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 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
 TEDESCO, R. L. Assistant Director for Licensing

SUBJECT: Forwards clarification of 810928 response to Containment
 Sys Branch questions re containment spray sys.

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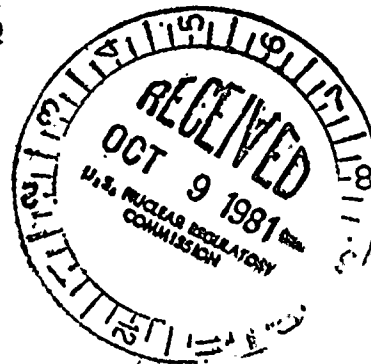


PUBLIC SERVICE COMPANY

STA. _____

P.O. BOX 21666 - PHOENIX, ARIZONA 85036

September 30, 1981
ANPP-19049-JMA/WFQ



Mr. R. L. Tedesco
Assistant Director for Licensing
Division of Licensing
Office of Nuclear Reactor Regulation
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
File: 81-056-026; G.1.10

Reference: Letter from E. E. Van Brunt, Jr., APS, to R. L. Tedesco,
dated September 28, 1981 (ANPP-19014)
Subject: CSB Questions.

Dear Mr. Tedesco:

Attached is a clarification of our response provided by the
referenced letter as discussed with Energy Incorporated (telecon),
September 30, 1981.

If you have any questions, please contact me.

Very truly yours,

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

EEVBJr/WFQ/ma

Attachments/

cc: J. Kerrigan (w/a)
P. Hourihan (w/a)
A. Gehr (w/a)
J. Huang, NRC (w/a)

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A PDR



STATE OF ARIZONA)
) ss.
COUNTY OF MARICOPA)

I, Edwin E. Van Brunt, Jr., represent that I am Vice President Nuclear Projects of Arizona Public Service Company, that the foregoing document has been signed by me on behalf of Arizona Public Service Company with full authority so to do, 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.

Edwin E. Van Brunt, Jr.
Edwin E. Van Brunt, Jr.

Sworn to before me this 7th day of October, 1981.

Connie Sue Armstrong
Notary Public

My Commission expires:

June 24, 1983



Item 2

The staff requested inclusion of a caution statement in procedures to terminate containment spray. The caution was to inform operators that forced hydrogen mixing depended on operation of the containment spray system.

Response

See attached Revised PVNGS FSAR page 6.2. ⁵⁻⁷~~2-4~~

Table 6.2.5-1
COMBUSTIBLE GAS CONTROL SYSTEM DESIGN PARAMETERS (Sheet 3 of 3)

Parameter	Value
Heating coil capacity, kW	0.25
HEPA filter (downstream)	
Quantity and size	1 - 24x24x12
Pressure drop, clean, in. WG	0.50
Efficiency	99.9% minimum of particulate matter of 0.3 micron or larger size

Following a LOCA, the containment spray system is automatically started. This system serves to minimize localized hydrogen buildup within the containment as well as remove fission products from the containment atmosphere and reduce containment pressure. Within 24 hours after a LOCA both redundant hydrogen analyzers are manually activated to monitor hydrogen levels and to alert the operator in the control room when operation of the hydrogen recombiners or hydrogen purge system is required; i.e., at or below a hydrogen concentration of 4 vol %.

The recombiners are manually started before hydrogen concentration reaches 3.5 vol %. Figure 6.2.5-2 shows that this occurs at approximately 10.7 days after the LOCA. In the unlikely event that both recombiners fail, the hydrogen purge subsystem will be manually put into operation when hydrogen concentration reaches 3.5 vol %.

6.2.5.2.2 Hydrogen Mixing

Hydrogen mixing within the containment is accomplished by the containment spray system and the containment internal structure design, which permits convective mixing and prevents entrapment (Design Basis B).

Procedures concerning termination of system operation contain statements to caution operators regarding assurance that adequate Hydrogen mixing has been accomplished and further forced circulation is not required so

that operation will not be terminated just because the system's heat removal function is completed.

Item 3

The staff indicated that the containment refueling purge isolation valves should be sealed closed except during operational modes 5 and 6.

Response

See attached revised PVNGS LLIR Page II.E.4.2-6.

2 | 6. Containment power access purge isolation valves satisfy the operability criteria set forth in Branch Technical Position CSB 6-4. Containment refueling purge isolation valves will be sealed closed except during operational modes 5 and 6. ~~Y~~ (Cold shutdown and refueling respectively, see CESSAR Section 16.1.1).

7. As stated in item 1 above, both the power access purge and the refueling purge isolate on high containment purge radioactivity.

2 | { These valves will be verified closed
once every 30 days.

