

November 8, 2000

Mr. Gregg R. Overbeck
Senior Vice President, Nuclear
Arizona Public Service Company
P. O. Box 52034
Phoenix, AZ 85072-2034

SUBJECT: PALO VERDE NUCLEAR GENERATING STATION, UNITS 1, 2, AND 3 -
ISSUANCE OF AMENDMENTS ON REVISION TO VENTILATION CHARCOAL
ADSORBER TESTING PROGRAM (TAC NOS. MA7743, MA7744, MA7745)

Dear Mr. Overbeck:

The Commission has issued the enclosed Amendment No. 130 to Facility Operating License No. NPF-41, Amendment No. 130 to Facility Operating License No. NPF-51, and Amendment No. 130 to Facility Operating License No. NPF-74 for the Palo Verde Nuclear Generating Station, Units 1, 2, and 3, respectively. The amendments consist of changes to the Technical Specifications in response to your application dated November 19, 1999, as supplemented by letter dated July 18, 2000.

The amendments revise Technical Specification 5.5.11.c, "Ventilation Filter Testing Program (VFTP)," to include the requirement for laboratory testing of Engineered Safety Feature Ventilation System charcoal samples per American Society for Testing and Materials D3803-1989, "Standard Test Method for Nuclear-Grade Activated Carbon," in response to Generic Letter 99-02, "Laboratory Testing of Nuclear-Grade Activated Charcoal," dated June 3, 1999.

A copy of the related Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,
/RA/

Girija Shukla, Project Manager, Section 2
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

DISTRIBUTION:

PUBLIC
PDIV-2 r/f
G. Hill (6)
RidsNrrDlpmLpdiv (S.Richards)
RidsNrrPMMFields
RidsNrrPMGShukla
RidsNrrLACJamerson
RidsNrrDripRtsb (W.Beckner)
RidsAcrcsAcnwMailCenter
RidsOgcRp
RidsNrrDssaSplb (J.Hannon)
RidsRgn4MailCenter (P.Harrell,
L.Hurley, D.Bujol)

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

- Enclosures: 1. Amendment No. 130 to NPF-41
- 2. Amendment No. 130 to NPF-51
- 3. Amendment No. 130 to NPF-74
- 4. Safety Evaluation

cc w/encl: See next page

ACCESSION NO: ML00

OFFICE	PDIV-2/PM	PDIV-2/PM	PDIV-D/LA	SPLB/BC	OGC	PDIV-2/SC
NAME	GShukla/lcc	MFields	CJamerson	JHannon	5/11/00	SDembek
DATE	10/25/00	10/25/00	10/19/00	10/21/00	11/3/00	11/7/00

OFFICIAL RECORD COPY

DOCUMENT NAME: G:\PDIV-2\PaloVerde\AMDA7743.wpd

NRR-058

DFOI

Palo Verde Generating Station, Units 1, 2, and 3

cc:

Mr. Steve Olea
Arizona Corporation Commission
1200 W. Washington Street
Phoenix, AZ 85007

Mr. David Summers
Public Service Company of New Mexico
414 Silver SW, #1206
Albuquerque, NM 87102

Douglas Kent Porter
Senior Counsel
Southern California Edison Company
Law Department, Generation Resources
P.O. Box 800
Rosemead, CA 91770

Mr. Jarlath Curran
Southern California Edison Company
5000 Pacific Coast Hwy Bldg DIN
San Clemente, CA 92672

Senior Resident Inspector
U.S. Nuclear Regulatory Commission
P. O. Box 40
Buckeye, AZ 85326

Mr. Robert Henry
Salt River Project
6504 East Thomas Road
Scottsdale, AZ 85251

Regional Administrator, Region IV
U.S. Nuclear Regulatory Commission
Harris Tower & Pavillion
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011-8064

Terry Bassham, Esq.
General Counsel
El Paso Electric Company
123 W. Mills
El Paso, TX 79901

Chairman
Maricopa County Board of Supervisors
301 W. Jefferson, 10th Floor
Phoenix, AZ 85003

