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

6.2.1 OFFSITE AND ONSITE ORGANIZATIONS

An offsite and an onsite organization shall be established for unit operation and corporate management. The offsite and onsite organization shall include the positions for activities affecting the safety of the nuclear power plant.

a. Lines of authority, responsibility and communication shall be established and defined from the highest management levels through intermediate levels to and including all operating organization positions. Those relationships shall be documented and updated, as appropriate, in the form of organizational charts. These organizational charts will be documented in the FSAR and updated in accordance with 10 CFR 50.71(e).

b. There shall be an individual executive position (Executive Vice President ~~ANPP~~ Nuclear) in the offsite organization having corporate responsibility for overall plant nuclear safety. This individual shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining and providing technical support in the plant so that continued nuclear safety is assured.

c. There shall be individual management positions (Plant Managers) in the onsite organization having responsibility for overall unit safe operation and having control over those onsite resources necessary for safe operation and maintenance of the plant.

d. Although the individuals who train the operating staff and those who carry out health physics and quality assurance functions may report to the appropriate manager onsite, they shall have sufficient organizational freedom to be independent from operating pressures.

6.2.2 UNIT STAFF

a. Each on-duty shift shall be composed of at least the minimum shift crew composition shown in Table 6.2-1.

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.

following personnel: Director, Technical Support; Director, PVNGS Services; General Manager, Site Radiation Protection; General Manager, Site Chemistry; General Manager, Training

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 resotre 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.

*A total of two STAs for the site.

6.2.3 INDEPENDENT SAFETY ENGINEERING ~~GROUP~~ DEPARTMENT (ISE~~G~~D)

FUNCTION

6.2.3.1 The ISE~~G~~D Department shall function to selectively 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 ISE~~G~~D Department 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 ISE~~G~~D Department shall be responsible for maintaining surveillance of selected 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 ISE~~G~~D Department 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~~ or designated alternate, Plant Manager, and the ~~Manager, Nuclear Safety Group (NSG)~~ Chairman, Offsite Safety Review Committee (OSRC).

RECORDS

6.2.3.5 Records of activities performed by the ISE~~G~~D Department shall be prepared, maintained, and forwarded each calendar month to the Director, Nuclear Safety or designated alternate. ~~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 ANSI/ANS 3.1-1978 and Regulatory Guide 1.8, September 1975, except for the ~~Radiation Protection and Chemistry Manager~~ General Manager, Site Radiation Protection 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. An additional exception is that the

*Not responsible for sign-off function.

6.3 UNIT STAFF QUALIFICATIONS (Continued)

Senior Reactor Operator (SRO) license requirement for the Operations Manager shall be met if either the Operations Manager or the Operations Supervisor holds a valid SRO license. The holder of the SRO license shall direct the licensed activities of the licensed operators.

6.4 TRAINING

SEE INSERT

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 Vice President Nuclear Production or his designee ~~Plant Director~~ on all matters related to nuclear safety.

COMPOSITION

6.5.1.2 The PRB shall be composed of nine members from the Palo Verde management staff. These positions will be designated by the Vice President Nuclear Production or his designee ~~Plant Director~~ in Administrative Procedures.

The Vice President Nuclear Production or his designee ~~Plant Director~~ shall designate the Chairman and Vice-Chairmen in writing. The Chairman and Vice-Chairmen may be from outside the members provided that they meet ANSI/ANS ~~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.

INSERT

TRAINING

6.4.1 A training program for the unit staff shall be maintained under the direction of the General Manager, Nuclear Training and shall meet or exceed the requirements of Section 5.0 of ANSI/ANS-3.1, 1978 and 10CFR55. The program shall include familiarization with relevant industry operational experience.

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 proposed changes to Appendix "A" Technical Specifications.

b. 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).~~ Offsite Safety Review Committee (OSRC).

c. Review of REPORTABLE EVENTS.

d. Review of unit operations to detect potential nuclear safety hazards.

e. Performance of special reviews, investigations or analyses and reports thereon as requested by the Vice President-Nuclear Production or PRB Chairman.

f. 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 6.5.1.6b. above constitutes an unreviewed safety question.

b. Provide written notification within 24 hours to the OSRC Executive Vice President Nuclear ~~Production, Plant Director~~ and ~~NSG~~ of disagreement between the PRB and the ~~Plant Director~~, however, the ~~Plant Director~~ Vice President Nuclear Production shall have responsibility for resolution of such disagreements.

