



U.S. NUCLEAR REGULATORY COMMISSION STANDARD REVIEW PLAN

9.3.1 COMPRESSED AIR SYSTEM

REVIEW RESPONSIBILITIES

Primary - Organization responsible for the review of air systems

Secondary - None

I. AREAS OF REVIEW

The compressed air system (CAS) provides compressed air to station service equipment and to safety-related and nonsafety-related equipment. There may be two systems or subsystems, an instrumentation and control air system (ICAS) which provides control air to safety-related and nonsafety-related components and systems and a station service air system (SSAS) which provides compressed air to nonsafety-related service equipment (e.g., pneumatic tools, cleaning, etc.). If the two systems are interconnected, the area of review includes the ICAS to the outermost isolation valve on all interconnections between the two systems. The review also evaluates the quality of the compressed air provided by the SSAS to the ICAS, if the SSAS is used as a back up source for the ICAS. If the systems are not connected, review is limited to the ICAS. The portions of the CAS described above are reviewed for compliance with 10 CFR 50, appendix A, General Design Criteria (GDCs) 1, 2, and 5 and 10 CFR 50.63.

The specific areas of review are as follows:

1. The ICAS is reviewed for whether safety-related portions of the system are correctly identified and can be isolated from the nonsafety-related portions.
2. The ICAS is reviewed for whether the effects of failure of the nonsafety-related portions or nonseismic Category I equipment or components preclude operation of ICAS safety-related portions.

Revision 2 - March 2007

USNRC STANDARD REVIEW PLAN

This Standard Review Plan, NUREG-0800, has been prepared to establish criteria that the U.S. Nuclear Regulatory Commission staff responsible for the review of applications to construct and operate nuclear power plants intends to use in evaluating whether an applicant/licensee meets the NRC's regulations. The Standard Review Plan is not a substitute for the NRC's regulations, and compliance with it is not required. However, an applicant is required to identify differences between the design features, analytical techniques, and procedural measures proposed for its facility and the SRP acceptance criteria and evaluate how the proposed alternatives to the SRP acceptance criteria provide an acceptable method of complying with the NRC regulations.

The standard review plan sections are numbered in accordance with corresponding sections in Regulatory Guide 1.70, "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants (LWR Edition)". Not all sections of Regulatory Guide 1.70 have a corresponding review plan section. The SRP sections applicable to a combined license application for a new light-water reactor (LWR) are based on Regulatory Guide 1.206, "Combined License Applications for Nuclear Power Plants (LWR Edition)".

These documents are made available to the public as part of the NRC's policy to inform the nuclear industry and the general public of regulatory procedures and policies. Individual sections of NUREG-0800 will be revised periodically, as appropriate, to accommodate comments and to reflect new information and experience. Comments may be submitted electronically by email to NRR_SRP@nrc.gov.

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3. The systems are reviewed for safety-related and nonsafety-related air-operated devices supplied by the ICAS and whether each requires a source of supply air to perform safety-related functions.
4. The systems are reviewed for whether a failure of a component or the loss of a compressed air source prevents any safety-related system, subsystem, or device from performing safety-related functions.
5. The ICAS design is reviewed for the following:
 - A. Capability to isolate part of a system or components in case of component malfunction.
 - B. Instrumentation and control features to determine and verify that the system operates in a correct mode (e.g., valve position indication, pressure).
 - C. Capability of the system to function in adverse environmental phenomena, abnormal operation including station blackout, or accident conditions (e.g., a loss-of-coolant accident or main steam line break concurrent with loss of offsite power). The duration considered for such events/conditions includes the time interval from the onset until the ICAS safety function is no longer required.
 - D. Capability of the system (including interconnected systems designed for backup capability to the ICAS) to supply clean, dry, oil-free instrument air.
 - E. Provisions for periodic testing of the quality of the air delivered to the ICAS components.
 - F. Provisions for periodic pressure, leakage, and functional testing of the safety-related ICAS portions.
 - G. Provisions for adequate inventory and quality for performance of ICAS functions with equipment out of service for maintenance or repair.
 - H. The potential for radiological contamination of the ICAS and, if applicable, provisions for detection of leakage from radioactive systems to the ICAS and preclusion of releases to the environment.
 - I. The air quality and over-pressure protection from air or nitrogen accumulators or nitrogen systems for pressurized-water reactor (PWR) primary and secondary system power-operated relief valves (PORVs) and boiling-water reactor (BWR) safety relief valves (SRVs).
 - J. Provisions for periodic pressure and leakage testing of the accumulators for PWR PORVs or BWR SRVs.
6. Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC). For design certification (DC) and combined license (COL) reviews, the staff reviews the applicant's proposed ITAAC associated with the structures, systems, and components (SSCs) related to this SRP section in accordance with SRP Section 14.3, "Inspections, Tests, Analyses, and Acceptance Criteria." The staff recognizes that the review of ITAAC cannot be completed until after the rest of this portion of the application has been reviewed against acceptance criteria contained in this SRP section. Furthermore, the staff reviews the ITAAC to ensure that all SSCs in this area of review are identified and addressed as appropriate in accordance with SRP Section 14.3.

