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SUBJECT: Forwards response to NRC 811202 ltr re compliance w/10CFR20, 50 & 100.

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ARIZONA PUBLIC SERVICE COMPANY
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June 1, 1982
ANPP-21083-ACR/NEM

Mr. Frank J. Miraglia, Chief
Licensing Branch No. 3
Division of Licensing
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: Palo Verde Nuclear Generating Station
(PVNGS) Units 1, 2 and 3
Docket Nos. STN-50-528/529/530
File: 82-056-026;G.1.10

Ref: Letter from F. J. Miraglia to E. E. Van Brunt, Jr., dated December 2, 1981; Subject: Compliance with Commission's Regulations

Dear Mr. Miraglia:

Please find attached our response to the referenced NRC letter, concerning compliance with regulations in 10 CFR Parts 20, 50 and 100. The attached response addresses all requirements published through April 2, 1982.

If you have any questions, please contact me.

Very truly yours,

E. E. Van Brunt

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

EEVBJr/NEM/br
Attach.
cc: E. Licitra (w/a)
A. E. Gehr (w/a)
R. L. Greenfield (w/a)
L. Bernabei, Esq. (w/a)

B001
1/1

STATE OF ARIZONA)
) ss.
COUNTY OF MARICOPA)

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

Edwin E. Van Brunt

Edwin E. Van Brunt, Jr.

Sworn to before me this 1st day of June, 1982.

Robert K. Walker

Notary Public

My Commission expires:

Oct. 2, 1985

COMPLIANCE OF PALO VERDE NUCLEAR GENERATING STATION UNITS 1, 2 AND 3 WITH PARTS 20, 50 AND 100 OF NRC REGULATIONS IN TITLE 10, CODE OF FEDERAL REGULATIONS

Regulation (10 CFR)	Compliance
20.1(a)	This regulation states the general purpose for which the Part 20 regulations are established and does not impose any independent obligations on licensees.
20.1(b)	This regulation describes the overall purpose of the Part 20 regulations to control the possession, use, and transfer of licensed material by any licensee, so that the total dose to an individual will not exceed the standards prescribed therein. It does not impose any independent obligations on licensees.
20.1(c)	Conformance with the ALARA principle stated in this regulation will be ensured by the implementation of Company policies and appropriate Technical Specifications and health physics procedures. Chapters 11 and 12 of the Final Safety Analysis Report (FSAR) describe the specific equipment and design features utilized in this effort.
20.2	This regulation states the extent of application of the Part 20 regulations and imposes no independent obligations on those licensees to which they apply.
20.3	The definitions contained in this regulation are adhered to in appropriate Technical Specifications and procedures and in applicable sections of the FSAR.
20.4	The units of radiation dose specified in this regulation are accepted and conformed to in the FSAR, Technical Specifications and applicable station procedures.
20.5	The units of radioactivity specified in this regulation are accepted and conformed to in the FSAR, Technical Specifications and applicable station procedures.
20.6	This regulation governs the interpretation of regulations by the NRC and does not impose independent obligations on licensees.
20.7	This regulation identifies the address of the NRC and does not impose independent obligations on licensees.

Regulation (10 CFR)	Compliance
20.101	The radiation dose limits specified in this regulation will be complied with through the implementation of and adherence to administrative policies and controls and appropriate health physics procedures developed for this purpose. Conformance will be documented by the use of appropriate monitoring devices and the maintenance of required records.
20.102	When required by this regulation, the accumulated dose for any individual permitted to exceed the exposure limits specified in 20.101(a) is determined by the use of Form NRC-4. Appropriate health physics procedures and administrative policies will control this process.
20.103(a)	Compliance with this regulation will be ensured through the implementation of appropriate health physics procedures relating to air sampling for radioactive materials and bioassay of individuals for internal contamination. Administrative policies and controls will provide adequate margins of safety for the protection of individuals against intake of radioactive materials. The systems and equipment described in Chapters 11 and 12 of the FSAR provide the capability to minimize these hazards.
20.103(b)	Appropriate process and engineering controls and equipment, as described in Chapters 11 and 12 of the FSAR, will be installed and operated to maintain levels of airborne radioactivity as low as reasonably achievable. When necessary, as determined by station administrative guidelines, additional precautionary procedures will be utilized to limit the potential for intake of radioactive materials.
20.103(c)	This regulation allows credit in estimating individual exposures for operators who are wearing respiratory protective equipment. Operating manuals will contain procedures that ensure that approved respiratory protection equipment is being properly used and that plant practices are in compliance with Regulatory Guide 8.15, "Acceptable Programs for Respiratory Protection."
20.103(d)	This regulation describes further restrictions which the Commission may impose on licensees. It does not impose any independent obligations on licensees.
20.103(e)	The proper notification specified by this regulation will be made to the appropriate authority within the appropriate time limit.

