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AUTH.NAME AUTHOR AFFILIATION
VAN BRUNT,E.E. Arizona Public Service Co.
RECIP.NAME RECIPIENT AFFILIATION
TEDESCO,R.L. Assistant Director for Licensing

SUBJECT: Responds to 820108 request for addl info re TMI Action Items II.F.1 & III.D.1.1 re noble gas sampling & analysis of plant effluents & radioactive liquid atmospheric tanks overflow & leakage protection.

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February 11, 1982
ANPP-20157 - JMA/WFQ

Mr. R. L. Tedesco
Assistant Director of 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: 82-056-026; G.1.10

References:
(1) Letter from F. Miraglia, NRC, to E. E. Van Brunt, Jr. dated January 8, 1982, subject: Request for Additional Information (PVNGS)
(2) Letter from E. E. Van Brunt, Jr., APS, to R. L. Tedesco (ANPP-19803 - JMA/WFQ) dated December 30, 1981
(3) Letter from E. E. Van Brunt, Jr., APS, to Director of Nuclear Reactor Regulation (ANPP-19184 - JMA/WFQ) dated November 2, 1981, subject: LLIR Amendment 2

Dear Mr. Tedesco:

Our responses to the items enclosed in your letter, Reference 1, are as follows.

Items 1 and 2

Responses to these questions regarding PVNGS cable trays were provided by Reference 2.

Item 3 - II.F.1

B001 s 1/1

Attachment 1 - Noble Gas

a) and b) - A response will be provided by March, 1982 (also refer to the PVNGS SER, Item II.F.1.1, page 22-27).

The area monitors are located on each steam line approximately one foot upstream of the atmospheric dump valves in the Main Steam Support Structure (MSSS). Refer to FSAR Figure 12.3-2.

Item 3 - II.F.1

Attachment 2 - Sampling and Analysis of Plant Effluents

Monitors are designed to allow personnel to remove, replace and transport sampling media without exceeding the criteria of GDC19 of 5 rem whole-body and 75 rem to the extremities. Refer to the PVNGS LLIR, page II.F.1-2 (Amendment 2). Also refer to FSAR Section 11.5.2.1.1.7.2.

Item 3 - III.D.1.1

a) - g) (except b) Refer to the PVNGS LLIR Item III.D.1.1 - Responses were transmitted by Reference 3. Records of leakage measurement will be available at PVNGS for NRC review.

b) The PVNGS design was reviewed to confirm that the design and construction of PVNGS systems minimize unplanned releases of radioactivity including the related incidents identified in NRC letter dated October 17, 1979 to all operating nuclear power plants.

The following discussion summarizes that review.

Radioactive liquid atmospheric tanks are provided with overflows with either no isolation valve or a locked-open valve. Overflow lines have loop seals and are routed to appropriate radioactive building sumps.

The sump liquid is routed to the LRS holdup tanks. Overflow lines from the Refueling Water Tank and the LRS Concentrate Monitor Tanks are heat-traced to prevent plugging. Radioactive liquid pressurized tanks with the exception of the volume control tank and reactor drain tank are provided with relief lines routed to the appropriate sumps. A summary of the overflow provisions for the radioactive tanks is provided in Table 1.

Storm drains are located away from areas with a high potential for radioactive spills. No storm drains exist in the immediate vicinity of the Containment, Auxiliary or Radwaste Buildings.

Radioactive pumps are generally located in isolated compartments whose drains are designed to catch all potential leakage. These drains are routed to the appropriate radioactive building sump. In addition, certain pumps whose potential for radioactive leakage is greatest are equipped with drip pans with lines hard-piped to the associated building sump. A summary of the radioactive pumps and their leakage provisions is given in Table 2.

Radioactive valves are located in shielded compartments such as valve galleries equipped with floor drains that are designed to collect all potential valve leakage. These drains are routed to appropriate building sumps.

Instrumentation containing radioactive process fluid outside enclosed compartments are located away from normal passageways and are equipped with drip pans to collect potential leakage.

Radioactive tanks located inside the Auxiliary and Radwaste Buildings are located in compartments with curbs to contain tank leakage. These compartments are also equipped with floor drains routed to the appropriate radioactive building sump. Outside liquid radwaste tanks are surrounded by a dike sufficient to hold the contents of a tank rupture. Outside CVCS tanks are concrete tanks with steel liners. The concrete tanks will retain potential liner leakage.

The hot lab, cold lab, decontamination area, and sample station are equipped with floor drains routed to the non-ESF sump.

There are no cross-connects between units of PVNGS.

Please contact me if you have any questions.

Very truly yours,

E. E. Van Brunt

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

EEVBJr/WFQ/av

cc: M. Licitra
F. Miraglia
P. L. Hourihan
R. L. Greenfield
A. C. Gehr

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 11th day of FEBRUARY, 1982.

