

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8907200394 DOC. DATE: 89/04/27 NOTARIZED: NO DOCKET #  
 FACIL: STN-50-528 Palo Verde Nuclear Station, Unit 1, Arizona Publi 05000528  
 STN-50-529 Palo Verde Nuclear Station, Unit 2, Arizona Publi 05000529  
 STN-50-530 Palo Verde Nuclear Station, Unit 3, Arizona Publi 05000530

AUTH. NAME AUTHOR AFFILIATION  
 KARNER, D.B. Arizona Public Service Co. (formerly Arizona Nuclear Power  
 RECIP. NAME RECIPIENT AFFILIATION  
 Document Control Branch (Document Control Desk)

SUBJECT: Provides supplemental response to Generic Ltr 88-14 "  
 "Instrument Air Supply Problems Affecting...."

DISTRIBUTION CODE: A048D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 4  
 TITLE: OR/Licensing Submittal: Equipment Qualification

NOTES: Standardized plant. 05000528  
 Standardized plant. 05000529  
 Standardized plant. 05000530

	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
	PD5 LA	1 0	PD5 PD	1 0
	CHAN, T	1 1	DAVIS, M	1 1
	DAVIS, M.	1 1		
INTERNAL:	ACRS	6 6	NRR/DEST/ADE 8H	1 0
	NRR/DEST/MEB 9H	1 1	NRR/DEST/SGB 8D	1 1
	NUDOCS-ABSTRACT	1 1	OC/LFMB	1 0
	OGC/HDS1	1 1	REG FIDE 01	1 1
	RES/DSIR/EIB	1 1		
EXTERNAL:	LPDR	1 1	NRC PDR	1 1
	NSIC	1 1		
NOTES:		1 1		

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK,  
 ROOM P1-37 (EXT. 20079) TO ELIMINATE YOUR NAME FROM DISTRIBUTION  
 LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTTR 23 ENCL 19

THE NATIONAL BUREAU OF INVESTIGATION  
UNITED STATES DEPARTMENT OF JUSTICE  
WASHINGTON, D. C. 20535



## Arizona Nuclear Power Project.

P.O. BOX 52034 • PHOENIX, ARIZONA 85072-2034

161-01881-DBK/JMQ

April 27, 1989

Docket Nos. STN 50-528/529/530  
U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Mail Station PL-137  
Washington, D. C. 20555

References: (A) Letter from NRC to all Holders of  
Construction Permits for Nuclear Power  
Reactors dated August 8, 1988.  
Subject: Generic Letter 88-14  
(B) Letter from D. B. Karner, APS to NRC  
dated February 20, 1989. Subject:  
Generic Letter 88-14

Dear Sirs:

Subject: Palo Verde Nuclear Generating Station (PVNGS)  
Units 1, 2 and 3  
Supplemental Response to Generic Letter 88-14  
"Instrument Air Supply System Problems Affecting  
Safety-Related Equipment"  
File: 89-010-026; 89-056-026

Generic Letter 88-14, Item 1 recommended verification by test that actual instrument air quality is consistent with manufacturer's recommendations for individual components served.

Reference (B) stated that the air quality data will be taken for approximately one month in Unit 2 in order to obtain adequate test data. It also stated that a supplemental letter would be provided by April 28, 1989, indicating whether any improvements or modifications will be made and providing the schedule for completion. See Attachment 1 for response.

Also, Generic Letter 88-14, Item 3 recommended a verification of the design of the entire instrument air system. Reference (B) stated that the review is expected to be completed during the first quarter of 1991.

8907200394 890427  
PDR ADOCK 05000528  
P PDC



A048  
1/1



U. S. Regulatory Commission  
Attention: Document Control Desk  
Page 2

161-01881-DBK/JMQ  
April 27, 1989

However, a limited scope design review has already been performed, also the schedule for completion of the formal review has been advanced and is expected to be completed during the first quarter of 1990. See Attachment 2 for details.

Very truly yours,



D. B. Karner  
Executive Vice President

DBK/JMQ/jle

Attachments

cc: T. J. Polich (all w/attachments)  
~~T. L. Chan~~  
M. J. Davis  
J. B. Martin



Attachment 1  
Unit 2 Test Results/Evaluation

Dewpoint, particulate and hydrocarbon tests were conducted on the Instrument Air System to ascertain the quality of instrument air delivered by air compressor/dryer system.

The design dewpoint for the instrument air system at Palo Verde is  $-40^{\circ}$  F at 125 PSIG and the test data obtained supports this temperature requirement. The dew point temperatures, as measured, are quite acceptable as they range between  $-58^{\circ}$  F to  $-85^{\circ}$  F corrected to a line pressure of 125 PSIG. The minimum winter design temperature as described in Section 9.4.2 of the PVNGS FSAR Table 9.4-1 is  $11^{\circ}$  F. The ISA-S7.3-1975 "Quality Standard for Instrument Air" recommends that the dewpoint at line pressure be at least  $18^{\circ}$  F below the minimum temperature ( $11^{\circ}$  F) to which any part of the instrument air system is exposed at any season in the year. Therefore, the maximum allowable dewpoint at PVNGS is  $-7^{\circ}$  F and we are well within the guidelines of the ISA Standard. However, tests will be conducted during our most humid months to verify that dewpoints can be maintained at  $-40^{\circ}$  F, or below, at a line pressure of 125 PSIG at a normal flow rate.

ISA-S7.3-1975 recommends that the particle size in the air stream shall not exceed 3 microns. The test runs have given particle sizes ranging from .5 microns to 15 microns. Only two particles of the 15 micron size were encountered in 25 measurements taken in 10 days during the test. On the average, the particle size was approximately .65 microns.

The oil content shall be as close to zero per weight ratio (w/w) or volume ratio (v/v) as possible per the ISA Standard and under no circumstances shall it exceed one ppm w/w or v/v under normal operating conditions. The average oil content in the air samples taken was 0.03 ppm.

The following action resulted from the evaluation of the air quality data:

Change the afterfilter internals (cartridge) from the current 1 micron rated filter to a .45 micron rated filter or smaller in Units 1, 2, and 3. This task will be completed before the Unit 1, 2, and 3 restart from the current outages. Following the upgrade of the filters, the air quality test will be performed on a periodic basis.



Attachment 2  
Design Review of the Instrument Air System

A limited scope design review of the instrument air system has been performed using the documents that represent the actual installation at the plant. The design basis documents reviewed were Regulatory Guides, 10 CFR 50 and the Design Criteria Manual. A number of design output documents, design modification packages and other associated engineering documents were also reviewed.

This limited scope review indicates that the system delivers, as designed, quality air to meet or exceed the requirements of the design basis. The complete review for the adequacy of the existing design basis and development of the Design Basis Manual for Instrument Air will be completed during the first quarter of 1990.

[illegible]