

A. DESCRIPTION OF THE PROPOSED CHANGE REQUEST

The requested change regarding the ESF air filtration unit charcoal involves only the initial qualification tests which are performed by the manufacturers to certify suitability of the impregnated activated carbon for removal of radio-iodines from airstreams and the verification tests which are performed by the user prior to installation of the charcoal into the filter unit. The differences between ANSI N509-1976 and ANSI N509-1980, Tables 5-1, reflect a refinement in the test methods used for initial qualification. (See Table 1).

PVNGS requests a change to the 1980 standard which has been accepted by the NRC and the acceptance is documented in Section 6.5.1 of the Standard Review Plan, Revision 2, July 1981.

TABLE 1

Summary of Differences Between Table 5-1
of ANSI N509-1976 and ANSI N509-1980

A. Physical Characteristics:

	<u>1976</u>	<u>1980</u>
1. Particle Size Distribution:		
Retained on #6 Sieve	0.0%	0.1% max.
Retained on #8 Sieve	5.0%	5.0% max.
Thru #8, Retained on #12	40-60%	60% max.
Thru #12, Retained on #16	40-60%	40% min.
Thru #16, Retained on #16	5.0% max.	5.0% max.
Thru #18, Retained on #16	1.0% max.	1.0% max.
2. Hardness No.	95 min.	92 min.
3. Ignition Temp (Min)	330°C	330°C
4. CCL ₄ Activity	60 min.	60 min.
5. Bulk Density (min.)	0.38 gm/ML	0.38g/cm ³

B. Performance Efficiency

1. Methyl Iodide @ 95% RM	99% at 25°C	97% @ 30°C
2. Methyl Iodide @ 80°C & 95% RH	99%	99%
3. Methyl Iodide @ 130°C, 95% RH	98%	98%
4. Elemental Iodine Retention	99.9% Loading 99.9% Incl. Elution	99.9% min.
5. Elemental Iodine @ 180°C	NA	99.5% min.



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B. BASIS FOR NO SIGNIFICANT HAZARDS DETERMINATION

The proposed change does not involve a significant hazards consideration because operation of Palo Verde Units 1 and 2 in accordance with this change would not:

- 1) Involve a significant increase in the probability or consequences of an accident previously evaluated. This change allows for the use of ANSI N509-1980 in lieu of the outdated version, ANSI N509-1976 for acceptance criteria of a surveillance test for Technical Specification 4.7.7.b(2) and 4.7.7.c. The impact of changing the versions of the standard on the surveillance test is on the requirements for the charcoal filters when new (unused). The methods of testing and acceptance criteria on used charcoal filters remain the same. The 1980 standard compensates for the fact that the charcoal filters efficiency increases as the temperature increases. The Standard Review Plan, NUREG 0800, section 6.5.1 references ANSI N509-1980. The acceptance criteria of this test still falls within the parameters assumed for the existing safety analysis.
- 2) Create the possibility of a new or different kind of accident from any previously analyzed. No "limiting conditions of operations" are being changed. An updated version of a standard is being incorporated into the Technical Specification for use with a surveillance requirement as mentioned above, this updated standard has been found to be acceptable to the NRC. Since the 1980 version of the standard has acceptance criteria which are more conservative than the assumptions made for the existing safety analysis, the possibility of a new or different kind of accident will not be created.
- 3) Involve a significant reduction in a margin of safety. As was stated previously, the acceptance criteria of the 1980 version of the standard are more conservative than the assumptions made for the existing safety analysis. The surveillance interval is not being changed, nor is the method of testing. The charcoal filters have been tested to the requirements of ANSI N509-1980 in its entirety and meet those requirements. The charcoal filters had met all the requirements of ANSI N509-1976 except for the requirements of Methyl Iodide, 30°C, 95% RH. The charcoal filter failed this test by less than 1%, however, they exceed the requirements of ANSI N509-1980.

The Commission has provided guidance concerning the application of the standards for determining whether a significant hazards consideration exists. The proposed change is similar to example (vii), a change to make a license conform to changes in the regulations, where the change results in very minor changes to facility operations clearly in keeping with the regulations. This change modifies the Technical Specifications to include a standard referenced in the Standard Review Plan, NUREG 0800 (1981) instead of one referenced in Regulatory Guide 1.52 Revision 2 (1978).



