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SUBJECT: Submits response to branch suggestions pertaining to graded QA program.

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- Reference:
1. Letter dated 12/04/95, from Charles R. Thomas, Project Manager, Project Directorate IV-2, to W. L. Stewart, APS
 2. APS Letter 102-03770-GRO/AKK/ACR, dated 09/12/96, to USNRC Document Control Desk
 3. Letter dated 08/21/96, from K. E. Brockman, Acting Director, Division of Reactor Safety, Region IV, to W. L. Stewart, APS

Dear Sirs:

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Units 1, 2, and 3
Docket Nos. STN 50-528/529/530
Graded QA Program

In a letter dated December 4, 1995, Reference 1, the NRC forwarded trip reports pertaining to two visits. Both trip reports included suggestions and questions pertaining to the Graded QA (GQA)-Procurement Volunteer program which had been implemented by PVNGS. One of the trip reports dealt with the procurement aspect of the GQA program. APS letter, Reference 2, responded to the procurement comments and suggestions. This letter responds to the PSA Branch suggestions which were included in Reference 1.

The PSA Branch provided eight specific suggestions. Those suggestions and the PVNGS responses are given below. The NRC staff should note that PVNGS concurs with the staff position reflected in SECY 95-265 that "...the conceptual risk determination process described in NUMARC 93-01 could be used in other applications." Specifically, the risk determination process used by PVNGS includes PSA, deterministic methods, and an Expert Panel that considers all types of functional failures of Structures, Systems, and Components (SSCs), not just maintenance preventable functional failures. As the NRC staff allowed in the SECY paper, PVNGS considered the risk ranking produced by the NUMARC 93-01 Expert Panel "...to be applicable for ...issues such as graded quality assurance..."

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A Maintenance Rule inspection was completed at the Palo Verde site on July 19, 1996. The inspection is documented in Inspection Report 528/529/530/96-09, forwarded to PVNGS by Reference 3. No Violations were found. The NRC, in the cover letter to the Inspection Report, stated that the PVNGS program was well developed and comprehensive. The NRC positively noted the methods used to monitor all functional failures of SSCs, the expanded use of the expert panel, and the centralized data collection process. Since PVNGS' system risk ranking for GQA-Procurement is the same as the Maintenance Rule risk ranking, we believe that these comments reflect positively on the responses to the specific suggestions from Reference 1. The NRC suggested that:

NRC Suggestion 1

- Additional guidance be provided to the expert panel for utilizing risk importance measures.

PVNGS Response

PVNGS had revised its methodology for use of risk importance measures subsequent to the 1995 visit by the PSA Branch to Palo Verde. The revised methodology was in use and a re-ranking of structures, systems, and components had been accomplished prior to the NRC's Maintenance Rule Inspection. Prior to the re-ranking by the Expert Panel, specific guidance on the use of risk importance measures was provided to the Expert Panel. This guidance included what importance measures to use and the specific quantitative criteria to apply for the system ranking.

NRC Suggestion 2

- The expert panel establish defensible basis for why systems are included/excluded from the final list of high risk systems.

PVNGS Response

A revision had been made to the Expert Panel procedure which resulted in better documentation of the system ranking. This revised procedure was used in re-ranking all systems prior to the NRC inspection. Included in the new procedure was the requirement that the ranking basis be provided in those instances when the Expert Panel excluded a SSC from the final list of high ranked systems that the PRA had included.

NRC Suggestions 3, 4 and 5

- Additional guidance be provided regarding how the expert panel should supplement PRA scope limitations (i.e., nitrogen back-up was not modeled, but may affect the risk importance of the Instrument Air System).
- Fire, seismic other external risks should be considered by the expert panel in a more structured manner.
- Containment failure and shutdown risks should be considered by the expert panel in a more structured manner.

PVNGS Response

As noted in response to Suggestion 2, the Expert Panel procedure had been revised prior to the Maintenance Rule Inspection. The procedure now has improved guidance. It is believed that the changes to the Expert Panel procedure were responsive to the NRC's suggestions.

NRC Suggestion 6

- Dynamic risk importance and the effect of planned maintenance should be considered by the expert panel

PVNGS Response

Dynamic risk importance is not recommended as a part of the risk ranking methodology outlined in NUMARC 93-01. Dynamic risk ranking is more associated with plant configuration management issues. The defense-in-depth here is in the determinations of the Expert Panel as they consider deterministic insights, PRA insights, and their expertise with the plant.

NRC Suggestions 7 and 8

- The methodology/basis for using the top 20% of the systems for each of the 3 risk measures as an "initial consideration cutoff" is unclear.
- The mathematical process for calculating system importance needs to be justified.

PVNGS Response

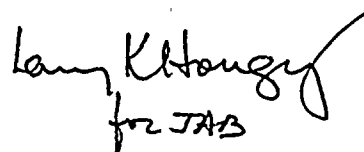
PVNGS no longer uses the Pareto principle (top 20 %) as discussed in the Maintenance Rule inspection. Risk importance measures are now calculated in accordance with the methodology defined in NUMARC 93-01.

Other

PVNGS appreciates the opportunity to work as a Volunteer plant in the effort to improve overall safety of the commercial industry through the use of "risk informed" processes. PVNGS has been fortunate to have been in a position to have implemented GQA-Procurement over the past 2 years. Based on our experience, we strongly believe that the industry guidance to implement GQA should endorse Maintenance Rule principles for risk significance determinations, that appropriate quality controls should be in the QA plan which implement Appendix B, Criterion II, that root cause and corrective action should be initiated based on performance as well as condition reporting, and that the GQA should be a "living" process. For us, as well as other utilities, we must look at safety improvements that are beyond current regulations with a cost/benefit justification. PVNGS has been able to minimize additional costs by using the Maintenance Rule model. This has facilitated our Graded QA safety improvements. PVNGS will be providing more detailed suggestions for the pending GQA Regulatory Guides in the near future based on our experience with implementing GQA-Procurement.

Should you have any questions, please contact Ms. Angela Krainik at (602) 393-5421.

Sincerely,


for JAB

JAB/AKK/ACR/dpr

cc: A. Thadani
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