Mr. John Schumann
Los Angeles Department of Water & Power
Southern California Public Power Authority
P.O. Box 51111, Room 1255-C
Los Angeles, CA 90051-0100

Mr. Aubrey V. Godwin, Director
Arizona Radiation Regulatory Agency
4814 South 40 Street
Phoenix, AZ 85040

Ms. Angela K. Krainik, Director
Regulatory Affairs
Arizona Public Service Company
P.O. Box 52034
Phoenix, AZ 85072-2034

Mr. John C. Horne
Vice President, Power Generation
El Paso Electric Company
2702 N. Third Street, Suite 3040
Phoenix, AZ 85004



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

ARIZONA PUBLIC SERVICE COMPANY, ET AL.

DOCKET NO. STN 50-528

PALO VERDE NUCLEAR GENERATING STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 130
License No. NPF-41

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Arizona Public Service Company (APS or the licensee) on behalf of itself and the Salt River Project Agricultural Improvement and Power District, El Paso Electric Company, Southern California Edison Company, Public Service Company of New Mexico, Los Angeles Department of Water and Power, and Southern California Public Power Authority dated November 19, 1999, as supplemented by letter dated July 18, 2000, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-41 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 130 , and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this license. APS shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

3. This license amendment is effective as of its date of issuance and shall be implemented within 45 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Stephen Dembek, Chief, Section 2
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: November 8, 2000



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

ARIZONA PUBLIC SERVICE COMPANY, ET AL.

DOCKET NO. STN 50-529

PALO VERDE NUCLEAR GENERATING STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 130
License No. NPF-51

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Arizona Public Service Company (APS or the licensee) on behalf of itself and the Salt River Project Agricultural Improvement and Power District, El Paso Electric Company, Southern California Edison Company, Public Service Company of New Mexico, Los Angeles Department of Water and Power, and Southern California Public Power Authority dated November 19, 1999, as supplemented by letter dated July 18, 2000, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-51 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 130 , and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this license. APS shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

3. This license amendment is effective as of its date of issuance and shall be implemented within 45 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Stephen Dembek, Chief, Section 2
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: November 8, 2000



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

ARIZONA PUBLIC SERVICE COMPANY, ET AL.

DOCKET NO. STN 50-530

PALO VERDE NUCLEAR GENERATING STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 130
License No. NPF-74

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Arizona Public Service Company (APS or the licensee) on behalf of itself and the Salt River Project Agricultural Improvement and Power District, El Paso Electric Company, Southern California Edison Company, Public Service Company of New Mexico, Los Angeles Department of Water and Power, and Southern California Public Power Authority dated November 19, 1999, as supplemented by letter dated July 18, 2000, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-74 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 130 , and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this license. APS shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan, except where otherwise stated in specific license conditions.

3. This license amendment is effective as of its date of issuance and shall be implemented within 45 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Stephen Dembek, Chief, Section 2
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: November 8, 2000

ATTACHMENT TO LICENSE AMENDMENT NOS. 130, 130 , AND 130

FACILITY OPERATING LICENSE NOS. NPF-41, NPF-51, AND NPF-74

DOCKET NOS. STN 50-528, STN 50-529, AND STN 50-530

Replace the following page of the Appendix A Technical Specifications with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

REMOVE

5.5-18

INSERT

5.5-18

5.5 Programs and Manuals (continued)

5.5.11 Ventilation Filter Testing Program (VFTP) (continued)

<u>ESF Ventilation System</u>	<u>Flowrate</u>
Control Room Essential Filtration System (CREFS)	28,600 CFM
Engineered Safety Feature (ESF) Pump Room Exhaust Air Cleanup System (PREACS)	6,000 CFM

- b. Demonstrate for each of the ESF systems that an in-place test of the charcoal adsorber shows a penetration and system bypass $\leq 1.0\%$ when tested in accordance with Regulatory Guide 1.52, Revision 2, and ANSI N510-1980 at the system flowrate specified as follows $\pm 10\%$:

