Arizona Nuclear Power Project
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September 18, 1985
ANPP-33487-EEVB/WFQ

Mr. John B. Martin, Regional Administrator
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region V
1450 Maria Lane, Suite 210
Walnut Creek, CA 94596-5368

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Units 1, 2 and 3
Docket Nos. STN50-528 (License NPF-41)/529/530
Auxiliary Pressurizer Spray
File: 85-056-026; G.1.01.10

Reference: Confirmatory Action Letter from J. B. Martin, NRC, to E. E. Van Brunt, Jr., ANPP, dated September 17, 1985

Dear Mr. Martin:

On September 17, 1985, a conference call was held between representatives of NRR, Region V and ANPP to discuss the unscheduled reactor shutdown of September 12, 1985 and its impact on the Chemical and Volume Control Systems (CVCS) design and operation. During this call, the following NRC concerns related to the charging and auxiliary pressurizer spray were identified:

1) The non-IE Motor Control Center (M-72) associated with motor-operated valves CH-501 and 536, is shed from the Class IE Electrical Bus on a Safety Injection Actuation Signal (SIAS) and is not automatically resequenced onto the Class IE Bus. To reestablish remote manual control of valves CH-501 and 536 operator action outside of the control room is required (Load Center panel located in the Auxiliary Building).

2) The failure of non safety related Volume Control Tank (VCT) level instrumentation, could cause maloperation of the charging pumps. Specifically, the faulty instrument may provide a reading which would indicate higher than the actual level in the VCT. This would lead to a loss of suction, if the VCT was eventually drained, and gas binding of the charging pumps could occur due to the hydrogen overpressure in the VCT.

IE-01

As discussed, ANPP evaluated the design and licensing basis, for the charging and auxiliary pressurizer spray, to determine the impact of the above described concerns. The result showed that use of the auxiliary pressurizer spray within 30 minutes of an initiating event, was assumed only for the PVNGS-specific Steam Generator Tube Rupture (SGTR) with a loss-of-offsite power and a full-open failed atmospheric dump valve on the affected steam generator. For other event scenarios, only those which assume loss-of-offsite power, assume the operation of the auxiliary pressurizer spray. For these events, after the plant has stabilized and the accident has been mitigated, auxiliary spray is used to depressurize the reactor coolant system to allow entry into shutdown cooling as part of the post-accident recovery.

As an interim resolution of the NRC concerns, ANPP proposes the following steps:

1) The appropriate PVNGS operating procedures will be changed to instruct the control room operators to promptly switch the charging pump suction from the Volume Control Tank (VCT) to the Refueling Water Tank (RWT), upon a loss-of-offsite power. This is done from the control room, by opening CH-536, to align the RWT, and by closing CH-501, to isolate the VCT.

2) A preventive maintenance (PM) procedure has been implemented to inspect the VCT level instrument reference leg, and to fill, if necessary, on a weekly basis. This will provide assurance that the level instrument will operate properly. In addition, a determination will be made if any additional surveillance or calibration to this instrument can be implemented without removing it from service.

The changes to the operating procedures will assure alignment of the charging pumps to the RWT, a safety-grade source of suction, and provide early VCT isolation if a subsequent SIAS were to occur. The additional PM on the VCT level instrument will provide added assurance the operators have valid VCT level information, and that the VCT will isolate properly on low level. These measures will remain in effect until this issue is resolved based on the actions described in the following paragraph.

Beyond the interim, ANPP proposes, to perform, in parallel, (1) a reevaluation of the PVNGS specific SGTR accident analysis to determine if acceptable offsite dose results are achieved assuming the auxiliary pressurizer spray is not available and (2) preliminary engineering to establish the scope of work necessary to potentially upgrade the auxiliary pressurizer spray capability to meet safety grade design criteria should the SGTR reevaluatin show that auxiliary spray is required to obtain acceptable results. By October 18, 1985, we will submit the results of our revised analysis, and if shown to be necessary by the revised analysis, a description of the design modifications for the auxiliary pressurizer spray upgrade, a schedule for implementation of the modifications, and a justification for continued operation if modifications are required.

As requested by the NRC staff, the loads fed by the non-IE Motor Control Center (M-72) are shown on the attached.

We believe these proposed actions adequately address the concerns of the referenced letter, and we anxiously await your concurrence.

Very truly yours,

E E Van Brunt Jr /WH

E. E. Van Brunt, Jr.
Executive Vice President
ANPP Project Director

EEVB/TFQ/dlm
Attachment

cc: G. W. Knighton (all w/a)
R. P. Zimmerman
A. C. Gehr
E. A. Licitra

ATTACHMENT A

480V Non Class IE Motor Control Center
E-NHM-M72

The following non class IE loads are fed from MCC 72 and are shed on SIAS (Reference Single Line Diagram 13-E-NHA-072 Rev. 4)

Position	Load
1	- (Incoming Feeder)
2	- Containment Normal ACU-B Discharge Damper (.13 hp)
3	- Containment Normal ACU-D Discharge Damper (.13hp)
4	- Backup Protection Breaker for positions 2 and 3
5	- Spare
6	- Space
7	- Space
8	- Volume Control Tank Outlet Valve (UV-501) (.33 hp)
9	- Refueling Water Tank Gravity Line to Charging Pump Valve (HV-536)(.7 hp)
10	- Space
11	- Space
12	- Space
13	- Backup Protection Breaker for Position 14
14	- Pressurizer Normal Cooling Fan (A06B) (10 hp)
15	- Space

[illegible]