughout the life of the plant in accordance with the program presented in Table 2.5-18 of the PVNGS FSAR or another NRC approved program.

- o. CEA Reactivity Integrity Program implementation

NOTE: The licensee shall perform, after initial fuel load or after each reload, either a CEA symmetry test or worth measurements of all full-length CEA groups to address Section 4.2.2 of the PVNGS SER dated November 11, 1981.

- p. Fuel Assembly Surveillance Program Implementation

NOTE: The licensee shall perform a fuel assembly surveillance program in conformance with the program discussed in Section 4.2.4 of the PVNGS SER dated November 11, 1981.

6.8.2 Each program or procedure of Specification 6.8.1, and changes thereto, shall be reviewed as specified in Specification 6.5 and approved prior to implementation. Programs, administrative control procedures and implementing procedures shall be approved by the Vice President-Nuclear Production, or designated alternate who is at supervisory level or above. Programs and procedures of Specification 6.8.1 shall be reviewed periodically as set forth in administrative procedures.

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

- a. The intent of the original procedure is not altered.
- b. The change is approved by two members of the plant supervisory staff, at least one of whom is a Shift Supervisor or Assistant Shift Supervisor with an SRO on the affected unit.
- c. The change is documented, reviewed in accordance with Specification 6.5.2 and approved by the Director, Standards and Technical Support or cognizant department head, as designated by the Vice President-Nuclear Production, within 14 days of implementation.

*Not required until prior to exceeding 5% of RATED THERMAL POWER.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

ARIZONA PUBLIC SERVICE COMPANY, ET AL.

DOCKET NO. STN 50-530

PALO VERDE NUCLEAR GENERATING STATION, UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 3
License No. NPF-65

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment, dated August 10, 1987, as supplemented by letters dated September 22 and October 15, 1987, by the Arizona Public Service Company (APS) on behalf of itself and the Salt River Project Agricultural Improvement and Power District, El Paso Electric Company, Southern California Edison Company, Public Service Company of New Mexico, Los Angeles Department of Water and Power, and Southern California Public Power Authority (licensees), complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the enclosure to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-65 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 3, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this license. APS shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of issuance. The changes in the Technical Specifications are to become effective within 120 days of issuance of the amendment. In the period between issuance of the amendment and the effective date of the new Technical Specifications, the licensees shall adhere to the Technical Specifications existing at the time. The period of time during changeover shall be minimized.

FOR THE NUCLEAR REGULATORY COMMISSION


George W. Knighton, Director
Project Directorate V
Division of Reactor Projects - III,
IV, V and Special Projects

Enclosure:
Changes to the Technical
Specification

Date of Issuance: October 30, 1987

ENCLOSURE TO LICENSE AMENDMENT

AMENDMENT NO. 3 TO FACILITY OPERATING LICENSE NO. NPF-65

DOCKET NO. STN 50-530

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change. Also to be replaced are the following overleaf pages to the amended page.

<u>Amendment Pages</u>	<u>Overleaf Pages</u>
6-1	-
6-2	-
6-3	-
6-4	-
6-6	6-5
6-7	-
6-8	-
6-9	-
6-10	-
6-12	6-11
6-13	-
6-14	-

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ADMINISTRATIVE CONTROLS

6.1 RESPONSIBILITY

6.1.1 The Plant Manager shall be responsible for overall unit operation and shall delegate in writing the succession to this responsibility during his absence.

6.1.2 The Shift Supervisor, or during his absence from the Control Room, a designated individual per Table 6.2-1, shall be responsible for the Control Room command function. A management directive to this effect, signed by the Vice President-Nuclear Production shall be reissued to all station personnel on an annual basis.

6.2 ORGANIZATION

OFFSITE

6.2.1 The offsite organization for unit management and technical support shall be as shown in Figure 6.2-1.

UNIT STAFF

6.2.2.1 The unit organization shall be as shown in Figure 6.2-2 and:

- a. Each on-duty shift shall be composed of at least the minimum shift crew composition shown in Table 6.2-1.
- b. At least one licensed Reactor Operator shall be in the Control Room when fuel is in the reactor. In addition, while the reactor is in MODE 1, 2, 3, or 4, at least one licensed Senior Reactor Operator shall be in the Control Room.
- c. A radiation protection technician* shall be onsite when fuel is in the reactor.
- d. All CORE ALTERATIONS shall be observed and directly supervised by either a licensed Senior Reactor Operator or Senior Reactor Operator Limited to Fuel Handling who has no other concurrent responsibilities during this operation.
- e. A site Fire Team of at least five members shall be maintained onsite at all times*. The Fire Team shall not include the Shift Supervisor, the STA, nor the 3 other members of the minimum shift crew necessary for safe shutdown of the unit and any personnel required for other essential functions during a fire emergency.

6.2.2.2 The unit staff working hours shall be as follows:

- a. Administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform safety-related functions; e.g., Senior Reactor Operators, Reactor Operators, radiation protection technicians, auxiliary operators, and key maintenance personnel.

*The radiation protection technician and Fire Team composition may be less than the minimum requirements for a period of time not to exceed 2 hours, in order to accommodate unexpected absence, provided immediate action is taken to fill the required positions.

ADMINISTRATIVE CONTROLS

UNIT STAFF (Continued)

- b. Adequate shift coverage shall be maintained without routine heavy use of overtime. The objective shall be to have operating personnel work a nominal 40-hour week while the plant is operating. However, in the event that unforeseen problems require substantial amounts of overtime to be used, or during extended periods of shutdown for refueling, major maintenance, or major plant modifications, on a temporary basis, the following guidelines shall be followed (this excludes the STA working hours):
- 1) An individual should not be permitted to work more than 16 hours straight, excluding shift turnover time.
 - 2) An individual should not be permitted to work more than 16 hours in any 24-hour period, nor more than 24 hours in any 48-hour period, nor more than 72 hours in any 7-day period, all excluding shift turnover time.
 - 3) A break of at least 8 hours should be allowed between work periods, including shift turnover time.
 - 4) Except during extended shutdown periods, the use of overtime should be considered on an individual basis and not for the entire staff on a shift.
- c. Any deviation from the above guidelines shall be authorized by the Assistant Vice President-Nuclear Production Support, Director, Standards and Technical Support or the Plant Manager or their designees who are at the manager level or above, or higher levels of management, in accordance with established procedures and with documentation of the basis for granting the deviation. Controls shall be included in the procedures such that individual overtime in their respective groups shall be reviewed monthly by these authorized individuals or their designees to assure that excessive hours have not been assigned. Routine deviation from the above guidelines is not authorized.