Regulation (10 CFR)	Compliance
20.103(f)	Plant respiratory protection programs were not in effect prior to December 29, 1976 and therefore, the regulation does not apply.
20.104	Conformance with this regulation will be ensured by appropriate Arizona Public Service Company policies regarding employment of individuals under the age of 18 and the Station Manual restricting these individuals' access to the station restricted areas.
20.105(a)	Chapters 11 and 12 of the FSAR provide the information and related radiation dose assessments specified by this regulation.
20.105(b)	The radiation dose rate limits specified in this regulation will be complied with through the implementation of station procedures, Technical Specifications, and administrative policies which control the use and transfer of radioactive materials. Appropriate surveys and monitoring devices will document this compliance.
20.105(c)	Compliance with applicable provisions of 40CFR190 is documented in the Palo Verde Environmental Report - Operating License Stage (ER-OL) Section 5.2 and Appendix 5B.
20.106(a)	Conformance with the limits specified in this regulation will be ensured through the implementation of station procedures and applicable Technical Specifications which will provide for adequate sampling and analyses and monitoring of radioactive materials in effluents prior to and during their release. The level of radioactivity in station effluents will be minimized to the extent practical by the use of appropriate equipment designed for this purpose, as described in Chapter 11 of the FSAR.
20.106(b), 20.106(c)	APS has not and does not currently intend to include in any license or amendment application proposed limits higher than those specified on 20.106(a), as provided for in these regulations.
20.106(d)	Appropriate allowances for dilution and dispersion of radioactive effluents are made in conformance with this regulation, and are described in detail in Chapter 11 of the FSAR and in appropriate reports that will be required by the Technical Specifications.
20.106(e)	This regulation provides criteria by which the Commission may impose further limitations on releases of radioactive materials made by a licensee. It imposes no independent obligations on licensees.

Regulation (10 CFR)	Compliance
20.106(f)	This regulation states that the provisions of 20.106 do not apply to disposal of radioactive material into sanitary sewage systems. It imposes no independent obligations on licensees.
20.106(g)	Compliance with applicable provisions of 40CFR190 is documented in the PVNGS ER-OL, Section 5.2 and Appendix 5B.
20.107	This regulation clarifies that the Part 20 regulations are not intended to apply to the intentional exposure of patients to radiation for the purpose of medical diagnosis or therapy. It does not impose any independent obligations on licensees.
20.108	Necessary bioassay equipment and procedures, including whole body counting, will be utilized at the Palo Verde Nuclear Generating Station (PVNGS) to determine exposure of individuals to concentrations of radioactive materials. Appropriate health physics procedures and administrative policies will implement this requirement.
20.201	The surveys required by this regulation will be performed at adequate frequencies and contain such detail as to be consistent with the radiation hazard being evaluated. Applicable health physics procedures will require these surveys and provide for their documentation in such a manner as to ensure compliance with the regulations of 10CFR20.
20.202(a)	Applicable health physics procedures will set forth policies and practices which ensure that individuals are supplied with and required to use appropriate personnel monitoring equipment. Work procedures will be established to provide additional control of personnel working in radiation areas and to ensure that the level of protection afforded to these individuals is consistent with the radiological hazards in the work place.
20.202(b)	The terminology set forth in this regulation is accepted and will be conformed to in all applicable station procedures, Technical Specifications, and those portions of the Station Manual in which its use is made.
20.203(a)	Materials used for labeling, posting, or otherwise designating radiation hazards or radioactive materials, and using the radiation symbol, will conform to the conventional design prescribed in this regulation.
20.203(b)	This regulation will be conformed to through the implementation of appropriate health physics procedures and portions of the Station Manual relating to posting of radiation areas, as defined in 10CFR20 Section 202(b)(2).