7. COL Action Items and Certification Requirements and Restrictions. For a DC application, the review will also address COL action items and requirements and restrictions (e.g., interface requirements and site parameters).

For a COL application referencing a DC, a COL applicant must address COL action items (referred to as COL license information in certain DCs) included in the referenced DC. Additionally, a COL applicant must address requirements and restrictions (e.g., interface requirements and site parameters) included in the referenced DC.

Review Interfaces

Other SRP sections interface with this section as follows:

1. Section 3.10: review of the seismic qualification of Category I equipment.
2. Section 3.11: review of the environmental qualification of equipment.
3. Sections 3.2.1 and 3.2.2: determination of acceptability of the seismic and quality group classifications for system components.
4. Sections 3.3.1, 3.3.2, 3.5.3, 3.7.1 through 3.7.4, 3.8.4 and 3.8.5: determination of the acceptability of the design analyses, procedures, and criteria establishing the ability of seismic Category I structures housing the system and supporting systems to withstand the effects of natural phenomena (e.g., safe shutdown earthquake (SSE), probable maximum flood, and tornado missiles).
5. Review of the protection against external events is as follows:
 - A. Section 3.4.1: review of flood protection.
 - B. Section 3.5.2: review of SSCs protected against externally-generated missiles.

A statement to the effect that the system is in a tornado missile- and flood-protected seismic Category I structure or that system components are in individual cubicles or rooms that withstand the effects of tornado winds, flooding, and missiles is acceptable.
6. Sections 3.5.1.1 (outside containment) and 3.5.1.2 (inside containment): review of protection against internally-generated missiles).
7. Section 3.6.1: review of protection against high- and moderate-energy pipe breaks.
8. Sections 3.9.1 through 3.9.3: determination whether components, piping, and structures are designed in accordance with applicable codes and standards.
9. Section 3.9.6: review of the adequacy of the inservice testing program of pumps and valves.
10. Section 5.2.2: review of the capacity of air or nitrogen accumulators used for PWR PORVs and BWR SRVs.
11. Section 6.6: verification of whether inservice inspection requirements are met for system components.
12. Sections 7.1 and 8.1: determination of the adequacy of the design, installation, inspection, and testing of all essential electrical components, system controls, and instrumentation.

13. Sections 8.4 (proposed) and 9.3.1: review of station blackout considerations and CAS capability and capacity for station blackout.
14. Section 9.5.1: review for fire protection.
15. Section 14.2: review of the initial test program.
16. Section 16.0: review for technical specifications.
17. Chapter 17: overall review for quality assurance.

The specific acceptance criteria and review procedures are contained in the referenced SRP sections.

II. ACCEPTANCE CRITERIA

Requirements

Acceptance criteria are based on meeting the relevant requirements of the following Commission regulations:

1. GDC 1 as to safety-related SSCs designed, fabricated, and tested to quality standards commensurate with the importance of the safety functions to be performed.
2. GDC 2 as to safety-related CAS SSCs capability to withstand the effects of earthquakes.
3. GDC 5 as to the sharing of safety-related SSCs.
4. 10 CFR 50.63, "Loss of all alternating current power," as to the ability of a plant to withstand for a specified duration and recover from a station blackout.
5. 10 CFR 52.47(b)(1), which requires that a DC application contain the proposed inspections, tests, analyses, and acceptance criteria (ITAAC) that are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, a plant that incorporates the design certification is built and will operate in accordance with the design certification, the provisions of the Atomic Energy Act, and the NRC's regulations.
6. 10 CFR 52.80(a), which requires that a COL application contain the proposed inspections, tests, and analyses, including those applicable to emergency planning, that the licensee shall perform, and the acceptance criteria that are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, the facility has been constructed and will operate in conformity with the combined license, the provisions of the Atomic Energy Act, and the NRC's regulations.

