

REGULATOR INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8306170326 DDC DATE: 83/06/13 NOTARIZED: YES DOCKET #
 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.
 RECIPIENT NAME: RECIPIENT AFFILIATION
 KNIGHTON, G. Licensing Branch 3

SUBJECT: Forwards proposed amend to FSAR re CESSAR iodine removal
 sys & responses to NRC 830422 ltr. Proposed FSAR amend
 combined w/ responses close out sump pH issue in SER Sections
 6.4 & 15.4.8 & TMI Item III.D.3.4.

DISTRIBUTION CODE: B001S COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 8
 TITLE: Licensing Submittal: PSAR/FSAR Amdts & Related Correspondence

NOTES: Standardized plant, 05000528
 Standardized plant, 05000529
 Standardized plant, 05000530

RECIPIENT ID CODE/NAME	COPIES LTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTR ENCL
NRR/DL/ADL	1 0	NRR LB3 BC	1 0
NRR LB3 LA	1 0	LICITRA, E. 01	1 1
INTERNAL: ELD/HDS3	1 0	IE FILE	1 1
IE/DEPER/EPB 36	3 3	IE/DEPER/IRB 35	1 1
IE/DEQA/QAB 21	1 1	NRR/DE/AEAB	1 0
NRR/DE/CEB 11	1 1	NRR/DE/EHEB	1 1
NRR/DE/eqB 13	2 2	NRR/DE/GB 28	2 2
NRR/DE/MEB 18	1 1	NRR/DE/MTEB 17	1 1
NRR/DE/SAB 24	1 1	NRR/DE/SGEB 25	1 1
NRR/DE/SGEB 30	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		

EXTERNAL: ACRS 41	6 6	BNL (AMDTs ONLY)	1 1
DMB/DSS (AMDTs)	1 1	FEMA-REP DIV 39	1 1
LPDR 03	1 1	NRC PDR 02	1 1
NSIC 05	1 1	NTIS	1 1

TOTAL NUMBER OF COPIES REQUIRED: LTR 54 ENCL 47

The following information was obtained from the records of the
 Department of the Interior, Bureau of Land Management, on the
 subject of the land owned by the United States in the
 State of California, and the same is hereby published for the
 information of the public.

The following is a list of the land owned by the United States
 in the State of California, and the same is hereby published for the
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Section	Range	County	Acres	Owner
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Arizona Public Service Company

P.O. BOX 21666 • PHOENIX, ARIZONA 85036

June 13, 1983

ANPP-24059 - WFQ/RJP

Director of Nuclear Reactor Regulation
Attention:- Mr. George 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
File: 83-056-026/G.1.01.10

Reference: (A) Summary of March 23, 1983 Appeal Meeting
on the CESSAR Iodine Removal System, from
Gary C. Meyer, NRC, dated March 31, 1983.

(B) Letter from A. E. Scherer, CE, to
Darrell G. Eisenhut, NRC, dated
April 22, 1983.

Dear Mr. Knighton:

Reference (A) is a summary of the March 23, 1983 appeal meeting on the CESSAR Iodine Removal System (IRS). Reference (B) transmits CE's revised report entitled, "Long-Term Iodine Control in Reactor Containment Buildings Using Combustion Engineering Iodine Removal System" and amendments to the CESSAR-F interface requirements.

In Reference (A), two plant specific issues were discussed. 1) Post-accident access to the Spray Chemical Storage Tank (SCST), and 2) available information to determine the need to reactivate the IRS.

In response to the first issue, the attached amendment to the PVNGS FSAR is proposed. Also, the following additional information is provided:

NUREG-0737 discusses two cases: Case 1 postulates a degraded core-intact primary; Case 2, a LOCA with recirculation via the containment sump.

Case 1:

The iodine removal system would not be operated since iodine release inside the containment is not consistent with the postulated scenario.

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Case 2:

The assumed core releases are as follows:

Source A = containment airborne
(100% noble gases and 25% iodines)

Source C = containment sump
(50% halogens and 1% solids)

The direct dose rates from these sources (assuming no decay subsequent to the onset of recirculation [i.e., about 20 minutes post-accident]) are 100 mrem/hr to 1,000 mrem/hr within the spray chemical storage tank (SCST) room, and 2.5 mrem/hr to 15 mrem/hr along the access corridor to the SCST room.

The bounding scenario airborne dose rate (assuming non-ESF ventilation system failure and postulated leakage into the Auxiliary Building in accordance with Regulatory Guide 1.4) builds up to 30 rem/hr in the SCST room after four days post-accident. Within four days, the normal (800 cfm) ventilation system can be restored to service, or, alternatively, a low volume (50 cfm) purge could be established using portable equipment. The airborne dose rate can be reduced to less than 3 rem/hr (whole body) within one day of low volume purge initiation. At this dose rate, PVNGS meets NUREG-0737 (Section II.B.2) dose rate criteria.