Regulation (10 CFR)	Compliance
20.203(c)	The requirements of this regulation for "High Radiation Areas" will be conformed to by the implementation of the Technical Specifications and appropriate health physics procedures, as well as the Station Manual. The controls and other protective measures set forth in the regulation will be maintained under the surveillance of the station Radiation Protection Supervisor.
20.203(d)	Each Airborne Radioactivity Area, as defined in this regulation, will be required to be posted by provisions of the Station Manual and appropriate health physics procedures. These procedures will also provide for the surveillance requirements necessary to determine airborne radioactivity levels.
20.203(e)	The area and room posting requirements set forth in this regulation pertaining to radioactive materials will be complied with through the implementation of appropriate health physics procedures and portions of the Station Manual.
20.203(f)	The container labeling requirements set forth in this regulation will be complied with through the implementation of appropriate health physics procedures and portions of the Station Manual.
20.204	The posting requirement exceptions described in this regulation will be used where appropriate and necessary at the station. Adequate controls will be provided within the station health physics procedures to ensure safe and proper application of these exceptions.
20.205	The requirements of this regulation pertaining to procedures for picking up, receiving, and opening packages of radioactive materials will be implemented by the Station Manual and appropriate health physics procedures. These procedures will also provide for the necessary documentation to ensure an auditable record of compliance.
20.206	Appropriate health physics procedures will set forth requirements for radiation workers to receive training and instructions as required by 10CFR19 Section 12.
20.207	The storage and control requirements for licensed materials in unrestricted areas will be conformed to and documented through the implementation of station health physics procedures and applicable portions of the Station Manual.
20.301	The general requirements for waste disposal set forth in this regulation will be complied with through station health physics procedures, the Technical Specifications, and the

Regulation (10 CFR)	Compliance
	provisions of the station license. Chapter 11 of the FSAR describes the solid waste disposal system installed at the station.
20.302	No such application for proposed disposal procedures as described in this regulation is contemplated.
20.303	No such plans for disposal of licensed material by release into sanitary sewage systems as provided for in this regulation are contemplated.
20.304	(Deleted 45 FR 71761)
20.305	No such incineration of licensed material as provided for in this regulation is contemplated.
20.306	The disposal limits of this regulation will be complied with through the implementation of appropriate health physics procedures which will also require the maintenance of records on the receipt, transfer and disposal of such byproduct material as specified in 10CFR30 Section 51.
20.401	The requirements of this regulation will be complied with through the implementation of appropriate Technical Specifications and health physics procedures pertaining to records of surveys, radiation monitoring, and waste disposal. The retention periods specified for such records will also be provided for in these specifications and procedures.
20.402	Palo Verde Nuclear Generating Station will establish an appropriate inventory and control program to ensure strict accountability for licensed radioactive materials. Reports of theft or loss of licensed material will be required by reference to the regulations of 10CFR in the Technical Specifications.
20.403	Notifications of incidents, as described in this regulation, will be assured by the requirements of the Technical Specifications, the Station Manual, and appropriate health physics procedures, which will also provide for the necessary assessments to determine the occurrence of such incidents.
20.405	Reports of overexposures to radiation and the occurrence of excessive levels and concentrations, as required by this regulation, will be provided for by reference in the Technical Specifications and in appropriate health physics procedures.
20.407	The personnel monitoring required by this regulation will be provided for by the Technical Specifications. Appropriate health physics procedures will establish the data base from which this report is generated.

Regulation (10 CFR)	Compliance
20.408	The report of radiation exposure required by this regulation upon termination of an individual's employment or work assignment will be generated through the provisions of a station health physics procedure.
20.409	The notification and reporting requirements of this regulation, and those referred to by it, will be satisfied by the provisions of a station health physics procedure.
20.501	This regulation provides for the granting of exemptions from 10CFR20 regulations, provided that such exemptions are authorized by law and will not result in undue hazard to life or property. It does not impose independent obligations on licensees.
20.502	This regulation describes the means by which the Commission may impose upon any licensee requirements which are in addition to the regulations of Part 20. It does not impose independent obligations on licensees.
20.601	This regulation describes the remedies which the Commission may obtain in order to enforce its regulations, and sets forth those penalties or punishments which may be imposed for violations of its rules. It does not impose any independent obligations on licensees.
50.1	This regulation states the purpose of the Part 50 regulations and does not impose any independent obligations on licensees.
50.2	This regulation defines various terms and does not impose independent obligations on licensees.
50.3	This regulation governs the interpretation of the regulations by the NRC and does not impose independent obligations on licensees.
50.4	This regulation gives the address of the NRC and does not impose independent obligations on licensees.
50.8	This regulation presents Office of Management and Budget (OMB) approval of the information collection requirements of various sections of 10CFR50 and imposes no independent obligations on licensees.
50.10, 50.11	These regulations specify the types of activities that may not be undertaken without a license from the NRC. APS does not propose to conduct any such activities at Palo Verde without an NRC license.