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C. JUSTIFICATION FOR EMERGENCY CLASSIFICATION

During a review of documentation prior to installation of the PVNGS Unit 3 charcoal filter beds, it was discovered that the charcoal did not fully meet the requirements of ANSI N509-1976. This condition was evaluated for its effect on the charcoal filters installed in Units 1 and 2. The evaluation determined that the charcoal filters installed in Units 1 and 2 did not fully meet the ANSI N509-1976 requirements with regard to radioactive removal efficiency. Technical Specification surveillance requirement 4.7.7.b.2 and 4.7.7.c requires sampling and testing in accordance with Regulatory Position C.6.a and C.6.b which reference ANSI N509-1976.

The information from Units 1 and 2 which was reviewed included a copy of startup NCR #SN 3331 which was generated on November 18, 1983 identifying a lack of certification for the charcoal purchased under Spec. 13-MM-620 and 13-MM-721B. The final disposition stated that per tests performed on the subject charcoal, the charcoal met the requirements of Regulatory Guide 1.52, Revision 2. Upon review of the test results, it was discovered that although all of the charcoal met the physical characteristic criteria of ANSI N509-1976 (Table 5.1), these lots had not met the Methyl Iodide removal efficiency of 99% at 25°C and 95% RH:

<u>Charcoal I.D.</u>	<u>Efficiency @ 25°C</u>
Item 4 Lot 2	98.53%
Item 4 Lot 3	98.06%
Item 4 Lot 4	98.53%

All other test results met the criteria of both ANSI N509-1976 and ANSI N509-1980. Additional tests had been performed on all the charcoal samples @ 30°C and 95% RH as per ANSI N509-1980 for a required Methyl Iodide efficiency of 97%. The samples tested as follows:

Item 4 Lot 2	98.66% @ 30°C
Item 4 Lot 3	98.22% @ 30°C
Item 4 Lot 4	98.67% @ 30°C

Through review of Unit 1 and 2 startup records all essential filtration units which had been loaded with charcoal from Item 4 Lots 2, 3 and 4 have been identified (1M-HJA-F04, 1M-HJB-F04 and 2M-HJA-F04). All other units met the criteria of both ANSI N509-1976 and 1980. A review of all surveillance tests for charcoal lab analysis (see Table 2), performed in accordance with Regulatory Guide 1.52, Revision 2, Table 2 indicates that the efficiencies for used charcoal have met Regulatory Guide 1.52, Revision 2, Table 2 criteria of greater than 99% @ 80°C and 70% RH.

TABLE 2

Surveillance Testing for Charcoal Efficiency @ 80°C & 70% RH

<u>Unit 1</u>	<u>Date</u>	<u>Efficiency</u>	<u>Procedure</u>
1M-HFA-J01	03/20/84	99.98%	74ST-1NF01
1M-HFA-J01	01/25/85	99.99%	74ST-1NF01
1M-HFA-J01	05/22/86	99.99%	73ST-9HF04-1
1M-HFB-J01	03/24/84	99.99%	74ST-1HF02
1M-HFB-J01	01/25/85	99.99%	74ST-1HF02
1M-HFB-J01	07/01/86	99.85%	73ST-9HF05-1
1M-HJA-F04	03/27/84	99.92%	74ST-1HJ01
1M-HJA-F04	10/18/84	99.57%	74ST-1HJ01
1M-HJA-F04	01/25/85	99.98%	74ST-1HJ01
1M-HJA-F04	06/10/85	99.98%	74ST-1HJ01
1M-HJA-F04	12/24/85	99.96%	73ST-9HJ04-1
1M-HJA-F04	05/22/86	99.99%	73ST-9HJ04-1
1M-HJB-F04	03/27/84	99.91%	74ST-1HJ02
1M-HJB-F04	10/18/84	99.59%	74ST-1HJ02
1M-HJB-F04	01/25/85	99.99%	74ST-1HJ02
1M-HJB-F04	06/10/85	99.99%	74ST-1HJ02
1M-HJB-F04	03/27/86	99.98%	73ST-9HJ05-1
1M-HJB-F04	05/22/86	99.94%	73ST-9HJ05-1
2M-HFA-J01	11/25/85	99.99%	73ST-9HF04-2
2M-HFB-J01	11/25/85	99.92%	73ST-9HF05-2
2M-HJA-F04	10/04/85	99.97%	73ST-9HJ04-2
2M-HJA-F04	05/22/86	99.98%	73ST-9HJ04-2
2M-HJB-F04	10/02/85	99.94%	73ST-9HJ05-2
2M-HJB-F04	12/24/85	99.98%	73ST-9HJ05-2
2M-HJB-F04	05/22/86	99.68%	73ST-9HJ05-2