SRP Acceptance Criteria

Specific SRP acceptance criteria acceptable to meet the relevant requirements of the NRC's regulations identified above are as follows for the review described in this SRP section. The SRP is not a substitute for the NRC's regulations, and compliance with it is not required. However, an applicant is required to identify differences between the design features, analytical techniques, and procedural measures proposed for its facility and the SRP acceptance criteria and evaluate how the proposed alternatives to the SRP acceptance criteria provide acceptable methods of compliance with the NRC regulations.

1. Acceptance for meeting the relevant aspect of GDC 1 is based on compliance with the criteria specified in American National Standards Institute/Instrument Society of America (ANSI/ISA) S7.3-R1981 related to minimum instrument air quality standards.
2. Acceptance for meeting the relevant requirements of GDC 2 as it relates to seismic classification is based on compliance to guidance provided in RG 1.29, Positions C.1 and C.2.
3. Acceptance for meeting the relevant requirements of GDC 5 as it relates to the sharing of safety-related SSCs is based on the criteria set forth here for CAS SSCs shared among multiple units.
4. Acceptance for meeting the relevant requirements of 10 CFR 50.63 as it relates to the CAS design and the ability of a plant to withstand for a specified duration and recover from a station blackout is based on RG 1.155.

Technical Rationale

CASs may be divided into subsystems that provide control air to safety-related components and systems and subsystems that provide compressed air to nonsafety-related components and systems. For the purposes of these technical rationales, CAS portions that provide control air to safety-related components and systems are referred to as the ICAS.

The technical rationale for application of these acceptance criteria to the areas of review addressed by this SRP section is discussed in the following paragraphs:

1. GDC 1 requires that safety-related SSCs be designed, fabricated, erected, and tested to quality standards commensurate with the importance of the safety functions performed. The ICAS provides compressed air or nitrogen required to actuate or control equipment that performs safety-related functions during normal operations, transients, or accidents.

Generic Issue 43, "Reliability of Air Systems," states concerns about the reliability of safety-related equipment actuated or controlled by compressed air. As indicated in NUREG-1275 and Generic Letter 88-14 as to this generic issue, (e.g., oil, particulate, water, etc.) compressed air contamination is a significant contributor to unreliability in safety-related equipment controlled or actuated by compressed air. In some plant designs, the ICAS or equipment supplied by the ICAS may be supplied under certain operating conditions from backup compressed air sources outside the scope of the ICAS. In these cases there is the potential for a contaminated compressed air source to adversely affect the reliability of the ICAS or equipment supplied by the ICAS.

RG 1.68.3 recognizes this potential and RG 1.68.3, Position C.9, states the guidance that pre-operational testing should verify whether equipment designed to be supplied by the instrument and control air system is not supplied by other compressed air supplies with less restrictive air quality requirements.

ANSI/ISA-S7.3-R1981 provides air quality criteria. This criteria, if followed for the ICAS and backup compressed air sources, help ensure that ICAS and the equipment supplied from the ICAS will reliably perform their intended safety functions.

2. GDC 2 requires that safety-related SSCs be designed to withstand the effects of natural phenomena, including earthquakes, without loss of capability to perform safety functions. The ICAS provides compressed air or nitrogen required to actuate or control equipment that performs safety-related functions during normal operations, transients, or accidents. A seismic design classification system based on SAR reviews identifies plant features that should be designed to withstand SSE effects. RG 1.29 describes an acceptable method for identifying and classifying features of light-water reactor nuclear

power plants that should be designed to withstand SSE effects. SSCs that should be designed to remain functional if the SSE occurs are designated as seismic Category 1. RG 1.29, Position C.1, states that systems required for safe shutdown, including their foundations and supports, are designated as seismic Category I and should be designed to withstand SSE effects and remain functional. RG 1.29, Position C.2, states that SSCs, the continued function of which is not required but the failure of which could reduce the functioning of any seismic Category I plant feature to an unacceptable safety level or could result in incapacitating injury to control room occupants, should be designed and constructed so that the SSE would not result in such failure. RG 1.29, Positions C.1 and C.2, assures that the ICAS will remain functional during an earthquake and provide compressed air necessary for the actuation and control of safety-related equipment.