ADMINISTRATIVE CONTROLS

UNIT STAFF (Continued)

- b. Adequate shift coverage shall be maintained without routine heavy use of overtime. The objective shall be to have operating personnel work a nominal 40-hour week while the plant is operating. However, in the event that unforeseen problems require substantial amounts of overtime to be used, or during extended periods of shutdown for refueling, major maintenance, or major plant modifications, on a temporary basis, the following guidelines shall be followed (this excludes the STA working hours):
- 1) An individual should not be permitted to work more than 16 hours straight, excluding shift turnover time.
 - 2) An individual should not be permitted to work more than 16 hours in any 24-hour period, nor more than 24 hours in any 48-hour period, nor more than 72 hours in any 7-day period, all excluding shift turnover time.
 - 3) A break of at least 8 hours should be allowed between work periods, including shift turnover time.
 - 4) Except during extended shutdown periods, the use of overtime should be considered on an individual basis and not for the entire staff on a shift.
- c. Any deviation from the above guidelines shall be authorized by the Assistant Vice President-Nuclear Production Support, Director, Standards and Technical Support or the Plant Manager or their designees who are at the manager level or above, or higher levels of management, in accordance with established procedures and with documentation of the basis for granting the deviation. Controls shall be included in the procedures such that individual overtime in their respective groups shall be reviewed monthly by these authorized individuals or their designees to assure that excessive hours have not been assigned. Routine deviation from the above guidelines is not authorized.

*LOCATED ONSITE

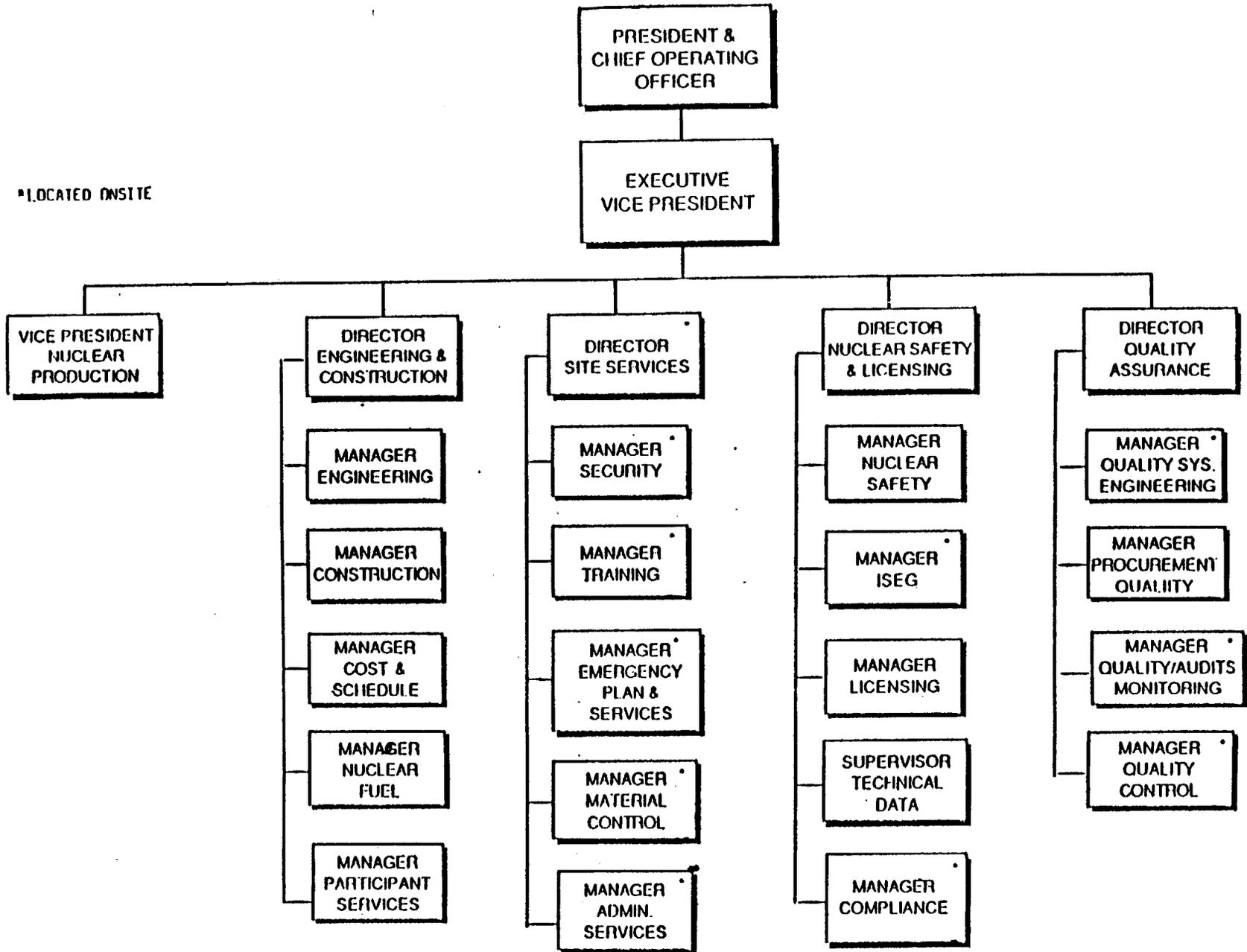
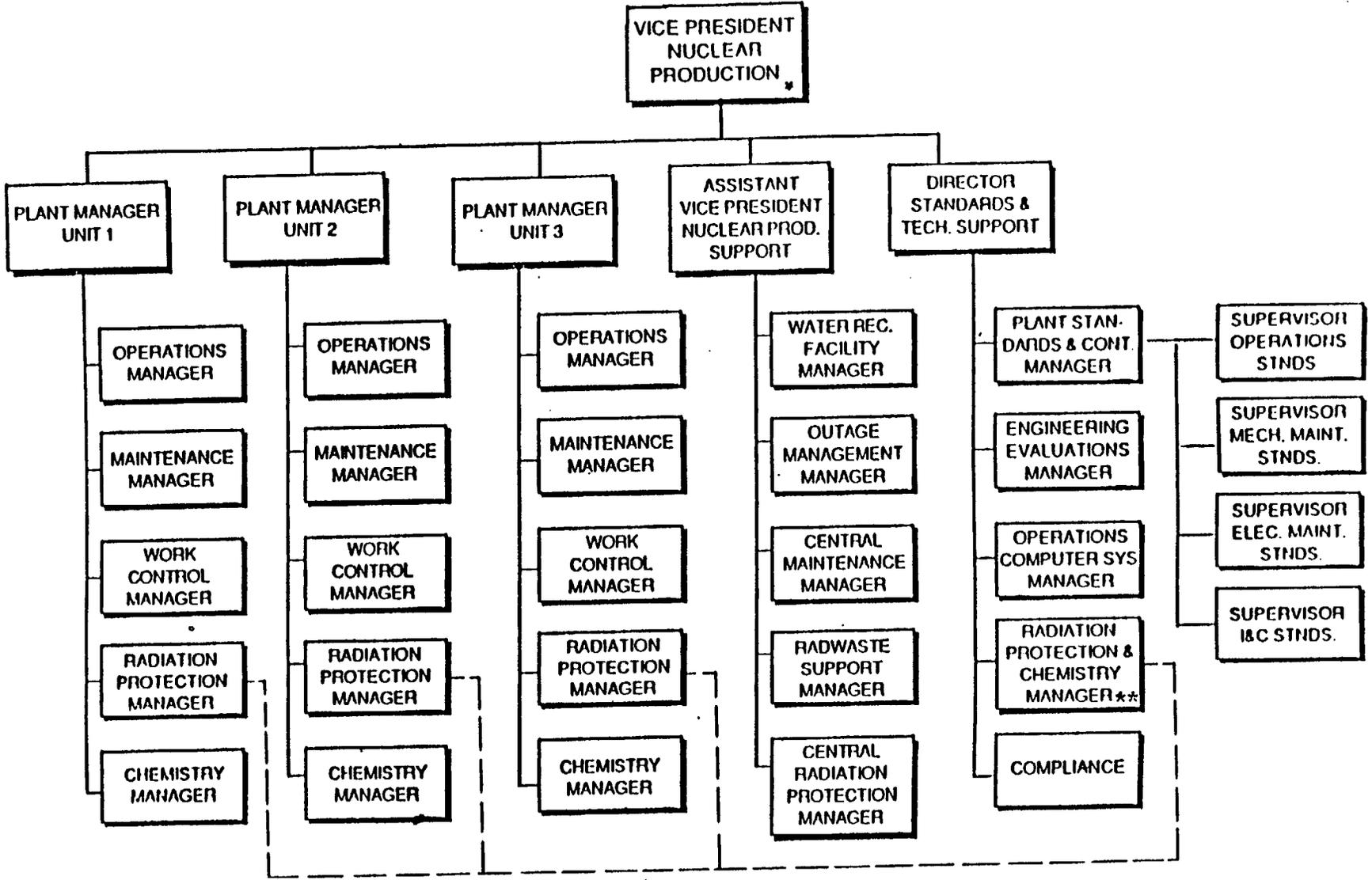