<u>ESF Ventilation System</u>	<u>Flowrate</u>
CREFS	28,600 CFM
ESF PREACS	6,000 CFM

- c. Demonstrate for each of the ESF systems that a charcoal adsorber sample, when obtained in accordance with the application of Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, as described in Section 1.8 of the UFSAR, shows the methyl iodide penetration less than or equal to the value specified below, when tested in accordance with ASTM D3803-1989, at a temperature of 30°C and to the relative humidity specified as follows:

<u>ESF Ventilation System</u>	<u>Penetration</u>	<u>RH</u>
CREFS	$\leq 2.5\%$	70%
ESF PREACS	$\leq 2.5\%$	70%

(continued)



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 130 TO FACILITY OPERATING LICENSE NO. NPF-41,
AMENDMENT NO. 130 TO FACILITY OPERATING LICENSE NO. NPF-51,
AND AMENDMENT NO. 130 TO FACILITY OPERATING LICENSE NO. NPF-74
ARIZONA PUBLIC SERVICE COMPANY, ET AL.
PALO VERDE NUCLEAR GENERATING STATION, UNITS 1, 2, AND 3
DOCKET NOS. STN 50-528, STN 50-529, AND STN 50-530

1.0 INTRODUCTION

By application dated November 19, 1999, as supplemented by letter dated July 18, 2000, the Arizona Public Service Company (APS or the licensee) requested changes to the Technical Specifications (TSs) for the Palo Verde Nuclear Generating Station (Palo Verde), Units 1, 2, and 3. APS submitted this request on behalf of itself, the Salt River Project Agricultural Improvement and Power District, Southern California Edison Company, El Paso Electric Company, Public Service Company of New Mexico, Los Angeles Department of Water and Power, and Southern California Public Power Authority.

By letter dated November 19, 1999, APS submitted its response to the actions requested in Generic Letter (GL) 99-02, "Laboratory Testing of Nuclear-Grade Activated Charcoal," dated June 3, 1999, for the Palo Verde Nuclear Generating Station, Units 1, 2 and 3. In the same letter, APS requested changes to the TSs Section 5.5.11.c, "Ventilation Filter Testing Program (VFTP)," for the three units. Additionally, APS requested to revise the references relating to the requirement for obtaining the charcoal adsorber samples per Regulatory Guide 1.52, Revision 2, and correct references to ANSI standard N510-1980. The revised reference is Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, and the correct reference to ANSI standard is N509-1980. Both of these references are contained in Section 1.8 of the Palo Verde Updated Final Safety Analysis Report (UFSAR). By letter dated July 18, 2000, APS provided additional information at the NRC's request concerning the charcoal bed residence times and face velocities for the two systems. The proposed changes would revise TS 5.5.11.c, "Ventilation Filter Testing Program (VFTP)," to include the requirement for laboratory testing of Engineered Safety Feature Ventilation System charcoal samples per American Society for Testing and Materials (ASTM) D3803-1989, "Standard Test Method for Nuclear-Grade Activated Carbon," in response to GL 99-02.

The July 18, 2000, supplement provided clarifying information that was within the scope of the original application and *Federal Register* notice and did not change the staff's initial proposed no significant hazards consideration determination.

2.0 EVALUATION

The NRC staff, with technical assistance from Brookhaven National Laboratory (BNL), has reviewed the licensee's submittals. In addition, the staff has reviewed the attached BNL Technical Evaluation Report (TER) regarding the proposed TS changes for the Palo Verde Nuclear Generating Station, Units 1, 2, and 3. Based on its review, the staff adopts the TER. In view of the above, and because the NRC staff considers ASTM D3803-1989 to be the most accurate and most realistic protocol for testing charcoal in safety-related ventilation systems, the NRC staff finds that the proposed TS changes satisfy the actions requested in GL 99-02 and are acceptable.