Connie Lou Armstrong
Notary Public

My Commission expires:

June 24, 1983

TABLE 1

RADIOACTIVE TANKS OVERFLOW AND LEAKAGE PROTECTION

P&ID	Tank	Atmospheric or Pressure Vessel	Overflow or Relief	Overflow or Relief Line	Tank Location	Curb or Enclosed Compartment	Comments
CHP-001	Volume Control Tank	PV	Relieves to vent gas surge header	N-214-HCDA-3/4"	Auxiliary Bldg 120′ level	Enclosed Compartment	
CHP-002	Refueling Water Tank	ATM	Overflows to holdup tank sump	N-134-HCDA-6"	Outside of fuel bldg	Concrete w/ steel liner	Overflow line i heat-traced.
CHP-003	Reactor Makeup Water Tank	ATM	Overflows to holdup tank sump	N-381-HCDA-3"	Outside of fuel bldg	Concrete w/ steel liner	
CHP-001	Radwaste Crud Tank	PV	Relieves to non-ESF sump	N-533-GCDA-2"	Auxiliary Bldg 100′ level	4" curb	
CHP-003	Reactor Drain Tank	PV	Vents to gas surge tank	N-281-HCDB-2"	Containment 80′ level	-	
CHP-003	Equipment Drain Tank	PV	Relieves to non-ESF sump	N-347-HCDB-1"	Auxiliary Bldg 40′ level	-	
CHP-003	Holdup Tank	ATM	Overflows to holdup tank sump	N-353-HCDA-3"	Outside of fuel bldg	Concrete w/ steel liner	
LRP-001	Low TDS Holdup Tank	ATM	Overflows to radwaste bldg sump	N-014-HCDA-6"	Outside of Radwaste Bldg	Enclosed compartment	
LRP-001	High TDS Holdup Tanks	ATM	Overflows to radwaste bldg sump	N-229-HCDA-4"	Outside of Radwaste Bldg	Enclosed compartment	
LRP-001	Chemical Drain Tanks	ATM	Overflows to aux bldg sump via a funnel drain	N-067-HCDA-3" N-206-HCDA-2"	Auxiliary Bldg 51′-6" level	6" curb	

P&ID	Tank	Atmos-pheric or Pressure Vessel	Overflow or Relief	Overflow or Relief Line	Tank Location	Curb or Enclosed Compartment	Comments
LRP-002	Concentrate Monitor Tanks	ATM	Overflows to radwaste bldg sump	N-195-HCDC-2" N-219-HCDC-1"	Radwaste Bldg 100′ level	6" curb	Overflow lines are heat-traced.
LRP-002	Recycle Monitor Tanks	ATM	Overflows to radwaste bldg sump	N-183-HCDA-3" N-205-HCDA-3"	Outside of Radwaste Bldg	Enclosed compartment	
SRP-001	High Activity Spent Resin Tank	PV	Relieves to radwaste bldg sump	N-027-HCDA-2"	Radwaste Bldg 100′ level	Curb	
SRP-001	Low Activity Spent Resin Tank	PV	Relieves to radwaste bldg sump	N-016-HCDA-2"	Radwaste Bldg 100′ level	Curb	
SRP-002	Waste Feed Tank	ATM	Overflows to radwaste bldg sump via funnel drain	N-204-HCDC-3/4"	Radwaste Bldg 100′ level	Enclosed Compartment	

TABLE 2
RADIOACTIVE PUMPS LEAKAGE PROVISIONS

P&ID	Pump	Drip Pan Drain Line	Location	Comments
CHP-001	Crud Pump	N-554-HCDA-1". Drains to non-ESF sump	Auxiliary Bldg 100′ level	None.
CHP-002	Charging Pumps	N-245-HCDB-1" N-246-HCDB-1" N-247-HCDB-1". Drain to recycle drain header.	Aux. Bldg. 100′ level	None.
CHP-002	Boric Acid Makeup Pumps	N-449-XCDA-1/2" N-453-XCDA-1/2" Drain to non-ESF sump.	Aux. Bldg. 70′-0" level	Equipped with a gland seal loop off the process flow.
CHP-003	Reactor Make-up Water Pumps	No drip pan. Drain line off gland seal to holdup tank sump	Aux. Bldg. 70′ level	Equipped with a gland seal loop off the process flow.
CHP-003	Reactor Drain Pumps	N-476-XCDA-1" N-479-XCDA-1" Drain to a funnel drain routed to non-ESF sump	Aux. Bldg. 40′ level	None.
CHP-003	Holdup Pumps	N-482-XCDA-1/2" N-488-XCDA-1/2" Drain to holdup tank sump	Aux. Bldg. 40′ level	Equipped with a gland seal loop off the process flow.
LRP-001	LRS Holdup Pumps	N-031-HCDA-1" N-032-HCDA-1" N-033-HCDA-1" Drain to radwaste bldg sump	Radwaste Bldg 100′ level	None.
LRP-001	Chemical Drain Pumps	N-079-HCDA-1" N-082-HCDA-1" Drain to a funnel drain routed to radwaste bldg sump	Aux. Bldg. 40′-0" level	None.
LRP-002	Concentrate Monitor Tank Pumps	N-117-HCDC-1" N-620-HCDC-1" Drain to radwaste bldg sump	Radwaste Bldg. 100′ level	Drain line is heat-traced.

P&ID	Pump	Drip Pan Drain Line	Location	Comments
LRP-002	Recycle Monitor Pumps	N-186-HCDA-1" Drains to radwaste bldg sump	Radwaste bldg. 100′ level	None.
PCP-001	Fuel Pool Cleanup Pumps	No drip pan.	Fuel bldg. 100′ level	Equipped with a gland seal loop off. the process flow which drains to fuel building sump.
PCP-001	Fuel Pool	No drip pan.	Fuel bldg. 100′ level	Equipped with a gland seal loop off the process flow which drains to fuel building sump.
SRP-001	Resin Transfer/ Dewatering Pump	N- -HCDA-1" Drains to a local stub-up routed to radwase bldg sump	Radwaste bldg. 100′ level	None.
SRP-002	Waste Feed Pump	N-068-HCDC-1" Drains to a local stub-up routed to radwaste bldg sump	Radwaste bldg. 100′ level	None.