FIGURE 6.2-1

OFFSITE ORGANIZATION



— MATRIX

*Located Offsite

**Designated Regulatory Guide 1.8 "Radiation Protection Manager"

--- Dotted Lines Indicate Programmatic Procedural Direction and Problem Resolution

FIGURE 6.2-2

ONSITE UNIT ORGANIZATION

TABLE 6.2-1
MINIMUM SHIFT CREW COMPOSITION

POSITION	NUMBER OF INDIVIDUALS REQUIRED TO FILL POSITION	
	MODE 1, 2, 3, OR 4	MODE 5 OR 6
SS	1	1
SRO	1	None
RO	2	1
AO	2	1
STA	1	None

- SS - Shift Supervisor with a Senior Reactor Operators License
- SRO - Individual with a Senior Reactor Operators License
- RO - Individual with a Reactor Operators License
- AO - Nuclear Operator I or II
- STA - Shift Technical Advisor

The Shift Crew Composition may be one less than the minimum requirements of Table 6.2-1 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 of Table 6.2-1. This provision does not permit any shift crew position to be unmanned upon shift change due to an oncoming shift crewman being late or absent.

During any absence of the Shift Supervisor from the Control Room while the unit is in MODE 1, 2, 3, or 4, an individual with a valid Senior Operator license shall be designated to assume the Control Room command function. During any absence of the Shift Supervisor from the Control Room while the unit is in MODE 5 or 6, an individual with a valid Senior Operator or Operator license shall be designated to assume the Control Room command function.

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ADMINISTRATIVE CONTROLS

6.2.3 INDEPENDENT SAFETY ENGINEERING GROUP (ISEG)

FUNCTION

6.2.3.1 The ISEG shall function to examine plant operating characteristics, NRC issuances, industry advisories, Licensee Event Reports, and other sources of plant design and operating experience information, including plants of similar design, which may indicate areas for improving plant safety.

COMPOSITION

6.2.3.2 The ISEG shall be composed of at least five, dedicated, full-time engineers located on site. Each shall have a Bachelor's Degree in engineering or related science and at least two years professional level experience in his field.

RESPONSIBILITIES

6.2.3.3 The ISEG shall be responsible for maintaining surveillance of plant activities to provide independent verification* that these activities are performed correctly to reduce human errors as much as practical, and to detect potential nuclear safety hazards.

AUTHORITY

6.2.3.4 The ISEG shall make detailed recommendations for revised procedures, equipment modifications, maintenance activities, operations activities or other means of improving plant safety to the Director, Nuclear Safety and Licensing, Plant Manager, and the Manager, Nuclear Safety Group (NSG).

RECORDS

6.2.3.5 Records of activities performed by the ISEG shall be prepared, maintained, and forwarded each calendar month to the Director, Nuclear Safety and Licensing.

6.2.4 SHIFT TECHNICAL ADVISOR

6.2.4.1 The Shift Technical Advisor (STA) shall provide advisory technical support to the Shift Supervisor in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. The STA shall be onsite and shall be available in the control room within 10 minutes whenever one or more units are in MODE 1, 2, 3, or 4.

6.3 UNIT STAFF QUALIFICATIONS

6.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANS 3.1-1978 and Regulatory Guide 1.8, September 1975, except for the Radiation Protection and Chemistry Manager who shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975, and 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 plant operating characteristics, including transients and accidents.

*Not responsible for sign-off function.

ADMINISTRATIVE CONTROLS

6.2.3 INDEPENDENT SAFETY ENGINEERING GROUP (ISEG)

FUNCTION

6.2.3.1 The ISEG shall function to examine plant operating characteristics, NRC issuances, industry advisories, Licensee Event Reports, and other sources of plant design and operating experience information, including plants of similar design, which may indicate areas for improving plant safety.

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AUTHORITY

6.2.3.4 The ISEG shall make detailed recommendations for revised procedures, equipment modifications, maintenance activities, operations activities or other means of improving plant safety to the Director, Nuclear Safety and Licensing, Plant Manager, and the Manager, Nuclear Safety Group (NSG).