Regulation (10 CFR)	Compliance
50.12	This regulation provides for the granting of exemptions from 10CFR50 regulations, provided that such exemptions are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest. It does not impose independent obligations on licensees.
50.13	This regulation says that a license applicant need not design against acts of war. It imposes no independent obligations on licensees.
50.20, 50.21, 50.22, 50.23	These regulations describe the types of licenses that the NRC issues. They do not address the substantive requirements that an applicant must satisfy to qualify for such licenses. APS is applying for a Class 103 operating license for each of the PVNGS Units 1, 2 and 3.
50.30	This regulation sets forth procedural requirements for the filing of license applications concerning items such as place of filing, oath or affirmation, number of copies of application, application for operating license, filing fees, and an environmental report. The procedural requirements of this regulation have been met in the license application.
50.31, 50.32	These regulations permit more efficient organization of the license application and impose no independent obligations on licensees.
50.33	This regulation requires the licensee's application to contain certain general information, such as identification of the applicant, information about the applicant's financial qualifications and a list of regulatory agencies with jurisdiction over the applicant's rates and services. This information is provided in the operating license application.
50.33a	This regulation requires applicants for construction permits to submit information required for the antitrust review. The requirements set forth by this regulation have been satisfied in the applications for construction permits and construction permit amendments.
50.34(a)	This regulation sets forth requirements which govern the content of technical information in the Preliminary Safety Analysis Report and is relevant to the construction permit stage. The requirements of this regulation were satisfied as part of the construction permit application.

Regulation (10 CFR)	Compliance
50.34(b)	A Final Safety Analysis Report (FSAR) has been prepared and submitted by the applicant which addresses in the chapters indicated the information required by this regulation. The FSAR includes by reference substantial information specific to the System 80 NSSS contained in the Combustion Engineering Standard Safety Analysis Report Final Safety Analysis Report (CESSAR-F) prepared and submitted by Combustion Engineering, Inc. (1) Site evaluation factors - Chapter 2. (2) Structures, systems, and components - Chapter 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 15. (3) Radioactive effluents and radiation protection - Chapters 11 and 12. (4) Design and performance evaluation - ECCS performance is discussed and shown to meet the requirements of 10CFR50 Section 46 in Chapters 6 and 15. (5) Results of research program - Chapter 1. (6) i Organization structure - Chapter 13. ii Managerial and administrative controls - Chapters 13 and 17. Chapter 17 discusses compliance with the quality assurance requirements of Appendix B. iii Plans for preoperational testing and initial operations - Chapter 14. iv Plans for conduct of normal operations - Chapters 13 and 17. Surveillance and periodic testing is specified in the Technical Specifications. v Plans for coping with emergencies - Emergency Plan (see 50.47 and App. E). vi Technical specifications - a site specific set is being prepared in conjunction with the staff and will be appended to the operating license when approved. vii Potential hazards analysis - potential hazards to structures, systems and components important to safety of operating units due to construction activities at adjacent units will be minimized through the use of physical barriers and controls described in the applicant's physical security plan. The power blocks for PVNGS Units 1, 2 and 3 are centered 1200 feet apart and systems important to safety are not shared.