D. SAFETY EVALUATION OF THE PROPOSED AMENDMENT REQUEST

The control room essential filtration system is not directly used to help the plant achieve safe shutdown. This system ensures that the control room will remain habitable for operations personnel during and following all credible accident conditions. The PVNGS accident analysis assumes a filter efficiency of 95%. ANSI N509-1976 required new charcoal filter for Methyl Iodide 25°C, 95% RH to be 99% efficient. ANSI N509-1980 requires an efficiency of 97% at 30°C and 95% RH. The actual efficiency test results for filters used at PVNGS (2 filters in Unit 1 and 1 filter in Unit 2) were 98.06% at 25°C, 95% RH and 98.22% at 30°C 95% RH. The values given here are the lowest of the test results. The results show that the filters failed to meet ANSI N509-1976



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criteria by less than 1%. As called out by Regulatory Guide 1.52 Revision 2, this ANSI Standard is used only for new charcoal filters. The PVNGS filters had met all the criteria for used filters when surveillance tests were performed. Due to the data presented, it is clear that updating the surveillance requirements in the Technical Specifications to include the 1980 version of the ANSI Standard will not increase the probability of occurrence of accidents or malfunctions of equipment important to safety as analyzed in the Final Safety Analysis Report (FSAR).

Because the change does not involve a change to the plant design or the manner in which the plant is operated and the current analyses in the FSAR remain valid, the possibility of any new accident or malfunction is not created.

The NRC has reviewed ANSI N509-1980 and incorporated it as acceptance criteria in the Standard Review Plan, NUREG 0800, Section 6.5.1 Revision 2, 1981. No change is being made to the surveillance interval or the testing method. The control room essential filtration system will still serve the same purpose and function in the same manner as before this proposed change.

Therefore, based on the above considerations, ANPP has determined that this change does not involve a significant hazards consideration.

E. ENVIRONMENTAL IMPACT CONSIDERATION DETERMINATION

The proposed change request does not involve an unreviewed environmental question because operation of PVNGS Units 1 and 2 in accordance with this change would not:

1. Result in a significant increase in any adverse environmental impact previously evaluated in the Final Environmental Statement (FES) as modified by the staff's testimony to the Atomic Safety and Licensing Board, Supplements to the FES, Environmental Impact appraisals, or in any decisions of the Atomic Safety and Licensing Board; or
2. Result in a significant change in effluents or power levels; or
3. Results in matters not previously reviewed in the licensing basis for PVNGS which may have a significant environmental impact.

F. PROPOSED TECHNICAL SPECIFICATION CHANGE

See attached marked up Technical Specification sections for Units 1 and 2.



11-11-61

1. The first part of the report discusses the general situation of the company and the results of the survey. It is noted that the company has experienced a steady increase in sales over the past few years, and that the survey has revealed a number of areas where the company is doing well, as well as some areas where it needs to improve.

2. The second part of the report discusses the results of the survey in more detail. It is noted that the survey has revealed a number of areas where the company is doing well, such as its product quality and customer service. However, it also reveals some areas where the company needs to improve, such as its marketing and sales efforts.

3. The third part of the report discusses the recommendations for the company. It is recommended that the company should focus on improving its marketing and sales efforts, and that it should also continue to invest in its product quality and customer service.