RECORDS

6.2.3.5 Records of activities performed by the ISEG shall be prepared, maintained, and forwarded each calendar month to the Director, Nuclear Safety and Licensing.

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6.2.4.1 The Shift Technical Advisor (STA) shall provide advisory technical support to the Shift Supervisor in the areas of thermal hydraulics, reactor engineering, and plant analysis with regard to the safe operation of the unit. The STA shall be onsite and shall be available in the control room within 10 minutes whenever one or more units are in MODE 1, 2, 3, or 4.

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6.3.1 Each member of the unit staff shall meet or exceed the minimum qualifications of ANS 3.1-1978 and Regulatory Guide 1.8, September 1975, except for the Radiation Protection and Chemistry Manager who shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975, and 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 plant operating characteristics, including transients and accidents.

*Not responsible for sign-off function.

ADMINISTRATIVE CONTROLS

6.4 TRAINING

6.4.1 A training program for the unit staff shall be maintained under the direction of the Director, Site Services or his designee and shall meet or exceed the requirements and recommendations of Section 5.0 of ANS 3.1-1978 and Appendix A of 10 CFR Part 55 and the supplemental requirements specified in Sections A and C of Enclosure 1 of the March 28, 1980 NRC letter to all licensees, and shall include familiarization with relevant industry operational experience.

6.5 REVIEW AND AUDIT

6.5.1 PLANT REVIEW BOARD (PRB)

FUNCTION

6.5.1.1 The Plant Review Board shall function to advise the Plant Manager on all matters related to nuclear safety.

COMPOSITION

6.5.1.2 The PRB shall be composed of the following personnel:

Member:	Engineering Evaluations Manager
Member:	Operations Standards Supervisor
Member:	Mechanical Maintenance Standards Supervisor
Member:	Electrical Maintenance Standards Supervisor
Member:	Operations Managers for Unit 1, Unit 2, Unit 3
Member:	STA Supervisor
Member:	I&C Standards Supervisor
Member:	Radiation Protection and Chemistry Manager
Member:	Quality Systems/Engineering Manager

The Vice President-Nuclear Production shall designate the Chairman and Vice-Chairmen in writing. The Chairman and Vice-Chairmen may be from outside the members listed above provided that they meet ANSI Standard 3.1, 1978.

ALTERNATES

6.5.1.3 All alternate members shall be appointed in writing by the PRB Chairman to serve on a temporary basis; however, no more than two alternates shall participate as voting members in PRB activities at any one time.

MEETING FREQUENCY

6.5.1.4 The PRB shall meet at least once per calendar month and as convened by the PRB Chairman, Vice-Chairmen, or his designated alternate.

ADMINISTRATIVE CONTROLS

QUORUM

6.5.1.5 The quorum of the PRB necessary for the performance of the PRB responsibility and authority provisions of these Technical Specifications shall consist of the Chairman, Vice-Chairmen, or his designated alternate and five members including alternates.

RESPONSIBILITIES

6.5.1.6 The PRB shall be responsible for:

- a. Review of all administrative control procedures and changes.
- b. Review of all proposed changes to Appendix "A" Technical Specifications.
- c. Investigation of all violations of the Technical Specifications including the preparation and forwarding of reports covering evaluation and recommendations to prevent recurrence to the Nuclear Safety Group (NSG).
- d. Review of REPORTABLE EVENTS.
- e. Review of unit operations to detect potential nuclear safety hazards.
- f. Performance of special reviews, investigations or analyses and reports thereon as requested by the Vice President-Nuclear Production.
- g. Review and documentation of judgment concerning prolonged operation in bypass, channel trip, and/or repair of defective protection channels of process variables placed in bypass since the last PRB meeting.

AUTHORITY

6.5.1.7 The PRB shall:

- a. Render determinations in writing with regard to whether or not each item considered under Specification 6.5.1.6c. above constitutes an unreviewed safety question.
- b. Provide written notification within 24 hours to the Vice President-Nuclear Production, Plant Manager and NSG of disagreement between the PRB and the Plant Manager; however, the Plant Manager shall have responsibility for resolution of such disagreements pursuant to Specification 6.1.1 above.

RECORDS

6.5.1.8 The PRB shall maintain written minutes of each PRB meeting that, at a minimum, document the results of all PRB activities performed under the responsibility and authority provisions of these Technical Specifications. Copies shall be provided to the Plant Manager, Vice President-Nuclear Production and NSG.

ADMINISTRATIVE CONTROLS

QUORUM

6.5.1.5 The quorum of the PRB necessary for the performance of the PRB responsibility and authority provisions of these Technical Specifications shall consist of the Chairman, Vice-Chairmen, or his designated alternate and five members including alternates.

RESPONSIBILITIES

6.5.1.6 The PRB shall be responsible for:

- a. Review of all administrative control procedures and changes.
- b. Review of all proposed changes to Appendix "A" Technical Specifications.
- c. Investigation of all violations of the Technical Specifications including the preparation and forwarding of reports covering evaluation and recommendations to prevent recurrence to the Nuclear Safety Group (NSG).
- d. Review of REPORTABLE EVENTS.
- e. Review of unit operations to detect potential nuclear safety hazards.
- f. Performance of special reviews, investigations or analyses and reports thereon as requested by the Vice President-Nuclear Production.
- g. Review and documentation of judgment concerning prolonged operation in bypass, channel trip, and/or repair of defective protection channels of process variables placed in bypass since the last PRB meeting.

AUTHORITY

6.5.1.7 The PRB shall:

- a. Render determinations in writing with regard to whether or not each item considered under Specification 6.5.1.6c. above constitutes an unreviewed safety question.
- b. Provide written notification within 24 hours to the Vice President-Nuclear Production, Plant Manager and NSG of disagreement between the PRB and the Plant Manager; however, the Plant Manager shall have responsibility for resolution of such disagreements pursuant to Specification 6.1.1 above.

RECORDS

6.5.1.8 The PRB shall maintain written minutes of each PRB meeting that, at a minimum, document the results of all PRB activities performed under the responsibility and authority provisions of these Technical Specifications. Copies shall be provided to the Plant Manager, Vice President-Nuclear Production and NSG.

ADMINISTRATIVE CONTROLS

6.5.2 TECHNICAL REVIEW AND CONTROL ACTIVITIES

6.5.2.1 The Director, Standards and Technical Support shall assure that each procedure and program required by Specification 6.8 and other procedures which affect nuclear safety, and changes thereto, is prepared by a qualified individual/organization. Each such procedure, and changes thereto, shall be reviewed by an individual/group other than the individual/group which prepared the procedure, or changes thereto, but who may be from the same organization as the individual/group which prepared the procedure, or changes thereto.