The licensee also proposed revising TS 5.5.11.c to delete the reference to ANSI N510-1980, and to specifically identify the section of Regulatory Guide 1.52, Revision 2 that contains the guidance for obtaining the charcoal adsorber samples. The staff finds acceptable the deletion of ANSI N510-1980, since it is an incorrect reference for obtaining the charcoal adsorber samples, and also finds acceptable the licensee's proposal to specifically identify the section of the regulatory guide that provides guidance on obtaining samples.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Arizona State official was notified of the proposed issuance of the amendments. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts and no significant change in the types of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (65 FR 12287). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

5.0 CONCLUSION

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

Attachment: BNL TER

Principal Contributor: G. Shukla

Date: November 8, 2000

**TECHNICAL EVALUATION REPORT
BROOKHAVEN NATIONAL LABORATORY
FOR THE OFFICE OF NUCLEAR REACTOR REGULATION
DIVISION OF SYSTEMS SAFETY AND ANALYSIS
PLANT SYSTEMS BRANCH
RELATED TO AMENDMENT TO FACILITY OPERATING LICENSE
NOS. NPF-41, NPF-51, NPF-74
ARIZONA PUBLIC SERVICE COMPANY
PALO VERDE NUCLEAR GENERATING STATION - UNITS 1, 2 & 3
DOCKET NOS. 50 - 528, 50-529, 50-530**

1.0 INTRODUCTION

By letter dated November 19, 1999 (102-04373), Arizona Public Service Company (APS) submitted its response to the actions requested in Generic Letter (GL) 99-02, "Laboratory Testing of Nuclear-Grade Activated Charcoal," dated June 3, 1999, for the Palo Verde Nuclear Generating Station - Units 1,2 and 3 (PVNGS). In the same letter, APS requested changes to the Technical Specifications (TS) Section 5.5.11.c, Ventilation Filter Testing Program (VFTP), for the Control Room Essential Filtration System (CREFS), and the Engineered Safety feature Pump Room Exhaust Air Cleanup System (PREACS) for the three units comprising PVNGS. By letter dated July 18, 2000 (102-04464-CDM/SAB/JAP), APS provided additional information at NRC request concerning the charcoal bed residence times and face velocities for the two systems. The proposed changes would revise the TS surveillance testing of the safety related ventilation systems charcoal to meet the requested actions of GL 99-02.

2.0 BACKGROUND

Safety-related air-cleaning units used in the engineered safety features (ESF) ventilation systems of nuclear power plants reduce the potential onsite and offsite consequences of a radiological accident by filtering radioiodine. Analyses of design basis accidents assume particular safety-related charcoal adsorption efficiencies when calculating offsite and control room operator doses. To ensure that the charcoal filters used in these systems will perform in a manner that is consistent with the licensing basis of a facility, licensees have requirements in their TS to periodically perform a laboratory test (in accordance with a test standard) of charcoal samples taken from these ventilation systems.

In GL 99-02, the staff alerted licensees that testing nuclear-grade activated charcoal to standards other than American Society for Testing and Materials (ASTM) D3803-1989, "Standard Test Method for Nuclear-Grade Activated Carbon," does not provide assurance for complying with their current licensing bases with respect to the dose limits of General Design Criterion (GDC) 19 of Appendix A to Part 50 of Title 10 of the Code of Federal Regulations (10 CFR) and Subpart A of 10 CFR Part 100.

GL 99-02 requested that all licensees determine whether their TS reference ASTM D3803-89 for charcoal filter laboratory testing. Licensees whose TS do not reference ASTM D3803-89 were requested to either amend their TS to reference ASTM D3803-1989 or propose an alternative test protocol.

3.0 EVALUATION

3.1 Laboratory Charcoal Sample Testing Surveillance Requirements

The current and proposed laboratory charcoal sample testing TS surveillance requirements for the Control Room Essential Filtration System (CREFS), and the Engineered Safety feature Pump Room Exhaust Air Cleanup System (PREACS) are shown in Table 1 and Table 2, respectively, for all three PVNGS units.