3. GDC 5 prohibits the sharing of SSCs among nuclear power units unless such sharing can be shown not to significantly impair their ability to perform safety functions, including, in an accident in one unit, an orderly shutdown and cool-down of the remaining units. The ICAS provides compressed air or nitrogen required to actuate or control equipment that performs safety-related functions during normal operations, transients, or accidents. The ICAS must be designed such that there is no compromise of the ability of systems and components to perform these safety-related functions for each unit regardless of CAS equipment failures or other events that may occur in other units. GDC 5 requirements provide assurance that unacceptable effects of equipment failures or other events occurring in any unit of a multi-unit site will not propagate to unaffected units.
4. 10 CFR 50.63 requires that each light-water-cooled nuclear power plant licensed to operate must be able to withstand a station blackout for a specified duration and recover from it. Depending on the design-specific approach for demonstrating ability to withstand and recover from a station blackout, the CAS may provide compressed air or nitrogen to actuate or control equipment necessary for core cooling and decay heat removal or maintain containment integrity following a station blackout. RG 1.155 describes a method acceptable to the staff for compliance with 10 CFR 50.63. RG 1.155, Position 3.2.2, indicates that the capability of all systems and components necessary for core cooling and decay heat removal following a station blackout should be determined, including compressed air capacity, when determining the plant's capability to cope with a station blackout. RG 1.155, Position 3.3.3, provides guidance for the use of alternate compressed air sources if the compressed air capacity is not sufficient to cope with a station blackout. RG 1.155, Position 3.5, provides guidance for quality assurance and specifications for nonsafety-related equipment under 10 CFR 50.63 not already under 10 CFR Part 50, Appendix B quality assurance requirements. 10 CFR 50.63 and the positions of RG 1.155 on the ability to withstand, cope with, and recover from a station blackout provide additional defense in depth against unacceptable offsite consequences if both offsite and onsite emergency alternating current power systems fail concurrently.

III. REVIEW PROCEDURES

The reviewer will select material from the procedures described below, as may be appropriate for a particular case.

These review procedures are based on the identified SRP acceptance criteria. For deviations from these acceptance criteria, the staff should review the applicant's evaluation of how the proposed alternatives provide an acceptable method of complying with the relevant NRC requirements identified in Subsection II.

The procedures below during the construction permit review determine whether the design criteria and bases and the preliminary design as set forth in the preliminary SAR meet the recommendations and requirements of Subsection II of this SRP section. For operating license reviews, the procedures verify whether the initial design criteria and bases are implemented appropriately in the final design as set forth in the final SAR. The procedures for operating license and DC reviews include a determination whether the content and intent of the applicant's technical specifications agree with the requirements for system testing, minimum performance, and surveillance developed from the staff's review.

Because of various CAS designs for different plants, there are variations in system requirements. For purposes of this SRP section, a typical CAS is assumed to have two independent systems, an SSAS and an ICAS.

The SAR is reviewed to determine from information in the system description section whether the SSAS is connected to the ICAS as a backup instrumentation and control air source. If the two systems are connected, then the area of review extends from the ICAS to the outermost isolation valves on all connections between the two systems. The drawings and descriptions are reviewed for whether two automatically-operated isolation valves in series separate the SSAS from the ICAS and whether these isolation valves are classified Quality Group C and seismic Category I. The quality of the air supplied from the SSAS is reviewed for accordance with ANSI/ISA-S7.3-R1981 air quality requirements. If the systems are not connected, then the review is limited to the ICAS.

1. The system description, system piping and instrument diagrams (P&IDs), layout drawings, and component descriptions and characteristics are reviewed for the following:
 - A. Safety-related ICAS portions are identified correctly and can be isolated from the nonsafety-related portions. The P&IDs are reviewed for whether they clearly indicate the physical division between each portion. System drawings are also reviewed for whether they show the means for accomplishing isolation and the system description is reviewed for minimum performance requirements of the isolation valves. For the typical system, the drawings and descriptions are reviewed for whether two automatically-operated isolation valves in series separate the nonsafety-related from the safety-related portions of the system.
 - B. Safety-related ICAS portions, including the isolation valves separating safety-related from nonsafety-related portions, are classified Quality Group C and seismic Category I. SAR component and system descriptions of mechanical and performance characteristics are reviewed for whether the classifications are included and whether the P&IDs indicate points of change in any design classification. The review for seismic design and the reviews for seismic and quality classification are as indicated in subsection I of this SRP section.
 - C. In addition to the SSAS, other connected systems including air or nitrogen accumulators and nitrogen systems designed to provide backup nitrogen or compressed air to the ICAS are identified.
 - D. If an air or nitrogen accumulator is a compressed air supply or backup air source, the effects on the system and components (e.g., safety-relief valves, solenoid actuators, etc.) of potential over-pressurization are reviewed.
2. The ICAS is reviewed for whether the system meets ANSI/ISA-S7.3-R1981, including connected or backup systems like air or nitrogen accumulators, nitrogen systems, or other air systems designed to backup the ICAS.