6.5.2.2 Phase I - IV tests described in the FSAR that are performed by the plant operations staff shall be approved by the Director, Standards and Technical Support or the Engineering Evaluations Manager as previously designated by the Vice President-Nuclear Production. Test results shall be approved by the Director, Standards and Technical Support or the Engineering Evaluations Manager.

6.5.2.3 Proposed modifications to unit nuclear safety-related structures, systems and components shall be designed by a qualified individual/organization. Each such modification shall be reviewed by an individual/group other than the individual/group which designed the modification, but who may be from the same organization as the individual/group which designed the modification. Proposed modifications to nuclear safety-related structures, systems and components shall be approved prior to implementation by the Plant Manager; or by the Director, Standards and Technical Support as previously designated by the Vice President-Nuclear Production.

6.5.2.4 Individuals responsible for reviews performed in accordance with 6.5.2.1, 6.5.2.2, and 6.5.2.3 shall be members of the station nuclear production supervisory staff, previously designated by the Vice President-Nuclear Production to perform such reviews. Each such review shall include a determination of whether or not additional, cross-disciplinary, review is necessary. If deemed necessary, such review shall be performed by the appropriate designated review personnel.

6.5.2.5 Proposed tests and experiments which affect station nuclear safety and are not addressed in the FSAR or Technical Specifications shall be reviewed by the Vice President-Nuclear Production.

6.5.2.6 The station security program and implementing procedures shall be reviewed. Recommended changes shall be approved by the Director, Site Services or designated alternate and transmitted to the Vice President-Nuclear Production and to the NSG.

6.5.2.7 The station emergency plan and implementing procedures shall be reviewed. Recommended changes shall be approved by the Director, Site Services or designated alternate and transmitted to the Vice President-Nuclear Production and to the NSG.

6.5.2.8 The Director, Standards and Technical Support shall assure the performance of a review by a qualified individual/organization of every unplanned on-site release of radioactive material to the environs including the preparation and forwarding of reports covering the evaluation, recommendations and disposition of the corrective action to prevent recurrence.

ADMINISTRATIVE CONTROLS

TECHNICAL REVIEW AND CONTROL ACTIVITIES (Continued)

6.5.2.9 The Director, Standards and Technical Support shall assure the performance of a review by a qualified individual/organization of changes to the PROCESS CONTROL PROGRAM, OFFSITE DOSE CALCULATION MANUAL, radwaste treatment systems, and the Pre-planned Alternate Sampling Program.

6.5.2.10 Reports documenting each of the activities performed under Specifications 6.5.2.1 through 6.5.2.9 above shall be maintained. Copies shall be provided to the Vice President-Nuclear Production and the Nuclear Safety Group.

6.5.3 NUCLEAR SAFETY GROUP (NSG)

FUNCTION

6.5.3.1 The NSG shall function to provide independent review and shall be responsible for the audit of designated activities in the areas of:

- a. nuclear power plant operations
- b. nuclear engineering
- c. chemistry and radiochemistry
- d. metallurgy
- e. instrumentation and control
- f. radiological safety
- g. mechanical and electrical engineering
- h. quality assurance practices

COMPOSITION

6.5.3.2 The NSG shall consist of a Manager and at least four staff specialists. The Manager shall have a Bachelor's Degree in Engineering or the Physical Sciences. He will also have a minimum of 10 years experience in the power field with at least 3 of those years in the nuclear field. The NSG Manager will have at least 2 years of supervisor/managerial experience. Each staff specialist will have at least one of the following requirements:

- a. Eight years experience in one of the designated areas in Specification 6.5.3.1. One of these 8 years will be at Palo Verde Nuclear Generating Station.
- b. Bachelor's Degree in Engineering or a related science and 3 years of professional experience.

CONSULTANTS

6.5.3.3 Consultants shall be utilized as determined by the NSG Manager to provide expert advice to the NSG.

REVIEW

6.5.3.4 The NSG shall review:

- a. The safety evaluations program and its implementation for (1) changes to procedures, equipment, systems or facilities within the power block, and (2) tests or experiments completed under the provision of 10 CFR 50.59, to verify that such actions did not constitute an unreviewed safety question;

ADMINISTRATIVE CONTROLS

TECHNICAL REVIEW AND CONTROL ACTIVITIES (Continued)

6.5.2.9 The Director, Standards and Technical Support shall assure the performance of a review by a qualified individual/organization of changes to the PROCESS CONTROL PROGRAM, OFFSITE DOSE CALCULATION MANUAL, radwaste treatment systems, and the Pre-planned Alternate Sampling Program.

6.5.2.10 Reports documenting each of the activities performed under Specifications 6.5.2.1 through 6.5.2.9 above shall be maintained. Copies shall be provided to the Vice President-Nuclear Production and the Nuclear Safety Group.

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FUNCTION

6.5.3.1 The NSG shall function to provide independent review and shall be responsible for the audit of designated activities in the areas of:

- a. nuclear power plant operations
- b. nuclear engineering
- c. chemistry and radiochemistry
- d. metallurgy
- e. instrumentation and control
- f. radiological safety
- g. mechanical and electrical engineering
- h. quality assurance practices

COMPOSITION

6.5.3.2 The NSG shall consist of a Manager and at least four staff specialists. The Manager shall have a Bachelor's Degree in Engineering or the Physical Sciences. He will also have a minimum of 10 years experience in the power field with at least 3 of those years in the nuclear field. The NSG Manager will have at least 2 years of supervisor/managerial experience. Each staff specialist will have at least one of the following requirements:

- a. Eight years experience in one of the designated areas in Specification 6.5.3.1. One of these 8 years will be at Palo Verde Nuclear Generating Station.
- b. Bachelor's Degree in Engineering or a related science and 3 years of professional experience.

CONSULTANTS

6.5.3.3 Consultants shall be utilized as determined by the NSG Manager to provide expert advice to the NSG.

REVIEW

6.5.3.4 The NSG shall review:

- a. The safety evaluations program and its implementation for (1) changes to procedures, equipment, systems or facilities within the power block, and (2) tests or experiments completed under the provision of 10 CFR 50.59, to verify that such actions did not constitute an unreviewed safety question;

ADMINISTRATIVE CONTROLS

REVIEW (Continued)

- b. Proposed changes to procedures, equipment, systems or facilities within the power block which involve an unreviewed safety question as defined in 10 CFR 50.59;
- c. Proposed tests or experiments which involve an unreviewed safety question as defined in 10 CFR 50.59;
- d. Proposed changes to Technical Specifications or this Operating License;
- e. Violations of codes, regulations, orders, Technical Specifications, license requirements, or of internal procedures or instructions having nuclear safety significance;
- f. Significant operating abnormalities or deviations from normal and expected performance of unit equipment that affect nuclear safety;
- g. All REPORTABLE EVENTS requiring 24 hours written notification;
- h. All recognized indications of an unanticipated deficiency in some aspect of design or operation of structures, systems, or components that could affect nuclear safety; and
- i. Reports and meeting minutes of the PRB.