Regulation (10 CFR)	Compliance
	(7) Technical qualifications - Chapter 13.
	(8) Operator requalifications - Chapter 13.
50.34(c), 50.34(d)	The information required in these sections has been submitted for Palo Verde Nuclear Generating Station under separate cover pursuant to Paragraph 2.790(d) 10CFR2, "Rules of Practice." This information includes both the physical security plans and the safeguards contingency plans required by these regulations.
50.34(e)	The applicant's physical security plan and safeguards contingency plan are protected against unauthorized disclosure in accordance with the requirements of 10CFR73 Section 21, as appropriate.
50.34(f)	This rule defines additional TMI-related requirements for specific plants with pending construction permit applications. It is not applicable to the Palo Verde Nuclear Generating Station. PVNGS compliance with TMI requirements of NUREG 0737 is described in the PVNGS TMI-2 Lessons Learned Implementation Report (LLIR) and FSAR.
50.34a(a), 50.34a(b)	This regulation sets forth the requirements for including in the construction permit application a description of the design objectives and the preliminary design of equipment to control the release of radioactive material in nuclear power reactor effluents. The requirement of this regulation was satisfied as part of the construction permit application.
50.34a(c)	Chapters 11 and 12 of the FSAR provides the required information on the control of gaseous and liquid effluents and radionuclide releases during normal reactor operations.
50.35	This regulation is relevant to the construction permit stage rather than the operating license stage.
50.36	Technical specifications are being prepared for implementation by APS and will include 1) safety limits and limiting safety settings, 2) limiting conditions for operations, 3) surveillance requirements, 4) design features, and 5) administrative controls. Technical specifications will take the form prescribed by NUREG-0212, Revision 3, which are the "Standard Technical Specifications for Combustion Engineering Pressurized Water Reactors."

Regulation (10 CFR)	Compliance
50.36a	Radiological effluent technical specifications are being prepared for implementation by APS, as required by this regulation. These effluent specifications, including the reporting requirements of 10CFR50 Section 36a(2), will be incorporated in the plant technical specifications referred to in 10CFR50 Section 36 above.
50.37	This regulation requires the applicant to agree to limit access to restricted data. This requirement was satisfied at the time of application for the construction permit.
50.38	This regulation prohibits the NRC from issuing a license to any person who is a citizen, national, or agent of a foreign country or any corporation or other entity which is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government. APS is eligible to apply for and obtain a license as stated in their applications for operating licenses. Therefore, the requirements of this regulation are not applicable.
50.39	This regulation provides that applications and related documents may be made available for public inspection. This imposes no direct obligations on applicants and licensees.
50.40	This regulation provides considerations to "guide" the Commission in granting licenses and imposes no obligation upon licensees or applicants. Compliance is indicated by the SER, FES and the terms of the license when issued.
50.41	This regulation applies to class 104 licensees, such as those for devices used in medical therapy and research and development. APS has not applied for a class 104 license, and therefore 10CFR50 Section 41 is not applicable.
50.42	This regulation requires the Commission to consider additional standards in determining whether or not a Class 103 license should be issued, i.e., 1) that the proposed activities will serve a useful purpose proportionate to the quantities of special nuclear material or source material to be utilized and 2) that due account will be taken of the anti-trust advice provided by the Attorney General. Information pertinent to these standards was made known to the Commission at the construction permit stage 1) by the Atomic Safety and Licensing Board verification of the need for power and 2) by the Attorney General's satisfactory review of the anti-trust information.

Regulation (10 CFR)	Compliance
50.43	This regulation imposes certain duties on the NRC and addresses the applicability of the Federal Power Act and the right of government agencies to obtain NRC licenses. It imposes no direct obligations on licensees.
50.44(a)	The Palo Verde Nuclear Generating Station includes a combustible gas control system, described in FSAR Section 6.2.5, to control hydrogen gas that may be generated following a LOCA.
50.44(b)	The PVNGS combustible gas control system includes instrumentation for measuring the containment hydrogen concentration and external thermal recombiners for controlling the combustible gas concentration in the containment following a LOCA. A mixed atmosphere in the containment is assured by the containment spray system and the containment internal design which permits convective mixing and prevents local entrapment of hydrogen.
50.44(c)	Section 6.2.5 of the FSAR shows that the hydrogen recombiners can be utilized in sufficient time to limit hydrogen concentration in containment following a LOCA to less than 4 volume percent. Dedicated containment penetrations are employed for connection to the external recombiner; these penetrations conform to Criteria 54 and 56 of Appendix A to 10CFR50 and are designed against postulated single failures. High point vents, described in the FSAR in response to Question 5A.22, have been provided the RCS at the reactor vessel head and the pressurizer head to allow venting of noncondensible gases from the RCS.
50.44(d)	In accordance with this regulation, the hydrogen contribution of the core metal-water reaction is assumed to be that resulting from reaction of 5 percent of the fuel cladding.
50.44(e)	Capability for controlled, filtered purging of the containment is provided as a backup means for controlling combustible gases following a LOCA. Hydrogen recombiners are the primary means for combustible gas control.
50.44(f), (g)	Not applicable to PVNGS.
50.44(h)	This part of the regulation defines or clarifies certain terms used in 10CFR50 Section 44 and does not impose independent obligations on licensees.
50.45	This regulation provides standards for construction permits rather than operating licenses and is therefore not pertinent to the operating license proceeding.