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 Executive Vice President-Nuclear, Vice President-Nuclear Production, ~~Plant Director~~ and ~~NSG.~~ OSRC.

6.5.2 TECHNICAL REVIEW AND CONTROL ACTIVITIES

6.5.2.1 The Vice President Nuclear Production or his designee ~~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 his designee ~~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 his designee. ~~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 Director; or 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 identified in station administrative procedures. ~~members of the supervisory staff, previously designated by the Director Standards and Technical Support 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 ~~Plant Director~~. Vice President Nuclear Production or his designee.

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 PVNGS Production and to the ~~NSG.~~ OSRC.

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 PVNGS Production and to the ~~NSG.~~ OSRC.

6.5.2.8 The General Manager, Site Radiation Protection ~~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.

TECHNICAL REVIEW AND CONTROL ACTIVITIES (Continued)

6.5.2.9 The ~~Director, Standards and Technical Support~~ Vice President Nuclear Production or his designee 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.~~ Offsite Safety Review Committee.

6.5.3 ~~NUCLEAR SAFETY GROUP (NSG)~~ OFFSITE SAFETY REVIEW COMMITTEE (OSRC)

FUNCTION

6.5.3.1 The ~~NSG~~ OSRC 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

SEE INSERT

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~~ OSRC Chairman to provide expert advice to the ~~NSG~~ OSRC.

REVIEW

6.5.3.4 The ~~NSG~~ OSRC 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;

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.~~ OSRC 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~~ OSRC or the Executive 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.

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~~ OSRC shall report to and advise the ~~Director, Nuclear Safety and Licensing~~ Executive Vice President Nuclear 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~~ OSRC activities shall be prepared and maintained. Report of reviews and audits shall be ~~prepared monthly for~~ forwarded to the ~~Director, Nuclear Safety and Licensing who will distribute it to the Vice President-Nuclear Production, Plant Manager, and~~ Executive Vice President Nuclear to the management positions responsible for the areas audited. with distribution

Add → 6.6 REPORTABLE EVENT ACTION

6.5.3.8
6.5.3.9
6.5.3.10
SEE INSERT

6.6.1 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~~ Chairman, Offsite Safety Review Committee and the Vice President-Nuclear Production.

INSERTS

COMPOSITION

6.5.3.2 The OSRC shall be composed of the OSRC Chairman and a minimum of four OSRC members. The Chairman and members are designated by the Executive Vice President, Nuclear and shall have the qualifications that meet the requirements of Section 4.7 of ANSI/ANI 3.1; 1978.

ALTERNATES

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

MEETING FREQUENCY

6.5.3.9 The OSRC shall meet at least once per six months.

QUORUM

6.5.3.10 The quorum of the OSRC necessary for the performance of the OSRC review and audit functions of these Technical Specifications shall consist of the Chairman or his designated alternate and at least four OSRC members including alternates. No more than a minority of the quorum shall have line responsibility for operation of the unit.

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.

PROCESS CONTROL PROGRAM (PCP) (Continued)

1) Sufficiently detailed information to totally suport the rationale for the change without benefit of additional or supplemental information; and

2) A determination that the change did not reduce the overall conformance of the solidified waste product to existing criteria for solid wastes.

6.14 OFFSITE DOSE CALCULATION MANUAL (ODCM)

6.14.1 The ODCM shall be approved by the Commission prior to implementation.

6.14.2 Licensee-initiated changes to the ODCM:

Shall be submitted to the Commission in the Semiannual Radioactive Effluent Release Report for the period in which the change(s) was made effective. This submittal shall contain:

1) Sufficiently detailed information to totally support the rationale for the change without benefit of additional or supplemental information. Information submitted should consist of a package of those pages of the ODCM to be changed with each page numbered and provided with an approval and date box, together with appropriate analyses or evaluations justifying the change(s); and

2) A determination that the change will not reduce the accuracy or reliability of dose calculations or setpoint determinations.

6.15 MAJOR CHANGES TO RADIOACTIVE LIQUID, GASEOUS, AND SOLID WASTE TREATMENT SYSTEMS*

6.15.1 Licensee-initiated major changes to the radioactive waste systems (liquid, gaseous, and solid):

Shall be reported to the Commission in the Semiannual Radioactive Effluent Release Report for the period in which the ~~evaluation was reviewed by the PRB.~~ change was implemented. The discussion of each change shall contain:

1) A summary of the evaluation that led to the determination that the change could be made in accordance with 10 CFR 50.59.