AUDITS

6.5.3.5 Audits of unit activities shall be performed under the cognizance of the NSG. These audits shall encompass:

- a. The conformance of unit operation to provisions contained within the Technical Specifications and applicable license conditions at least once per 12 months.
- b. The performance, training, and qualifications of the unit staff at least once per 12 months.
- c. The results of actions taken to correct deficiencies occurring in unit equipment, structures, systems, or method of operation that affect nuclear safety at least once per 6 months.
- d. The performance of activities required by the Operational Quality Assurance Program to meet the criteria of Appendix B, 10 CFR Part 50, at least once per 24 months.
- e. Any other area of unit operation considered appropriate by the NSG or the Vice President-Nuclear Production.
- f. The fire protection programmatic controls including the implementing procedures at least once per 24 months by qualified licensee QA personnel.

ADMINISTRATIVE CONTROLS

AUDITS (Continued)

- g. The fire protection equipment and program implementation at least once per 12 months utilizing either a qualified offsite licensee fire protection engineer or an outside independent fire protection consultant. An outside independent fire protection consultant shall be used at least every third year.
- h. The radiological environmental monitoring program and the results thereof at least once per 12 months.
- i. The OFFSITE DOSE CALCULATION MANUAL and implementing procedures at least once per 24 months.
- j. The PROCESS CONTROL PROGRAM and implementing procedures for processing and packaging of radioactive wastes at least once per 24 months.
- k. The performance of activities required by the Operations Quality Assurance Criteria Manual to meet the provisions of Regulatory Guide 1.21, Revision 1, June 1974 and Regulatory Guide 4.1, Revision 1, April 1975 at least once per 12 months.

AUTHORITY

6.5.3.6 The NSG shall report to and advise the Director, Nuclear Safety and Licensing on those areas of responsibility specified in Specifications 6.5.3.4 and 6.5.3.5.

RECORDS

6.5.3.7 Records of NSG activities shall be prepared and maintained. Report of reviews and audits shall be prepared monthly for the Director, Nuclear Safety and Licensing who will distribute it to the Vice President-Nuclear Production, Plant Manager, and to the management positions responsible for the areas audited.

6.6 REPORTABLE EVENT ACTION

The following actions shall be taken for REPORTABLE EVENTS:

- a. The Commission shall be notified pursuant to the requirements of Section 50.72 to 10 CFR Part 50, and a report submitted pursuant to the requirements of Section 50.73 to 10 CFR Part 50, and
- b. Each REPORTABLE EVENT shall be reviewed by the PRB, and the results of this review shall be submitted to the Manager of Nuclear Safety Group and the Vice President-Nuclear Production.

ADMINISTRATIVE CONTROLS

AUDITS (Continued)

- g. The fire protection equipment and program implementation at least once per 12 months utilizing either a qualified offsite licensee fire protection engineer or an outside independent fire protection consultant. An outside independent fire protection consultant shall be used at least every third year.
- h. The radiological environmental monitoring program and the results thereof at least once per 12 months.
- i. The OFFSITE DOSE CALCULATION MANUAL and implementing procedures at least once per 24 months.
- j. The PROCESS CONTROL PROGRAM and implementing procedures for processing and packaging of radioactive wastes at least once per 24 months.
- k. The performance of activities required by the Operations Quality Assurance Criteria Manual to meet the provisions of Regulatory Guide 1.21, Revision 1, June 1974 and Regulatory Guide 4.1, Revision 1, April 1975 at least once per 12 months.

AUTHORITY

6.5.3.6 The NSG shall report to and advise the Director, Nuclear Safety and Licensing on those areas of responsibility specified in Specifications 6.5.3.4 and 6.5.3.5.

RECORDS

6.5.3.7 Records of NSG activities shall be prepared and maintained. Report of reviews and audits shall be prepared monthly for the Director, Nuclear Safety and Licensing who will distribute it to the Vice President-Nuclear Production, Plant Manager, and to the management positions responsible for the areas audited.

6.6 REPORTABLE EVENT ACTION

The following actions shall be taken for REPORTABLE EVENTS:

- a. The Commission shall be notified pursuant to the requirements of Section 50.72 to 10 CFR Part 50, and a report submitted pursuant to the requirements of Section 50.73 to 10 CFR Part 50, and
- b. Each REPORTABLE EVENT shall be reviewed by the PRB, and the results of this review shall be submitted to the Manager of Nuclear Safety Group and the Vice President-Nuclear Production.

ADMINISTRATIVE CONTROLS

6.7 SAFETY LIMIT VIOLATION

The following actions shall be taken in the event a Safety Limit is violated:

- a. The NRC Operations Center shall be notified by telephone as soon as possible and in all cases within 1 hour. The Vice President-Nuclear Production, Plant Manager and Manager of Nuclear Safety Group shall be notified within 24 hours.
- b. A Safety Limit Violation Report shall be prepared. The report shall be reviewed by the PRB. This report shall describe (1) applicable circumstances preceding the violation, (2) effects of the violation upon facility components, systems, or structures, and (3) corrective action taken to prevent recurrence.
- c. The Safety Limit Violation Report shall be submitted to the Commission, the Manager of the NSG and the Vice President-Nuclear Production within 30 days of the violation.
- d. Critical operation of the unit shall not be resumed until authorized by the Commission.

6.8 PROCEDURES AND PROGRAMS

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

- a. The applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978, and those required for implementing the requirements of NUREG-0737.
- b. Refueling operations.
- c. Surveillance and test activities of safety-related equipment.
- d. Security Plan implementation.
- e. Emergency Plan implementation.
- f. Fire Protection Program implementation.
- g. Modification of Core Protection Calculator (CPC) Addressable Constants--These procedures should 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.

NOTES: (1) Modification to the CPC Addressable Constants based on information obtained through the Plant Computer - CPC data link shall not be made without prior approval of the PRB.

(2) Modifications to the CPC software (including algorithm changes and changes in fuel cycle specific data) shall be performed in accordance with the most recent version of CEN-39(A)-P, "CPC Protection Algorithm Software Change Procedure," that 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.