- A. The dew point at line pressure for outdoor installations (where any part of the instrument air system is exposed to the outdoor atmosphere) must be at least 10 °C (18 °F) below the minimum recorded ambient temperature at the plant site. The dew point at line pressure for indoor installations (where the entire instrument air system is installed indoors) must be at least 10 °C (18 °F) below the minimum temperature to which any part of the instrument air system is exposed at any season of the year. The dew point at line pressure for indoor installation should never exceed 2 °C (approximately 35 °F).
- B. The maximum particle size in the air stream at the instrument must be three (3) micrometers.
- C. The maximum total oil or hydrocarbon content, exclusive of non-condensables, must be as close to zero (0) weight ratio (w/w) or volume ratio (v/v) as possible and never exceed one (1) ppm w/w or v/v under normal operating conditions.
- D. The instrument air must be free of all corrosive, contaminated, or hazardous gases, flammable or toxic, drawn into the instrument airstream.
- E. A regular periodic check should assure high-quality instrument air.

An acceptable ICAS consists of non-oil-lubricated (dry) compressors and automatic molecular sieve air dryers with input and output filters.

- 3. The reviewer evaluates the system failure modes and effects for whether the failure of nonsafety-related portions of the system or of other systems not designed to seismic Category I standards and located close to safety-related portions of the ICAS or of nonseismic Category I structures that house, support, or bound the ICAS preclude operation of safety-related ICAS portions. SAR statements to the effect that these conditions are met are acceptable.
- 4. The reviewer evaluates the ICAS for whether an adequate ICAS air supply source is available to cope with the following events:
 - A. Loss of Offsite Power. If the minimum performance requirements stated in the SAR are met, the system design is acceptable assuming a concurrent failure of a single, active component, including an emergency power source. SAR statements and failure mode and effects analysis results are considered for whether the system meets these requirements and are acceptable verification of system functional reliability. In addition, the reviewer determines whether the equipment affected by the loss of offsite power and subsequent loss of air supply fails in a safe position.
 - B. Station Blackout. The review of station blackout is under RG 1.155 and coordinated with station blackout review under SRP Section 8.4 (proposed). If ICAS capability and capacity are sufficient for plant ability to withstand, cope with (for the specified duration), and recover from station blackout, the system is deemed acceptable. If ICAS capability or capacity is not sufficient, RG 1.155, Positions 3.3.3 and 3.5, are additional guidance.
- 5. The reviewer verifies whether an adequate maintenance, periodic testing, and surveillance program ensures continuous reliable CAS functioning. The reviewer also verifies whether design provisions for appropriate periodic ICAS pressure, leakage, air quality, and functional testing are adequate to assure the structural integrity, leak-tight ability, operability, and performance of the active components and capability of the

system to function as intended during design-basis events, loss of offsite power, or station blackout.

6. The descriptive information, P&IDs, ICAS drawings, and SAR failure modes and effects analyses are reviewed for whether the CAS ICAS portion functions following design-basis accidents, assuming a concurrent, single, active failure. The reviewer evaluates the SAR information for the ability of required components to function, traces the availability of these components on system drawings, and checks that the SAR verifies whether minimum compressed air flow requirements are met for each degraded situation for the required duration. In addition, the reviewer checks the following to verify whether air-operated components function as intended during design-basis events, loss of offsite power, or station blackout:
 - A. The ICAS functional design, including air or nitrogen accumulators, is in accordance with its intended function.
 - B. Air-operated component failure positions are correct for assurance of required functions upon a sudden as well as a gradual loss of air pressure.
 - C. Periodic testing leakage limits ensure air-operated component function as intended for required durations.

For each case the design is acceptable if it meets minimum system requirements.