2) Sufficient detailed information to totally support the reason for the change without benefit of additional or supplemental information;

*Licensees may chose to submit the information called for in this specification as part of the annual FSAR update.

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

6.2.1 OFFSITE AND ONSITE ORGANIZATIONS

An offsite and an onsite organization shall be established for unit operation and corporate management. The offsite and onsite organization shall include the positions for activities affecting the safety of the nuclear power plant.

a. Lines of authority, responsibility and communication shall be established and defined from the highest management levels through intermediate levels to and including all operating organization positions. Those relationships shall be documented and updated, as appropriate, in the form of organizational charts. These organizational charts will be documented in the FSAR and updated in accordance with 10 CFR 50.71(e).

b. There shall be an individual executive position (Executive Vice President Nuclear ~~-ANPP~~) in the offsite organization having corporate responsibility for overall plant nuclear safety. This individual shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining and providing technical support in the plant so that continued nuclear safety is assured.

c. There shall be individual management positions (Plant Managers) in the onsite organization having responsibility for overall unit safe operation and having control over those onsite resources necessary for safe operation and maintenance of the plant.

d. Although the individuals who train the operating staff and those who carry out health physics and quality assurance functions may report to the appropriate manager onsite, they shall have sufficient organizational freedom to be independent from operating pressures.

6.2.2 UNIT STAFF

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.

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.

following personnel: Director, Technical Support; Director, PVNGS Services; General Manager, Site Radiation Protection; General Manager, Site Chemistry; General Manager, Training

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.

* A total of two STAs for the site.

6.2.3 INDEPENDENT SAFETY ENGINEERING ~~GROUP~~ DEPARTMENT (ISE~~G~~D)

FUNCTION

6.2.3.1 The ISE~~G~~D Department shall function to selectively 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 ISE~~G~~D Department 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 ISE~~G~~D Department shall be responsible for maintaining surveillance of selected 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 ISE~~G~~D Department 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,~~ or designated alternate, Plant Manager, and the ~~Manager, Nuclear Safety Group (NSG).~~ Chairman, Offsite Safety Review Committee (OSRC).

RECORDS

6.2.3.5 Records of activities performed by the ISE~~G~~D Department shall be prepared, maintained, and forwarded each calendar month to the Director, Nuclear Safety ~~and Licensing.~~ or designated alternate.

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 ANSI/ANS 3.1-1978 and Regulatory Guide 1.8, September 1975, except for the ~~Radiation Protection and Chemistry Manager~~ General Manager, Site Radiation Protection 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. An additional exception is that the

*Not responsible for sign-off function.

6.3 UNIT STAFF QUALIFICATIONS (Continued)

Senior Reactor Operator (SRO) license requirement for the Operations Manager shall be met if either the Operations Manager or the Operations Supervisor holds a valid SRO license. The holder of the SRO license shall direct the licensed activities of the licensed operators.

6.4 TRAINING

SEE INSERT

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 Vice President Nuclear Production or his designee ~~Plant Director~~ on all matters related to nuclear safety.

COMPOSITION

6.5.1.2 The PRB shall be composed of nine members from the Palo Verde management staff. These positions will be designated by the Vice President Nuclear Production or his designee ~~Plant Director~~ in Administrative Procedures.

The Vice President Nuclear Production or his designee ~~Plant Director~~ shall designate the Chairman and Vice-Chairmen in writing. The Chairman and Vice-Chairmen may be from outside the members provided that they meet ANSI/ANS ~~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.

INSERT

TRAINING

6.4.1 A training program for the unit staff shall be maintained under the direction of the General Manager, Nuclear Training and shall meet or exceed the requirements of Section 5.0 of ANSI/ANS-3.1, 1978 and 10CFR55. The program shall include familiarization with relevant industry operational experience.

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 proposed changes to Appendix "A" Technical Specifications.

b. 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).~~ Offsite Safety Review Committee (OSRC)

c. Review of REPORTABLE EVENTS.

d. Review of unit operations to detect potential nuclear safety hazards.

e. Performance of special reviews, investigations or analyses and reports thereon as requested by the Vice President-Nuclear Production or PRB Chairman.

f. 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 6.5.1.6b. above constitutes an unreviewed safety question.

b. Provide written notification within 24 hours to the Executive Vice President-Nuclear ~~Production~~, ~~Plant Director~~ and ~~NSG~~ OSRC of disagreement between the PRB and the ~~Plant Director~~; however, the ~~Plant Director~~ Vice President Nuclear Production shall have responsibility for resolution of such disagreements.