ADMINISTRATIVE CONTROLS

PROCEDURES AND PROGRAMS (Continued)

- h. PROCESS CONTROL PROGRAM implementation.
- i. OFFSITE DOSE CALCULATION MANUAL implementation.
- j. Quality Assurance Program for effluent and environmental monitoring, using the guidance in Regulatory Guide 1.21, Revision 1, June 1974 and Regulatory Guide 4.1, Revision 1, April 1975.
- k. Pre-planned Alternate Sampling Program implementation.
- l. Secondary water chemistry program implementation.

NOTE: The licensee shall perform a secondary water chemistry monitoring and control program that is in conformance with the program discussed in Section 10.3.4.1 of the CESSAR FSAR or another NRC approved program.

- m. Post-Accident Sampling System implementation.*
- n. Settlement Monitoring Program implementation.

NOTE: The licensee shall maintain a settlement monitoring program throughout the life of the plant in accordance with the program presented in Table 2.5-18 of the PVNGS FSAR or another NRC approved program.

- o. CEA Reactivity Integrity Program implementation

NOTE: The licensee shall perform, after initial fuel load or after each reload, either a CEA symmetry test or worth measurements of all full-length CEA groups to address Section 4.2.2 of the PVNGS SER dated November 11, 1981.

- p. Fuel Assembly Surveillance Program Implementation

NOTE: The licensee shall perform a fuel assembly surveillance program in conformance with the program discussed in Section 4.2.4 of the PVNGS SER dated November 11, 1981.

6.8.2 Each program or procedure of Specification 6.8.1, and changes thereto, shall be reviewed as specified in Specification 6.5 and approved prior to implementation. Programs, administrative control procedures and implementing procedures shall be approved by the Vice President-Nuclear Production, or designated alternate who is at supervisory level or above. Programs and procedures of Specification 6.8.1 shall be reviewed periodically as set forth in administrative procedures.

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

- a. The intent of the original procedure is not altered.
- b. The change is approved by two members of the plant supervisory staff, at least one of whom is a Shift Supervisor or Assistant Shift Supervisor with an SRO on the affected unit.
- c. The change is documented, reviewed in accordance with Specification 6.5.2 and approved by the Director, Standards and Technical Support or cognizant department head, as designated by the Vice President-Nuclear Production, within 14 days of implementation.

*Not required until prior to exceeding 5% of RATED THERMAL POWER.

ADMINISTRATIVE CONTROLS

PROCEDURES AND PROGRAMS (Continued)

- h. PROCESS CONTROL PROGRAM implementation.
- i. OFFSITE DOSE CALCULATION MANUAL implementation.
- j. Quality Assurance Program for effluent and environmental monitoring, using the guidance in Regulatory Guide 1.21, Revision 1, June 1974 and Regulatory Guide 4.1, Revision 1, April 1975.
- k. Pre-planned Alternate Sampling Program implementation.
- l. Secondary water chemistry program implementation.

NOTE: The licensee shall perform a secondary water chemistry monitoring and control program that is in conformance with the program discussed in Section 10.3.4.1 of the CESSAR FSAR or another NRC approved program.

- m. Post-Accident Sampling System implementation.*
- n. Settlement Monitoring Program implementation.

NOTE: The licensee shall maintain a settlement monitoring program throughout the life of the plant in accordance with the program presented in Table 2.5-18 of the PVNGS FSAR or another NRC approved program.

- o. CEA Reactivity Integrity Program implementation

NOTE: The licensee shall perform, after initial fuel load or after each reload, either a CEA symmetry test or worth measurements of all full-length CEA groups to address Section 4.2.2 of the PVNGS SER dated November 11, 1981.

- p. Fuel Assembly Surveillance Program Implementation

NOTE: The licensee shall perform a fuel assembly surveillance program in conformance with the program discussed in Section 4.2.4 of the PVNGS SER dated November 11, 1981.

6.8.2 Each program or procedure of Specification 6.8.1, and changes thereto, shall be reviewed as specified in Specification 6.5 and approved prior to implementation. Programs, administrative control procedures and implementing procedures shall be approved by the Vice President-Nuclear Production, or designated alternate who is at supervisory level or above. Programs and procedures of Specification 6.8.1 shall be reviewed periodically as set forth in administrative procedures.

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*Not required until prior to exceeding 5% of RATED THERMAL POWER.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 25 TO FACILITY OPERATING LICENSE NO. NPF-41,
AMENDMENT NO. 14 TO FACILITY OPERATING LICENSE NO. NPF-51
AND AMENDMENT NO. 3 TO FACILITY OPERATING LICENSE NO. NPF-65
ARIZONA PUBLIC SERVICE COMPANY, ET AL.
PALO VERDE NUCLEAR GENERATING STATION, UNIT NOS. 1, 2 AND 3
DOCKET NOS. STN 50-528, STN 50-529 AND STN 50-530

1.0 INTRODUCTION

By letter dated August 10, 1987, as supplemented by letters dated September 22 and October 15, 1987, the Arizona Public Service Company (APS) on behalf of itself, the Salt River Project Agricultural Improvement and Power District, Southern California Edison Company, El Paso Electric Company, Public Service Company of New Mexico, Los Angeles Department of Water and Power, and Southern California Public Power Authority (licensees), requested a change to the Technical Specifications for the Palo Verde Nuclear Generating Station, Units 1, 2 and 3 (Appendix A to Facility Operating License Nos. NPF-41, NPF-51 and NPF-65, respectively). The application requests changes to Section 6, "Administrative Controls," of the Technical Specifications to reflect a proposed change to the licensees' nuclear organizational structure.

2.0 DISCUSSION

The licensees state that the overall purpose of the proposed organizational structure for Palo Verde, Units 1, 2 and 3 is to reduce layers of management and to provide direct control of each unit's activities under individual plant managers. The proposed changes are summarized as follows:

- Revise the duties of the Vice President-Nuclear Production by eliminating daily responsibilities over offsite activities in order to focus attention on operating activities. He will be responsible for operations, maintenance and support of operations and maintenance for all three units, and for the water reclamation facility.
- Establish a Plant Manager for each of the three Palo Verde units, reporting to the Vice President-Nuclear Production, in lieu of an overall Plant Manager. Each will be responsible for the safe, reliable and efficient operation of his assigned unit, as well as maintenance and other daily activities relating to unit performance. Reporting to each Plant Manager will be an Operations Manager, Main-

tenance Manager, Work Control Manager, Radiation Protection Manager and Chemistry Manager.