7. The reviewer verifies whether safety-related ICAS systems and components are not shared among nuclear power units unless such sharing is shown not to impair their ability to perform safety functions, including, in an accident in one unit, an orderly shutdown and cool-down of the remaining units.
8. The reviewer determines whether the CAS could become contaminated through interfaces with radioactive systems (e.g., contaminated due to leakage, valving errors, faulty operation in other radioactive systems, etc.). If the system could become contaminated, the reviewer ensures that provisions for detection, collection, and control of system leakage detect leakage of activity from one system to another and preclude its release to the environment.
9. For review of a DC application, the reviewer should follow the above procedures to verify that the design, including requirements and restrictions (e.g., interface requirements and site parameters), set forth in the final safety analysis report (FSAR) meets the acceptance criteria. DCs have referred to the FSAR as the design control document (DCD). The reviewer should also consider the appropriateness of identified COL action items. The reviewer may identify additional COL action items; however, to ensure these COL action items are addressed during a COL application, they should be added to the DC FSAR.

For review of a COL application, the scope of the review is dependent on whether the COL applicant references a DC, an early site permit (ESP) or other NRC approvals (e.g., manufacturing license, site suitability report or topical report).

10. For review of both DC and COL applications, SRP Section 14.3 should be followed for the review of ITAAC. The review of ITAAC cannot be completed until after the completion of this section.

IV. EVALUATION FINDINGS

The reviewer verifies that the applicant has provided sufficient information and that the review and calculations (if applicable) support conclusions of the following type to be included in the staff's safety evaluation report. The reviewer also states the bases for those conclusions.

The ICAS includes all components and piping and the points of connection or interfaces with other systems. The ICAS provides a continuous air supply to safety-related components and is classified seismic Category I and Quality Group C.

The basis for acceptance in the staff review is compliance of the applicant's ICAS design and design criteria with NRC regulations as set forth in the general design criteria and with applicable RGs, staff technical positions, and industry standards.

The staff concludes that the CAS design is acceptable and complies with GDCs 1, 2, and 5 as to quality standards, seismic design, and sharing of systems and components and 10 CFR 50.63 as to station blackout. These conclusions are based on the following findings:

1. The applicant meets GDC 1 requirements as to quality standards by meeting ANSI/ISA-S7.3-R1981 for minimum instrument air quality standards for the ICAS and compressed air sources that back up the ICAS.
2. The applicant meets GDC 2 requirements as to seismic design by meeting RG 1.29, Position C.1 or C.2.
3. The applicant meets GDC 5 requirements as to the capability of safety-related shared systems and components to perform required safety functions as a failure in the system does not impair the system's safety function for either unit.
4. The applicant has met 10 CFR 50.63 requirements as to station blackout by CAS compliance with Regulatory Guide 1.155.

For DC and COL reviews, the findings will also summarize the staff's evaluation of requirements and restrictions (e.g., interface requirements and site parameters) and COL action items relevant to this SRP section.

In addition, to the extent that the review is not discussed in other SER sections, the findings will summarize the staff's evaluation of the ITAAC, including design acceptance criteria, as applicable.

V. IMPLEMENTATION

The staff will use this SRP section in performing safety evaluations of DC applications and license applications submitted by applicants pursuant to 10 CFR Part 50 or 10 CFR Part 52. Except when the applicant proposes an acceptable alternative method for complying with specified portions of the Commission's regulations, the staff will use the method described herein to evaluate conformance with Commission regulations.

The provisions of this SRP section apply to reviews of applications submitted six months or more after the date of issuance of this SRP section, unless superseded by a later revision.

VI. REFERENCES

1. 10 CFR 50.63, "Loss of All Alternating Current Power."
2. 10 CFR Part 50, Appendix A, GDC 1, "Quality Standards and Records."

3. 10 CFR Part 50, Appendix A, GDC 2, "Design Bases for Protection Against Natural Phenomena."
4. 10 CFR Part 50, Appendix A, GDC 5, "Sharing of Structures, Systems, and Components."
5. RG 1.29, "Seismic Design Classification."
6. RG 1.155, "Station Blackout."
7. NUREG-1275, Volume 2, "Operating Experience Feedback Report - Air Systems Problems."
8. NRC Letter to All Holders of Operating Licenses or Construction Permits for Nuclear Power Reactors, "Instrument Air Supply System Problems Affecting Safety-Related Equipment (Generic Letter No. 88-14)," August 8, 1988.
9. ANSI/ISA-S7.3-1976, Reaffirmed 1981, "Quality Standard for Instrument Air."

PAPERWORK REDUCTION ACT STATEMENT

The information collections contained in the Standard Review Plan are covered by the requirements of 10 CFR Part 50 and 10 CFR Part 52, and were approved by the Office of Management and Budget, approval number 3150-0011 and 3150-0151.

PUBLIC PROTECTION NOTIFICATION

The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid OMB control number.