Regulation (10 CFR)	Compliance
50.46	FSAR Section 6.3 and, by reference, CESSAR Section 6.3 describe the emergency core cooling system and the methods used to analyze ECCS performance following the course of an accident. The result of the loss-of-coolant accident analysis presented in FSAR Section 15.6 and in CESSAR Section 6.3.3 demonstrate conformance with 10CFR50 Section 46.
50.47	This regulation provides standards for onsite and offsite emergency plans and establishes the requirement for FEMA review and NRC approval of the plans prior to issuance of an operating license. Emergency plans have been submitted.
50.48	This regulation imposes requirements for a fire protection plan that satisfies Criterion 3 of Appendix (A) of 10CFR50 and makes reference to BTP APCSB 9.5-1 "Guidelines for Fire Protection for Nuclear Power Plants" and Appendix A to BTP APCSB 9.5-1 (Now, BTP CMEB 9.5-1 in NUREG-0800, Rev. 2, July 1981). Detailed description of the PVNGS fire protection system and performance evaluation provided in FSAR Section 9.5.1 and in the Fire Protection Evaluation Report (FPER) submitted by APS by letter dated May 31, 1977 including Revision 3, dated April 1982, document compliance with this regulation.
50.50	This regulation provides that the NRC will issue a license upon determining that the application meets the standards and requirements of the Atomic Energy Act and the regulations and that the necessary notifications to other agencies or bodies have been duly made. It imposes no direct obligations on the licensees.
50.51	This regulation specifies the maximum duration of licenses. Compliance will be effected by the Commission's writing the license in order to comply.
50.52	This regulation provides for the combining in a single license of a number of activities. It imposes no independent obligation on the licensee.
50.53	This regulation provides that licenses are not to be issued for activities that are not under or within the jurisdiction of the United States. The operation of Palo Verde Units 1, 2 and 3 will be within the United States and subject to the jurisdiction of the United States, as is evident from the description of the facility in the operating license application.
50.54	This regulation specifies certain conditions that are incorporated in every license issued. Compliance is effected by including these conditions in the license when it is issued.

Regulation (10 CFR)	Compliance
50.55	This regulation addresses conditions of construction permits, not operating licenses, and therefore it is not relevant at this time.
50.55a(a)(1)	The design, fabrication, construction and testing standards for safety-related structures, systems and components are presented in various chapters of the FSAR as noted below: General Design Criteria and Category I Structures - Chapter 3 Reactor and Reactivity Control - Chapter 4 Reactor Coolant System - Chapter 5 Engineered Safety Features - Chapter 6 Instrumentation and Controls - Chapter 7 Electric Power - Chapter 8 Auxiliary Systems - Chapter 9 Steam and Power Conversion System (including Auxiliary Feedwater System) - Chapter 10 Radiation Protection Systems - Chapter 12 Initial Test Program - Chapter 14 Quality Assurance Program - Chapter 17
50.55a(a)(2)	This paragraph is general in nature leading into Paragraphs (c) through (i) of the regulation.
50.55a(b)(1) 50.55a(b)(2)	These paragraphs provide guidance concerning the approved edition and addenda of Sections III and XI of the ASME B&PV Code.
50.55a(c)	Design and fabrication of the reactor vessel were carried out in accordance with ASME Section III (1971 Edition, through Winter 1973 Addenda).
50.55a(d)	Reactor coolant system piping meets the requirements of ASME Section III (1974 Edition, through Summer 1974 Addenda).
50.55a(e)	Reactor coolant pumps meet the requirements of ASME Section III (1974 Edition).

