

# REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

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 FACIL: STN-50-528 Palo Verde Nuclear Station, Unit 1, Arizona Public 05000528  
 STN-50-529 Palo Verde Nuclear Station, Unit 2, Arizona Public 05000529  
 STN-50-530 Palo Verde Nuclear Station, Unit 3, Arizona Public 05000530  
 AUTH. NAME AUTHOR AFFILIATION  
 VAN BRUNT, E.E. Arizona Public Service Co.  
 RECIP. NAME RECIPIENT AFFILIATION  
 KNIGHTON, G.W. Licensing Branch 3

SUBJECT: Forwards addl info re testing of air locks, per request for exemptions from 10CFR50, App J. Periodic 6-month & 3-day tests assure that air locks will not leak excessively when opened.

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NOTES: Standardized plant. 05000528  
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NRR/DE/SGEB 25	1 1	NRR/DHFS/HFEB40	1 1
NRR/DHFS/LQB 32	1 1	NRR/DHFS/PSRB	1 1
NRR/DL/SSPB	1 0	NRR/DSI/AEB 26	1 1
NRR/DSI/ASB	1 1	NRR/DSI/CPB 10	1 1
NRR/DSI/CSB 09	1 1	NRR/DSI/ICSB 16	1 1
NRR/DSI/METB 12	1 1	NRR/DSI/PSB 19	1 1
NRR/DSI/RAB 22	1 1	NRR/DSI/RSB 23	1 1
REG FILE 04	1 1	RGN5	3 3
RM/DDAMI/MIB	1 0		

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FEMA-REP DIV 39	1 1	LPDR 03	1 1
NRC PDR 02	1 1	NSIC 05	1 1
NTIS	1 1	PNL GRUEL, R	1 1

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Arizona Public Service Company

ANPP-31459-EEVB/WFQ/KEJ  
December 13, 1984

Director of Nuclear Reactor Regulation  
Mr. George W. Knighton, Chief  
Licensing Branch No. 3  
Division of Licensing  
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  
Request for Exemptions to 10 CFR 50, Appendix J.  
File: 84-056-026; G.1.01.10

Reference: Letter from E. E. Van Brunt, Jr., APS, to G. W. Knighton,  
NRC, dated December 7, 1984 (ANPP-31368); Subject: 10 CFR  
50, Appendix J exception.

Dear Mr. Knighton:

The referenced letter submitted a request for exemption to 10 CFR 50, Appendix J concerning testing of air locks. Additional information is being provided in response to a request by Mr. J. Huang of your staff. This information is provided in Attachment A of this letter.

If you have any questions concerning this matter, please contact me.

Very truly yours,

*EE Van Brunt / DSK*

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

EEVB/WFQ/KEJ/mb  
Attachment

cc: E. A. Licitra  
J. Huang  
A. C. Gehr  
R. P. Zimmerman

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PDR ADDCK 05000528  
A PDR

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STATE OF ARIZONA   )  
                          ) ss.  
COUNTY OF MARICOPA)

I, Donald B. Karner, represent that I am Assistant Vice President, Nuclear Production of Arizona Public Service Company, that the foregoing document has been signed by me on behalf of Arizona Public Service Company with full authority to do so, 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.

  
Donald B. Karner

Sworn to before me this 13 day of December, 1984.

  
Notary Public

My Commission Expires:

My Commission Expires April 6, 1987



Mr. G. W. Knighton  
Request for Exemptions to  
10 CFR 50, Appendix J  
ANPP-31459  
Page 2

bcc: T. G. Woods  
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W. E. Ide  
A. C. Rogers  
J. R. Bynum  
O. J. Zeringue  
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M. F. Hodge  
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W. H. Wilson  
W. G. Bingham  
S. H. Shepherd  
C. F. Ferguson  
M. F. Barnoski





ATTACHMENT A

Paragraph III.D.2(b) of Appendix J to 10 CFR 50 prescribes three explicit air lock testing requirements which must be included in the PVNGS Technical Specifications.