4. The fourth part of the report discusses the conclusions of the survey. It is concluded that the company is in a strong position, but that it needs to continue to improve in order to maintain its competitive edge.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

1. Verifying that the cleanup system satisfies the in-place testing acceptance criteria and uses the test procedures of Regulatory Positions C.5.a, C.5.c and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rate is 28,600 cfm \pm 10%.
 2. Verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978* meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978*.
 3. Verifying a system flow rate of 28,600 cfm \pm 10% during system operation when tested in accordance with ANSI N510-1980.
- c. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978* meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978*.
- d. At least once per 18 months by:
1. Verifying that the pressure drop across the combined HEPA filters, pre-filters, and charcoal adsorber banks is less than 8.4 inches Water Gauge while operating the system at a flow rate of 28,600 cfm \pm 10%.
 2. Verifying that on a Control Room Essential Filtration Actuation Signal and on a SIAS, the system is automatically placed into a filtration mode of operation with flow through the HEPA filters and charcoal adsorber banks.
 3. Verifying that the system maintains the control room at a positive pressure of greater than or equal to 1/8-inch Water Gauge relative to adjacent areas during system operation at a makeup flow rate to the control room of less than or equal to 1000 cfm.
 4. Verifying that the emergency chilled water system will maintain the control room environment at a temperature less than or equal to 80°F for a period of 30 minutes.

* ANSI N 509-1980 is applicable for this specification



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The guidance of Regulatory Guide 1.52, Revision 2, Regulatory Positions C.6.a and C.6.b are followed by using the qualification criteria for new charcoal of Table 5-1 of ANSI N 509-1980, as documented in Section 6.5.1 of the Standard Review Plan.

PLANT SYSTEMS

BASES

3/4.7.7 CONTROL ROOM ESSENTIAL FILTRATION SYSTEM

The OPERABILITY of the control room essential filtration system ensures that the control room will remain habitable for operations personnel during and following all credible accident conditions. The OPERABILITY of this system in conjunction with control room design provisions is based on limiting the radiation exposure to personnel occupying the control room to 5 rem or less whole body, or its equivalent. This limitation is consistent with the requirements of General Design Criterion 19 of Appendix A, 10 CFR Part 50.

3/4.7.8 ESF PUMP ROOM AIR EXHAUST CLEANUP SYSTEM

The OPERABILITY of the ESF pump room air exhaust cleanup system ensures that radioactive materials leaking from the ECCS equipment within the pump room following a LOCA are filtered prior to reaching the environment. The operation of this system and the resultant effect on offsite dosage calculations was assumed in the safety analyses.