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 Executive Vice President-Nuclear, Vice President-Nuclear Production, ~~Plant Director~~, and ~~NSG.~~ OSRC.

6.5.2 TECHNICAL REVIEW AND CONTROL ACTIVITIES

6.5.2.1 The Vice President Nuclear Production or his designee ~~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 his designee ~~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 his designee. ~~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 Director; or 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 identified in station administrative procedures. ~~members of the supervisory staff, previously designated by the Director Standards and Technical Support 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 ~~Plant Director~~ Vice President Nuclear Production or his designee.

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.~~ OSRC. PVNGS

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.~~ OSRC. PVNGS

6.5.2.8 The General Manager, Site Radiation Protection ~~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.

TECHNICAL REVIEW AND CONTROL ACTIVITIES (Continued)

6.5.2.9 The ~~Director, Standards and Technical Support~~ Vice President Nuclear Production or his designee 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.~~ Offsite Safety Review Committee

6.5.3 ~~NUCLEAR SAFETY GROUP (NSG)~~ OFFSITE SAFETY REVIEW COMMITTEE (OSRC)

FUNCTION

6.5.3.1 The ~~NSG~~ OSRC 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

SEE INSERT

~~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~~ OSRC Chairman to provide expert advice to the ~~NSG.~~ OSRC.

REVIEW

6.5.3.4 The ~~NSG~~ OSRC 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;

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.~~ OSRC. 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.~~ OSRC or the Executive 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.

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~~ OSRC shall report to and advise the ~~Director, Nuclear Safety and Licensing~~ Executive Vice President Nuclear 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~~ OSRC activities shall be prepared and maintained. Report of reviews and audits shall be ~~prepared monthly for~~ forwarded to the ~~Director, Nuclear Safety and Licensing who will distribute it to the Vice President-Nuclear Production, Plant Manager, and~~ Executive Vice President Nuclear to the management positions responsible for the areas audited.

ADD 6.5.3.8 6.5.3.9 6.5.3.10 SEE INSERT

with distribution

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~~ Chairman, Offsite Safety Review Committee and the Vice President-Nuclear Production.

INSERTS

COMPOSITION

6.5.3.2 The OSRC shall be composed of the OSRC Chairman and a minimum of four OSRC members. The Chairman and members are designated by the Executive Vice President, Nuclear and shall have the qualifications that meet the requirements of Section 4.7 of ANSI/ANI 3.1; 1978.

ALTERNATES

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

MEETING FREQUENCY

6.5.3.9 The OSRC shall meet at least once per six months.

QUORUM

6.5.3.10 The quorum of the OSRC necessary for the performance of the OSRC review and audit functions of these Technical Specifications shall consist of the Chairman or his designated alternate and at least four OSRC members including alternates. No more than a minority of the quorum shall have line responsibility for operation of the unit.

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.

6.14 OFFSITE DOSE CALCULATION MANUAL (ODCM)

6.14.1 The ODCM shall be approved by the Commission prior to implementation.

6.14.2 Licensee-initiated changes to the ODCM:

Shall be submitted to the Commission in the Semiannual Radioactive Effluent Release Report for the period in which the change(s) was made effective. This submittal shall contain:

1) Sufficiently detailed information to totally support the rationale for the change without benefit of additional or supplemental information. Information submitted should consist of a package of those pages of the ODCM to be changed with each page numbered and provided with an approval and date box, together with appropriate analyses or evaluations justifying the change(s); and

2) A determination that the change will not reduce the accuracy or reliability of dose calculations or setpoint determinations.

6.15 MAJOR CHANGES TO RADIOACTIVE LIQUID, GASEOUS, AND SOLID WASTE TREATMENT SYSTEMS*

6.15.1 Licensee-initiated major changes to the radioactive waste systems (liquid, gaseous, and solid):

Shall be reported to the Commission in the Semiannual Radioactive Effluent Release Report for the period in which the ~~evaluation was reviewed by the PRB.~~ change was implemented. The discussion of each change shall contain:

1) A summary of the evaluation that led to the determination that the change could be made in accordance with 10 CFR 50.59.

2) Sufficient detailed information to totally support the reason for the change without benefit of additional or supplemental information;

3) A detailed description of the equipment, components, and processes involved and the interfaces with other plant systems;

4) An evaluation of the change, which shows the predicted releases of radioactive materials in liquid and gaseous effluents and/or quantity of solid waste that differ from those previously predicted in the license application and amendments thereto;

*Licensees may chose to submit the information called for in this specification as part of the annual FSAR update.