The proposed use of ASTM D3803-1989 is acceptable because it provides accurate and reproducible test results. The proposed test temperature of 30 °C for the CREFS and PREACS systems is acceptable because it is consistent with ASTM D3803-1989. The proposed test relative humidity (RH) of 70% is also acceptable, because the air entering CREFS is maintained at less than 70% RH and the PREACS is equipped with safety-related heaters which maintain less than 70% RH during maximum accident conditions. In the July 18, 2000 letter, APS confirmed that for the CREVS, valid humidity control calculations exist to maintain 70% RH for that system during accident conditions. This is consistent with the actions requested in GL 99-02.

The credited filter efficiency for radioactive organic iodine for both the CREFS and PREACS is 95 %. The proposed allowable charcoal test penetration for radioactive methyl iodide of <2.5% in each of these systems results in a safety factor of 2. The proposed safety factors are acceptable because they ensure that the efficiencies credited in the accident analysis are still valid at the end of the surveillance interval. This is consistent with the minimum safety factor of 2 specified in GL 99-02.

APS stated in the July 18, 2000 letter that both the CREFS and PREACS have a face velocity of less than 110% of 40 fpm. Therefore, the system face velocity at the charcoal adsorber sections for the CREFS and PREACS will not exceed 44 fpm (110% of 40 fpm) at the maximum system flow rates specified in the TS. This is acceptable because it ensures that the testing will be consistent with the operation of the ventilation system during accident conditions. Therefore, it is not necessary to specify the face velocities in the proposed TS change for the CREFS and PREACS. This is acceptable because it is consistent with the August 23, 1999 errata to GL 99-02.

4.0 CONCLUSION

On the basis of its evaluation, BNL recommends that the NRC staff consider the proposed TS changes to be acceptable.

Principal Contributors: Richard E. Deem, Anthony Fresco, and Mano Subudhi

Date: August 18, 2000

PALO VERDE NUCLEAR GENERATING STATION - UNITS 1, 2 AND 3

TABLE 1 - CURRENT TS REQUIREMENTS											
System Description						Current TS Requirements					
TS Section	System	Bed Thickness (inches)	Actual Charcoal		Credited Efficiency (% organic iodine)	Test Penetration (% methyl iodide)	Safety Factor	Test Standard	Test Temp (° C)	Test RH (%)	Test Face Velocity (fpm)
			Res. Time (sec)	Face Velocity (fpm)							
5.511.c	Control Room Essential Filtration System (CREFS)	2	0.25	40*	95%	≤1.0%	Not stated (5)**	Reg. Guide 1.52, Rev.2; ANSI N510-1980, ASTM D3803-1979	80±0.5	≥70	Not stated (40)*
5.5.11.c	Engineered Safety Feature Pump Room Exhaust Air Cleanup System (PREACS)	2	0.25	40*	95%	≤1.0%	Not stated (5)**	Reg. Guide 1.52, Rev.2; ANSI N510-1980, ASTM D3803-1979	80±0.5	≥70	Not stated (40)*

* Face velocity information is as provided in the APS letter of July 18, 2000.

** Current safety factor is calculated based on the credited efficiency and the current test penetration.

PALO VERDE NUCLEAR GENERATING STATION - UNITS 1, 2 AND 3

TABLE 2 - PROPOSED TS REQUIREMENTS											
System Description						Proposed TS Requirements					
TS Section	System	Bed Thickness (inches)	Actual Charcoal		Credited Efficiency (methyl iodide)	Test Penetration (methyl iodide)	Safety Factor	Test Standard	Test Temp (° C)	Test RH (%)	Test Face Velocity (fpm)
			Res. Time (sec)	Face Velocity (fpm)							
5.5.11.c	Control Room Essential Filtration System (CREFS)	2	0.25	40*	95%	≤2.5%	2	ASTM D3803-1989	30	70	Not stated (40)*
5.5.11.c	Engineered Safety Feature Pump Room Exhaust Air Cleanup System (PREACS)	2	0.25	40*	95%	≤2.5%	2	ASTM D3803-1989	30	70	Not stated (40)*

* Face velocity information is as provided in the APS letter of July 18, 2000.