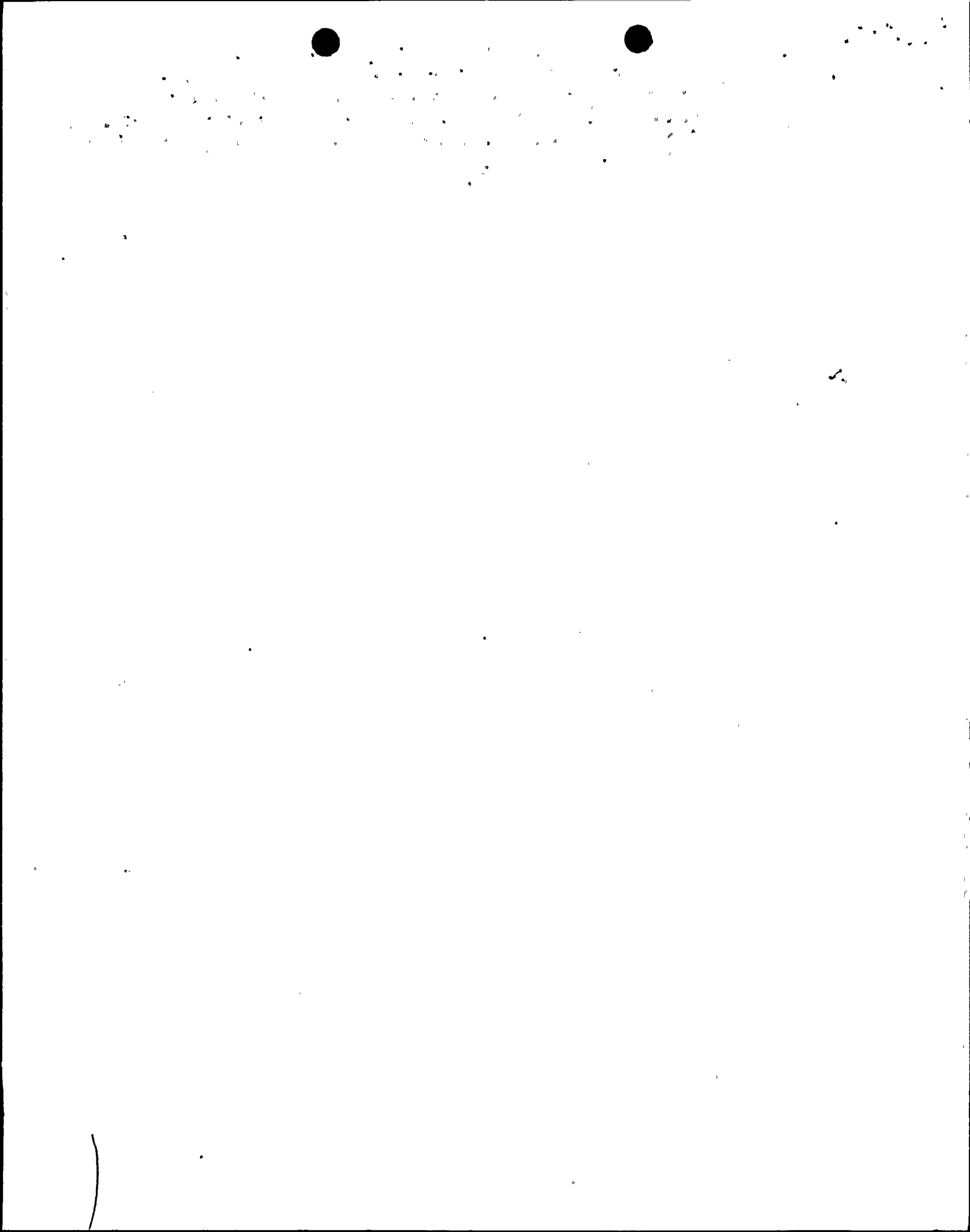
3/4.7.9 SNUBBERS

All snubbers are required OPERABLE to ensure that the structural integrity of the reactor coolant system and all other safety-related systems is maintained during and following a seismic or other event initiating dynamic loads. Snubbers excluded from this inspection program are those installed on nonsafety-related systems and then only if their failure or failure of the system on which they are installed, would have no adverse effect on any safety-related system.

Snubbers are classified and grouped by design and manufacturer but not by size. For example, mechanical snubbers utilizing the same design features of the 2-kip, 10-kip, and 100-kip capacity manufactured by Company "A" are of the same type. The same design mechanical snubbers manufactured by Company "B" for the purposes of this Technical Specification would be of a different type, as would hydraulic snubbers from either manufacturer.

A list of individual snubbers with detailed information of snubber location and size and of system affected shall be available at the plant in accordance with Section 50.71(c) of 10 CFR Part 50. The accessibility of each snubber shall be determined and approved by the Plant Review Board. The determination shall be based upon the existing radiation levels and the expected time to perform a visual inspection in each snubber location as well as other factors associated with accessibility during plant operations (e.g., temperature, atmosphere, location, etc.), and the recommendations of Regulatory Guides 8.8 and 8.10. The addition or deletion of any hydraulic or mechanical snubber shall be made in accordance with Section 50.59 of 10 CFR Part 50.

The visual inspection frequency is based upon maintaining a constant level of snubber protection. Therefore, the required inspection interval varies inversely with the observed snubber failures and is determined by the number