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

6.2.1 OFFSITE AND ONSITE ORGANIZATIONS

An offsite and an onsite organization shall be established for unit operation and corporate management. The offsite and onsite organization shall include the positions for activities affecting the safety of the nuclear power plant.

a. Lines of authority, responsibility and communication shall be established and defined from the highest management levels through intermediate levels to and including all operating organization positions. Those relationships shall be documented and updated, as appropriate, in the form of organizational charts. These organizational charts will be documented in the FSAR and updated in accordance with 10 CFR 50.71(e).

b. There shall be an individual executive position (Executive Vice President Nuclear ~~(ANPP)~~) in the offsite organization having corporate responsibility for overall plant nuclear safety. This individual shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining and providing technical support in the plant so that continued nuclear safety is assured.

c. There shall be individual management positions (Plant Managers) in the onsite organization having responsibility for overall unit safe operation and having control over those onsite resources necessary for safe operation and maintenance of the plant.

d. Although the individuals who train the operating staff and those who carry out health physics and quality assurance functions may report to the appropriate manager onsite, they shall have sufficient organizational freedom to be independent from operating pressures.

6.2.2 UNIT STAFF

a. Each on-duty shift shall be composed of at least the minimum shift crew composition shown in Table 6.2-1.

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.

following personnel: Director, Technical Support; Director, PVNGS Services; General Manager, Site Radiation Protection; General Manager, Site Chemistry; General Manager, Training

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.

* A total of two STAs for the site.

6.2.3 INDEPENDENT SAFETY ENGINEERING ~~GROUP~~ DEPARTMENT (ISE~~G~~)

FUNCTION

6.2.3.1 The ISE~~G~~ Department shall function to selectively 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 ISE~~G~~ Department 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 ISE~~G~~ Department shall be responsible for maintaining surveillance of selected 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 ISE~~G~~ Department 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,~~ or designated alternate, Plant Manager, and the ~~Manager, Nuclear Safety Group (NSG).~~ Chairman, Offsite Safety Review Committee (OSRC).

RECORDS

6.2.3.5 Records of activities performed by the ISE~~G~~ Department shall be prepared, maintained, and forwarded each calendar month to the Director, Nuclear Safety ~~and Licensing.~~ or designated alternate.

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 ANSI 3.1-1978 and Regulatory Guide 1.8, September 1975, except for the ~~Radiation Protection and Chemistry Manager~~ General Manager, Site Radiation Protection 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. An additional exception is that the

*Not responsible for sign-off function.

6.3 UNIT STAFF QUALIFICATIONS (Continued)

Senior Reactor Operator (SRO) license requirement for the Operations Manager shall be met if either the Operations Manager or the Operations Supervisor holds a valid SRO license. The holder of the SRO license shall direct the licensed activities of the licensed operators.

6.4 TRAINING

SEE INSERT

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 Vice President Nuclear Production or his designee ~~Plant Director~~ on all matters related to nuclear safety.

COMPOSITION

6.5.1.2 The PRB shall be composed of nine members from the Palo Verde management staff. These positions will be designated by the Vice President Nuclear Production or his designee ~~Plant Director~~ in Administrative Procedures.

The Vice President Nuclear Production or his designee ~~Plant Director~~ shall designate the Chairman and Vice-Chairmen in writing. The Chairman and Vice-Chairmen may be from outside the members provided that they meet ANSI/ANS ~~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.

INSERT

TRAINING

6.4.1 A training program for the unit staff shall be maintained under the direction of the General Manager, Nuclear Training and shall meet or exceed the requirements of Section 5.0 of ANSI/ANS-3.1, 1978 and 10CFR55. The program shall include familiarization with relevant industry operational experience.

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 proposed changes to Appendix "A" Technical Specifications.

b. 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).~~ Offsite Safety Review Committee (OSRC).

c. Review of REPORTABLE EVENTS.

d. Review of unit operations to detect potential nuclear safety hazards.

e. Performance of special reviews, investigations or analyses and reports thereon as requested by the Vice President-Nuclear Production or PRB chairman.

f. 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 6.5.1.6b. above constitutes an unreviewed safety question.

b. Provide written notification within 24 hours to the Executive Vice President-Nuclear ~~Production, Plant Director~~ and ~~NSG~~ OSRC of disagreement between the PRB and the ~~Plant Director;~~ however, the ~~Plant Director~~ Vice President Nuclear Production shall have responsibility for resolution of such disagreements.