- Revise the duties and title of the onsite Assistant Vice President to oversee the onsite support functions for the units. He will continue to report to the Vice President-Nuclear Production and be responsible for the water reclamation facility, outage management, central maintenance support, radwaste support, and radiation protection support.
- Establish an onsite Director of Standards and Technical Support reporting to the Vice President-Nuclear Production. He will be responsible for onsite engineering and technical work, onsite computer activities, site-wide preparation, coordination of station radiological protection, chemistry and radiochemistry programs, development of operation and maintenance standards including assurance of uniform application, and implementation of compliance monitoring of Palo Verde regulatory commitments.
- Establish a Director of Engineering and Construction reporting to the Executive Vice-President. He will be responsible for engineering, construction, records management, cost and scheduling, nuclear fuels management, and participant owner services.
- Establish a Director of Site Services reporting to the Executive Vice-President. He will be responsible for security, training, emergency planning and material control.
- Establish a Director of Nuclear Safety and Licensing reporting to the Executive Vice-President. He will be responsible for the nuclear safety groups, Independent Safety Engineering Group, onsite Compliance Department, technical data section, and offsite Licensing Department. He will also be responsible for coordinating license document changes, responding to NRC requests and serving as the plant interface with the NRC.
- Establish a Director of Corporate QA/QC to replace the QA Director and Assistant QA Director. His responsibilities will be the same as in the previous QA organization and the QA organization will continue to report to the Executive Vice-President.

3.0 EVALUATION

The staff has evaluated the proposed organizational structure for both offsite and onsite activities. The staff finds that the realignment of functions in the offsite organization supports the operation of the three Palo Verde units and emphasizes the management of operational activities. The staff also finds that the onsite changes will provide a greater level of management attention to each unit and that the restructuring does not delete any of the functions necessary for the safe operation of the facility.

The proposed changes include a number of title changes to reflect the revised organization. For example, the title of the Operations Superintendent will be changed to Operations Manager. These title changes are acceptable.

In response to staff questions during the review of the reorganization, the licensees provided additional information, by letters dated September 22 and October 15, 1987. The following is a discussion of the three areas of review involved.

The licensees state that the Plant Manager for each unit will meet the training requirements of ANSI/ANS-3.1-1978 by either completing the training received by an SRO candidate or by having a designated principal alternate who meets the ANSI/ANS-3.1-1978 requirements. For those Plant Managers who are relying on the designated principal alternate to meet those requirements, the licensees will provide a training program which includes courses on systems, mitigation of core damage, ALARA and refueling operation, and observation of each crew during normal operation and requalification simulator training. The staff finds that the training program will enhance the capabilities of those individuals.

In the proposed organization, the licensees will combine the positions of QA Director and Assistant QA Director into the position of Director of Corporate QA/QC. The licensees justified the elimination of the position of Assistant QA Director, noting that the position was established to provide additional management coverage during the transition from construction to operation only and that adequate management coverage would be provided during the operations phase with this position eliminated. The licensees stated that the new Director of QA/QC would typically divide his time between the site and the corporate office. The licensees also stated that training would be provided to the new Director of QA/QC to compensate for the Director's lack of one year experience within a QA organization. The staff has reviewed the licensees' proposed QA organization and related commitments and finds that they meet the requirements of Appendix B of 10 CFR 50 and are, therefore, acceptable.

The essential programmatic elements for an effective radiation protection organization are given in Regulatory Guide 8.8, Revision 2, "Information Relevant to Ensuring That Occupational Exposure at Nuclear Power Station Will Be As Low As Is Reasonably Achievable". The qualifications and training for the designated Radiation Protection Manager (RPM) and the backup RPM are given in Regulatory Guide 1.8, "Personnel Qualifications and Training". The requested proposed organizational changes satisfy the programmatic and qualification guidance in Regulatory Guides 8.8 and 1.8 but represents a significant shift from a line to a matrix organization. The designated RPM (Radiation Protection and Chemistry Manager) will no longer be directly over a line organization but will still exert overall program direction and leadership. The designated backup RPM (whose title will change to Health Physics Control Supervisor) will continue to report directly to the RPM. Both meet the RPM qualifications in Regulatory Guide 1.8.

The proposed Central Radiation Protection Manager position (currently the Radiation Protection Support Supervisor) will now report to the Assistant VP Nuclear Production Support. His function is to provide radiation protection activities and conduct radiation protection functions that lend themselves to centralization (e.g., dosimetry, ALARA reviews, radiation protection instrumentation and repair and operational support). These functions can be provided effectively with RPM oversight and guidance provided on a routine basis.

One aspect of the proposed organization merited special staff attention. Because of the proposed matrix organization, the designated RPM will no longer have supervisory responsibility over the individual first-line supervisors (Unit Radiation Protection Managers (URPMs)) who will be directly responsible for the day-to-day implementation of each unit's radiation protection program. These URPMs do not meet the RPM qualifications in Regulatory Guide 1.8; they will report directly to their respective Unit Plant Managers.

By letter dated October 15, 1987, the licensees submitted additional information requested by the staff concerning the onsite organizational changes relating to radiation protection. The licensees have made a commitment that the URPMs and the onsite RPM have an effective communication link for programmatic guidance and problem resolution interaction. The designated RPM does continuously monitor the site program implementation activities and will provide prompt, direct feedback to the URPMs to correct any identified problems. The URPMs can raise unresolved programmatic concerns directly to the onsite RPM, who, in turn, will have direct access to the Unit Plant Managers and the Director of Standards and Technical Support. This established interaction/communications network should compensate for the absence of the typical line organization authority normally vested with a single unit site RPM which Regulatory Guide 8.8, Section c.1.b.3.(i), stipulates has the responsibility for "... supervising ... the radiation protection staff." The staff believes this mechanism will provide the URPMs the needed direction and support from the onsite RPM. The staff finds the licensees' commitment acceptable.

The staff finds that the onsite organizational changes meet the radiation protection requirements of NUREG-0800, Section 12.5, Regulatory Guide 8.8 and Regulatory Guide 1.8 and, therefore, are acceptable.

On the basis of the above evaluation, the staff finds that the proposed offsite and onsite organizational structures are acceptable since they meet the acceptance criteria of Sections 13.1.1, 13.1.2 and 13.1.3 of the Standard Review Plan.

4.0 CONTACT WITH STATE OFFICIAL

The Arizona Radiation Regulatory Agency has been advised of the proposed determination of no significant hazards consideration with regard to these changes. No comments were received.

5.0 ENVIRONMENTAL CONSIDERATIONS

The amendments involve administrative changes. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(10). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need to be prepared in connection with the issuance of these amendments.

6.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public. We, therefore, conclude that the proposed changes are acceptable.

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Dated: October 30, 1987