Regulation (10 CFR)	Compliance
50.55a(f)	Reactor coolant system valves comply with the requirements found in ASME Section III (1974 and 1977 Editions with various addenda as described in FSAR Tables 5.2-0 and 5.2-1).
50.55a(g)	Inservice inspection (ISI) requirements delineated in this part will be specified in the Technical Specifications.
50.55a(h)	As discussed in Chapter 7 of the FSAR, the protection systems meet IEEE 279-1971.
50.55a(i)	Fracture toughness requirements are set forth in Appendices G and H of 10CFR50. Section 5.3 of the FSAR details vessel material parameters.
50.55a(j)	Not applicable to PVNGS.
50.56	This regulation provides that the Commission will, in the absence of good cause shown to the contrary, issue an operating license upon completion of the construction of a facility in compliance with the terms and conditions of the construction permit. This imposes no independent obligation on the applicant.
50.57(a)	This regulation requires the Commission to make certain findings prior to the issuance of an operating license.
50.57(b)	The license, as issued, will contain appropriate conditions to ensure that items of construction or modification are completed on a schedule acceptable to the Commission.
50.57(c)	This regulation provides for a low-power testing license.
50.58	This regulation provides for the review and report of the Advisory Committee on Reactor Safeguards. The review has been completed and the report has been received. Compliance with the report requires NRC Staff action.
50.59	This regulation provides for the licensing of certain changes, tests, and experiments at a licensed facility. Technical Specifications and procedures provide implementation of this regulation.
50.70	The Commission will assign resident inspectors to the Palo Verde Nuclear Generating Station and space will be provided in conformance with 10CFR50 Sections 70(b)(1) through (3).
50.71	Records are and will be maintained in accordance with the requirements of sections (a) through (e) of this regulation and the license.

Regulation (10 CFR)	Compliance
50.72	This regulation defines the requirements for reporting of significant events to NRC Operations Center. Appropriate operations and administrative station procedures will ensure compliance with this rule.
50.78	This regulation is in regard to implementation of the US/IAEA safeguards agreement and is applicable to holders of construction permits.
50.80	This regulation provides that licenses may not be transferred without NRC consent. No application for transfer of licensed authority to operate PVNGS is contemplated by APS; applications of amendments to the Palo Verde construction permits and the operating licenses to reflect changes in ownership have been made and have been approved or are pending before the NRC.
50.81	This regulation permits the creation of mortgages, pledges, and liens on licensed facilities, subject to certain provisions. The regulation prohibits secured creditors from violating the Atomic Energy Act and the Commission's regulations. Circumstances that would invoke this provision do not currently exist.
50.82	This regulation provides for the termination of licenses. It does not apply to the Palo Verde station because no termination of license has been requested.
50.90	This regulation governs applications for amendments to licenses. Future requests for license amendments will be made in accordance with these requirements.
50.91	This regulation provides guidance to the NRC in issuing license amendments. It does not impose any independent obligations on licensees.
50.100, 50.101, 50.102, 50.103	These regulations govern the revocation, suspension, and modification of licenses by the Commission under unusual circumstances. No such circumstances are present and therefore these regulations are not applicable at this time.
50.109	This regulation specifies the conditions under which the NRC may require the backfitting of a facility. This regulation imposes no independent obligations on a licensee unless the NRC proposes a backfitting requirement and therefore this regulation is not applicable.

Regulation (10 CFR)	Compliance
50.110	This regulation governs enforcement of the Atomic Energy Act, the Energy Reorganization Act of 1974, and the NRC's regulations and orders. No enforcement action is at issue in the Palo Verde proceeding, and therefore this regulation is not applicable at this time.
Appendix A	FSAR Section 3.1 discusses the extent to which the design criteria for Palo Verde 1,2&3 plant structures, systems, and components important to safety comply with Title 10, Code of Federal Regulations, Part 50 (10CFR50), Appendix A, "General Design Criteria for Nuclear Power Plants" (GDC). As presented in section 3.1, each criterion is first quoted and then discussed in enough detail to demonstrate compliance with each criterion. For some criteria, additional information may be required for a complete discussion. In some cases, detailed evaluations of compliance with the various general design criteria are incorporated in more appropriate FSAR sections, and are located by reference.
Appendix B	Chapter 17 of the FSAR describes in detail the provisions of the quality assurance program which have been implemented to meet applicable requirements of Appendix B.
Appendix C	This appendix has been removed by 47 FR 13750 (March 31, 1982).
Appendix D	This appendix has been superseded by 10CFR51. As noted in the discussion for 10CFR50 Section 40(d), the requirements of Part 51 have been satisfied.
Appendix E	This appendix specifies requirements for emergency plans. Emergency plans are being developed to provide reasonable assurance that appropriate measures can and will be taken in the event of an emergency to protect the public's health and safety and prevent damage to property. The new criteria for emergency planning developed subsequent to the event at Three Mile Island, Unit 2 are being factored into the emergency planning preparation effort.
Appendix F	This appendix applies to fuel reprocessing plants and related waste management facilities, not to power reactors and is, therefore, not applicable.
Appendix G	Fracture toughness compliance can be found in FSAR Section 5.3. Assurance of adequate fracture toughness of ferritic materials in the reactor coolant pressure boundary (ASME Code, Section III, Class 1 components) is provided by compliance with the requirements for fracture toughness testing included in NB-2300 to Section III of the ASME Code and Appendix G of 10CFR50.