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 Executive Vice President-Nuclear, Vice President-Nuclear Production, ~~Plant Director~~ and ~~NSG.~~ OSRC.

6.5.2 TECHNICAL REVIEW AND CONTROL ACTIVITIES

6.5.2.1 ~~The Director, Standards and Technical Support~~ The Vice President, Nuclear Production or his designee 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~~ his designee 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~~ his designee.

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 Director, or 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 supervisory staff, previously designated by the Director Standards and Technical Support to perform such reviews~~ identified in station administrative procedures. 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 ~~Plant Director,~~ Vice President Nuclear Production or his designee.

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,~~ PVNGS OSRC.

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.~~ PVNGS OSRC.

6.5.2.8 The ~~Director, Standards and Technical Support~~ General Manager, Site Radiation Protection 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.

TECHNICAL REVIEW AND CONTROL ACTIVITIES (Continued)

6.5.2.9 The ~~Director, Standards and Technical Support~~ Vice President Nuclear Production or his designee 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.~~ Offsite Safety Review Committee.

6.5.3 ~~NUCLEAR SAFETY GROUP (NSG)~~ OFFSITE SAFETY REVIEW COMMITTEE (OSRC)

FUNCTION

6.5.3.1 The ~~NSG~~ OSRC 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

SEE INSERT

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~~ OSRC Chairman to provide expert advice to the ~~NSG.~~ OSRC.

REVIEW

6.5.3.4 The ~~NSG~~ OSRC 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;

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.~~ OSRC. 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~~ OSRC or the Executive 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.

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~~ OSRC shall report to and advise the ~~Director, Nuclear Safety and Licensing~~ Executive Vice President Nuclear 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~~ OSRC activities forwarded to 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~~ Executive Vice President Nuclear to the management positions responsible for the areas audited. with distribution

ADD

6.5.3.8
6.5.3.9
6.5.3.10
SEE INSERT

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~~ Chairman, Offsite Safety Review Committee and the Vice President-Nuclear Production.

INSERTS

COMPOSITION

6.5.3.2 The OSRC shall be composed of the OSRC Chairman and a minimum of four OSRC members. The Chairman and members are designated by the Executive Vice President, Nuclear and shall have the qualifications that meet the requirements of Section 4.7 of ANSI/ANI 3.1; 1978.

ALTERNATES

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

MEETING FREQUENCY

6.5.3.9 The OSRC shall meet at least once per six months.

QUORUM

6.5.3.10 The quorum of the OSRC necessary for the performance of the OSRC review and audit functions of these Technical Specifications shall consist of the Chairman or his designated alternate and at least four OSRC members including alternates. No more than a minority of the quorum shall have line responsibility for operation of the unit.

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.

6.14 OFFSITE DOSE CALCULATION MANUAL (ODCM)

6.14.1 The ODCM shall be approved by the Commission prior to implementation.

6.14.2 Licensee-initiated changes to the ODCM:

Shall be submitted to the Commission in the Semiannual Radioactive Effluent Release Report for the period in which the change(s) was made effective. This submittal shall contain:

1) Sufficiently detailed information to totally support the rationale for the change without benefit of additional or supplemental information. Information submitted should consist of a package of those pages of the ODCM to be changed with each page numbered and provided with an approval and date box, together with appropriate analyses or evaluations justifying the change(s); and

2) A determination that the change will not reduce the accuracy or reliability of dose calculations or setpoint determinations.

6.15 MAJOR CHANGES TO RADIOACTIVE LIQUID, GASEOUS, AND SOLID WASTE TREATMENT SYSTEMS*

6.15.1 Licensee-initiated major changes to the radioactive waste systems (liquid, gaseous, and solid):

Shall be reported to the Commission in the Semiannual Radioactive Effluent Release Report for the period in which the ~~evaluation was reviewed by the PRB.~~ change was implemented. The discussion of each change shall contain:

1) A summary of the evaluation that led to the determination that the change could be made in accordance with 10 CFR 50.59.

2) Sufficient detailed information to totally support the reason for the change without benefit of additional or supplemental information;

3) A detailed description of the equipment, components, and processes involved and the interfaces with other plant systems;

4) An evaluation of the change, which shows the predicted releases of radioactive materials in liquid and gaseous effluents and/or quantity of solid waste that differ from those previously predicted in the license application and amendments thereto;

*Licensees may chose to submit the information called for in this specification as part of the annual FSAR update.