By reviewing these bounding scenarios, PVNGS can assure that hydrazine refill capabilities are maintained.

In response to the second issue, the following is provided:

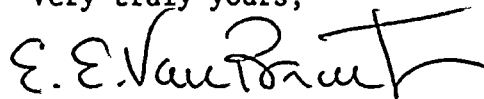
The following indicators are available for the operator to choose to reinitiate hydrazine spray:

- 1) overall radiation level failing to decrease (e.g., due to decay) after initial injection of hydrazine,
- 2) subsequent activity release (e.g., through operation of the reactor head vent system or safety-relief valves),
- 3) unexpected decreases in sump pH after four hours post-accident (determined by PASS sample of containment sump),
- 4) high iodine levels within containment (determined by PASS sample of containment atmosphere [valid only after 24 to 48 hours of decay]),

- 5) iodine concentration above safety-analysis values (determined by portable monitoring at the site boundary as part of the facility emergency response),
- 6) elapsed time (when lacking direct or inferred means of determining iodine concentration).

We feel that the attached FSAR amendment, combined with the preceding responses close out the sump pH issue, thus allowing the staff to continue with their evaluations of LOCA doses in SER Sections 6.4, 15.4.8, and III.D.3.4.

Very truly yours,



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

EEVB/RJP/wp
Attachments

cc: E. Licitra (w/attach.)
A. C. Gehr "

Director of Nuclear Reactor Regulation
ANPP-24059 - WFQ/RJP
Page 4

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 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.

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

Sworn to before me this 13th day of June, 1983.

Nora E. Meador
Notary Public

My Commission Expires:
My Commission Expires April 6, 1987

[illegible]

(B)7.13.21 In the routing of IRS Class IE circuits and location of equipment served by these Class IE Circuits, consideration shall be given to their exposure to potential hazards. See 7.5 above.

(B)7.13.22 All IRS ASME Boiler and Pressure Vessel Code Section III components shall be arranged to provide adequate clearances to permit inservice inspection. The design of the arrangement should conform to the guidelines of Section XI of the ASME Code.

(B)7.13.23

INSERT A

~~Access to the IRS shall be provided such that at time periods greater than 4 hours post-LOCA, capability of refilling the SCST with the concentration hydrazine solution is possible.~~

(B)7.13.24 Protection shall be provided from internally generated flooding that could prevent performance of safety-related functions.

(B)7.14 WASTE COLLECTION

(B)7.14.1 The IRS components are designed for zero external leakage. In the unlikely event that leakage should occur, provisions shall be provided to accept the maximum leakage rates listed below for purposes of room sump design.

a. SCAP seals: 100 cc/hr/pump

b. Valves

backseat leakage: 10 cc/hr/inch seat
diameter/valve

INSERT A (Excerpt from LD-83-034, dated April 22, 1983)

"Access to the SCST shall be provided following a LOCA such that the concentrated hydrazine solution can be replenished prior to reaching a minimum level of 5%. Consideration shall be given to radiological and hydrazine vapor hazards, and to alignment of the hydrazine fill apparatus."

(RB)7.13.22 All IRS ASME Boiler and Pressure Vessel Code Section III components are arranged to provide adequate clearances to permit inservice inspection. The design of the arrangement conforms to the guidelines of Section XI of the ASME Code.

(RB)7.13.23

INSERT
B →

~~Access to the IRS is provided such that at time periods greater than 4 hours post-LOCA, capability of refilling the SCST with concentrated hydrazine solution is possible.~~

(RB)7.13.24 Protection is provided from internally generated flooding that could prevent performance of safety-related functions. Refer also to sections 3.6 and 9.3.3.

8

(RB)7.14

WASTE COLLECTION

(RB)7.14.1

The IRS components are designed for zero external leakage. In the unlikely event that leakage should occur, provisions exist to accept the maximum leakage rates listed below for purposes of room sump design.

- a. SCAP seals: 100 cm³/h/pump
- b. Valves
 - backseat leakage: 10 cm³/h/in. seat diameter/valve
 - across the valve seat: 10 cm³/h/in. of nominal valve size/valve

IRS leakages are treated as potentially toxic waste with a low dissolved solids and organic content.

INSERT B

"Access to the SCST is provided following a LOCA such that the concentrated hydrazine solution can be replenished prior to reaching a minimum level of 5%. Consideration is given to radiological and hydrazine vapor hazards, and to alignment of the hydrazine fill apparatus."