Regulation (10 CFR)	Compliance
Appendix H	Reactor vessel material surveillance program requirements are delineated in this part. Technical Specifications and operating procedures have been established to implement their requirements. Further information is provided in FSAR Chapter 5.
Appendix I	This appendix provides numerical guides for design objectives and limiting conditions for operation to meet the criteria "as low as is reasonably achievable" for radioactive material in light water-cooled nuclear power reactor effluents. ER-OL Section 5.2 and Appendix 5B and FSAR Chapters 2, 11, and 12 discuss the extent to which the criteria for Appendix I are met. License conditions and technical specifications will also address this subject.
Appendix J	Reactor containment leakage testing for water-cooled power reactors is delineated in this appendix. These requirements are given in the Technical Specifications. Additional information concerning compliance can be found in FSAR Sections 6.2.4 and 6.2.6.
Appendix K	This appendix specifies features of acceptable ECCS evaluation models. As described in FSAR Section 6.3 and, by reference, CESSAR Section 6.3, the ECCS subsystem functional parameters are integrated so that the Appendix K requirements are met over the range of anticipated accidents and single failure assumptions. In addition, the ECCS evaluation model used to demonstrate conformance with 10CFR50 Section 46 (see FSAR Section 15.6 and CESSAR Section 6.3.3) is in conformance with Appendix K requirements.
Appendix L	This appendix identifies the information required to be submitted by the applicant to the Attorney General to satisfy the requirements when applying for a facility license. The requirements of this appendix were satisfied at the time of application for the construction permit.
Appendix M	This appendix lists guidelines for the licensing of plants whose site requirements are not considered in the design of the plant structures. Since the site is considered in the plant design, this appendix is not applicable.
Appendix N	This appendix provides the requirements applicable to duplicate plant designs on multiple sites. Since all three Palo Verde units are on a common site this appendix is not applicable.

Regulation (10 CFR)	Compliance
Appendix O	Appendix O provides guidelines for the Staff in reviewing standardization of design. It imposes no independent obligations on the licensee.
Appendix P	Reserved.
Appendix Q	Appendix Q provides procedures and guidelines for the staff in providing a pre-application early review of site suitability and does not deal with the operating license review.
Appendix R	This appendix specifies features of an acceptable fire protection program for nuclear generating stations operating prior to January 1, 1979 except to the extent set forth in Section 50.48(b). Guidance contained in Appendix A to BTP 9.5-1 and the requirements set forth in 10CFR50 Section 48 define the essential elements for an acceptable fire protection program at nuclear power plants docketed for construction permits prior to July 1, 1976. APS has submitted its fire protection program for NRC evaluation and the NRC has concluded that the program will satisfy the applicable requirements of this appendix.
100.1	This regulation is explanatory and does not impose independent obligations on licensees.
100.2	This regulation is explanatory. Palo Verde 1,2&3 is not novel in design and is not unproven as a prototype or pilot plant.
100.3	This regulation is explanatory and does not impose independent obligations on licensees.
100.10	The factors listed related to both the unit design and the site have been provided in the application. Site specifics, including seismology, meteorology, geology, and hydrology, are presented in Chapter 2 of the FSAR. The exclusion area, low population zone, and population center distance are provided and described. The FSAR also describes the characteristics of reactor design and operation.
100.11	Exclusion areas have been established, as described in FSAR Section 2.1. The low population zone for each unit has been established in accordance with this requirement. The FSAR accident analyses in Chapter 15, demonstrate that offsite doses resulting from postulated accidents would not exceed the criteria in this section of the regulation.

Regulation (10 CFR)	Compliance
Appendix A	Appendix A to 10CFR100 provides seismic and geologic siting criteria for nuclear power plants. The NRC has determined that APS has satisfied the requirements of Appendix A as documented in NUREG 0857, Section 2.5.