In accordance with Appendix J requirement III.D.2(b)(i) PVNGS Technical Specification 4.6.1.3.b.1 requires that containment air locks be demonstrated operable by conducting a leak test every 6 months, when containment integrity is required, by pressurizing the interior of the air lock to  $P_a$  (the calculated peak containment internal pressure under design basis accident conditions) and verifying that the leakage rate is within its limit.

In accordance Appendix J requirement III.D.2(b)(iii) PVNGS Technical Specification 4.6.1.3a requires that air locks be tested within 3 days after being opened (or at least once every 3 days for openings more frequent than every 3 days) specifies that air lock seal tests satisfy the 3 day test requirements.

The portion of Appendix J to which APS requests an exemption applies to paragraph III.D.2(b)(ii) which requires that "Air locks opened during period when containment integrity is not required by the plant's Technical Specifications shall be tested at not less than  $P_a$ ." In lieu of this requirement PVNGS Technical Specification 4.6.1.3.b.2 requires that an overall air lock leakage test be conducted at  $P_a$  when maintenance has been performed on the air lock that could affect the air lock sealing capability. This Technical Specification contains a footnote stating that this requirement is an exemption to Appendix J of 10 CFR 50.

APS requests an exemption, pursuant to 10 CFR 50.12 to the requirements of paragraph III.D.2(b)(ii) and in support of such request states:

1. The existing air lock doors are so designed that a full pressure test at  $P_a$  of an entire air lock can only be performed after strong backs (structural bracing) have been installed on the inner door. This is due to the fact that the pressure exerted on the inner door during the test is in a direction opposite to that of force experienced during a postulated accident and the locking mechanisms are not designed to withstand such reverse forces associated with pressures on the order of  $P_a$ . Installing strong backs, performing the test, and removing the strong backs, is a cumbersome process requiring approximately 12 hours per air lock (there are 2 air locks), during which access through the air lock is prohibited. The basic design of the PVNGS containment permits frequent access in order to perform required surveillance and maintenance activities.
2. The periodic 6-month test of paragraph III.D.2(b)(i) of Appendix J and the 3-day test requirement of paragraph III.D.2.(b)(iii) of Appendix J provide assurance that the air lock will not leak excessively just because it has been opened when containment integrity is not required if no maintenance which could affect the ability of the air lock to seal has been performed on the air lock and the air lock is properly engaged and sealed.



3. Furthermore, this exemption is consistent with current regulatory practice and policy, and is provided for in the Standard Technical Specifications (NUREG-0212).
4. PVNGS Technical Specification 4.6.1.3.b.2 provides protection equivalent to the requirement of paragraph III.D.2(b)(ii) of Appendix J and does not endanger life or property.
5. If literal compliance with the applicable provisions of Appendix J discussed above were mandated, either a cumbersome and unwarranted test method must be used or a major design change would be required in order to permit the inner door to withstand full containment pressure in the test direction without strong backs. The remaining Appendix J test requirements for containment airlock testing in conjunction with the current PVNGS Technical Specification post-maintenance test requirement assures compliance with the purpose of the Appendix J requirements, which is to provide reasonable assurance that leakage will be detected.
6. If design changes were undertaken at this stage, a delay in commercial operation of PVNGS Unit 1 would result. Any delay in the commercial operation of PVNGS Unit 1 would cause the cost of the unit to increase at a rate in excess of \$25 million per month. Under standard ratemaking practices, these costs would eventually have to be borne by customers of the participants of the Arizona Nuclear Power Project.
7. If full compliance with the Appendix J testing requirement is undertaken using the current design, then periodically over the remaining life of the plant, a cumbersome and lengthy test must be undertaken on one or both containment air locks. The duration of these tests taken over the life of the plant during which the plant must be shut down (since Appendix J required the test at the end of each period during which containment integrity is not required and during which the air lock has been opened) is substantial. These tests would extend the duration of the outages by half a day or more several times a year. This would have a significant financial impact on the participants of the Arizona Nuclear Power Project and ultimately on the customers as described above.
8. Either implementation of a full compliance test requirement with lost time over the life of the plant or a delay in commercial operation to implement a major design change has a substantial financial impact on the participants of the Arizona Nuclear Power Project and its customers and is not warranted inasmuch as, as shown above, the public health and safety are adequately protected.