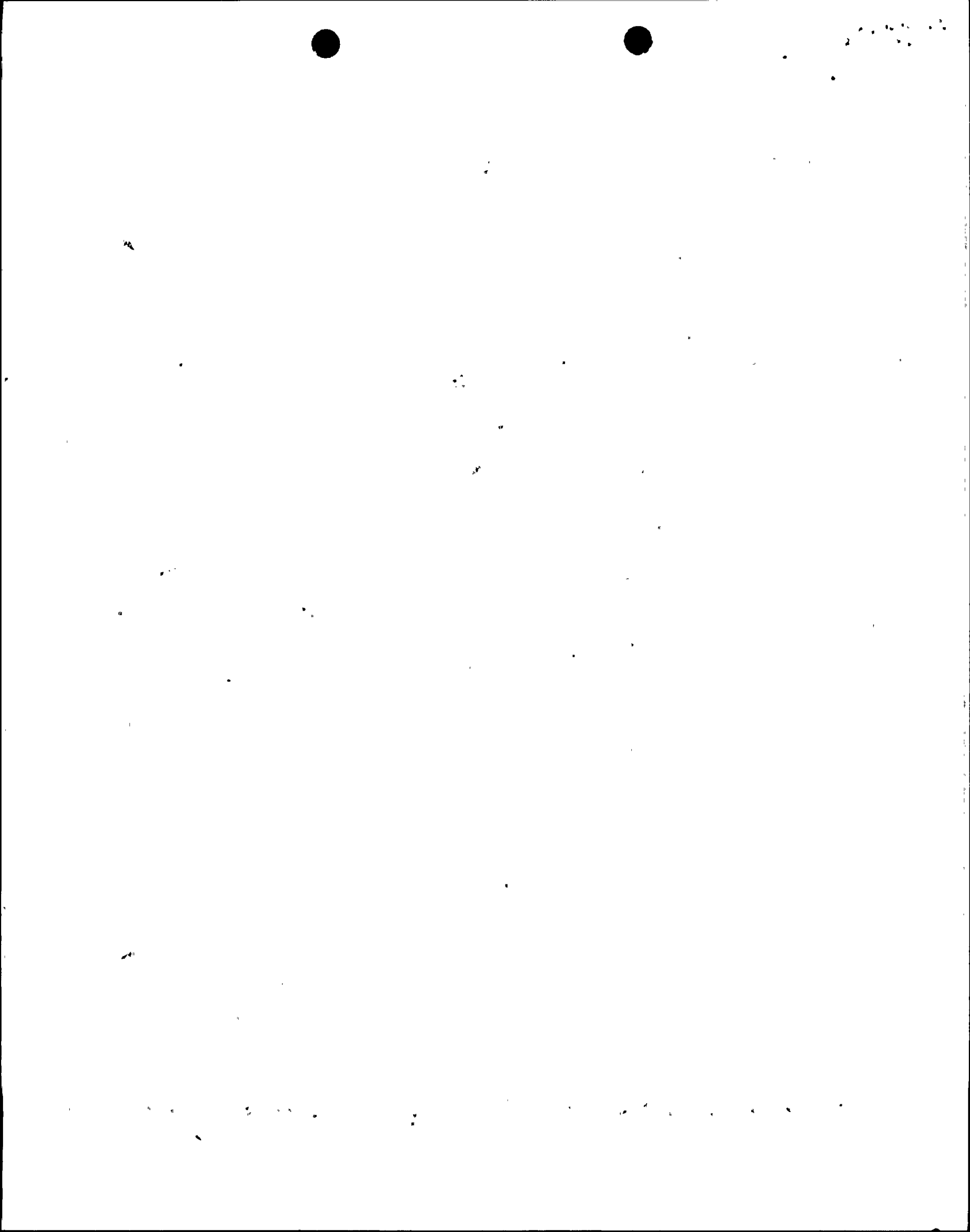


PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

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 4. Verifying that the emergency chilled water system will maintain the control room environment at a temperature less than or equal to 80°F for a period of 30 minutes.

* ANSI N509-1980 is applicable for this specification



PLANT SYSTEMS

BASES

The guidance of Regulatory Guide 1.52, Revision 2, Regulatory Positions c.6.a and c.6.b are followed by using the qualification criteria for new charcoal of Table 5-1 of ANSI N 509-1980, as documented in Section 6.5.1 of the Standard Revision Plan.

3/4.7.7 CONTROL ROOM ESSENTIAL FILTRATION SYSTEM

The OPERABILITY of the control room essential filtration system ensures that the control room will remain habitable for operations personnel during and following all credible accident conditions. The OPERABILITY of this system in conjunction with control room design provisions is based on limiting the radiation exposure to personnel occupying the control room to 5 rem or less whole body, or its equivalent. This limitation is consistent with the requirements of General Design Criterion 19 of Appendix A, 10 CFR Part 50.

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3/4.7.9 SNUBBERS

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