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ACCESSION NBR:9609230130 DOC.DATE: 96/09/12 NOTARIZED: NO DOCKET #
FACIL:STN-50-528 Palo Verde Nuclear Station, Unit 1, Arizona Publi 05000528
STN-50-529 Palo Verde Nuclear Station, Unit 2, Arizona Publi 05000529
STN-50-530 Palo Verde Nuclear Station, Unit 3, Arizona Publi 05000530
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SUBJECT: Submits response to procurement comments & suggestions re graded QA program.Procedure encl. See Ltr.

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102-03770-GRO/AKK/ACR
September 12, 1996

GREGG R. OVERBECK
VICE PRESIDENT
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Reference: 1. Letter dated December 4, 1995, from Charles R. Thomas, Project Manager, Project Directorate IV-2, to W. L. Stewart, APS
2. Letter dated August 6, 1996, from James W. Clifford, Senior Project Manager, Project Directorate IV-2, 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. In one visit, the NRC's PSA Branch conducted a review of the PVNGS risk ranking methodology and the Expert Panel process. There are eight specific suggestions included in the PSA Branch's November 6, 1995 Trip Report which was attached to the December 4, 1995 letter. All eight suggestions relate to the Expert Panel functions and guidance. A specific response to the PSA suggestions will be developed in the near future. In the interim, it is suggested that the PSA Branch review the revised Expert Panel procedure which has been submitted to the NRC as a part of the PVNGS Maintenance Rule inspection and/or as a part of the Inservice Testing (IST) pilot. The NRC suggestions are addressed in the revised procedure. The Expert Panel procedure applies to all risk based applications that use an Expert Panel for risk ranking purposes, including Graded Quality Assurance (GQA) Procurement.

The other visit pertained to an assessment of the procurement aspects of the GQA program. This letter responds to the procurement comments and suggestions. An attachment to the NRC's referenced letter concluded that

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PVNGS had made a significant, and conservative, effort to establish a GQA process for procurement and Commercial Grade Item (CGI) dedication activities. The attachment identified four specific areas for improvement.

The identified areas were discussed in a meeting held with Bob Gramm and Juan Peralta of the NRC's Maintenance and QA Branch on June 5, 1996 at Palo Verde. The NRC's Trip Report for this meeting was forwarded by Reference (2). The four areas discussed during the meeting and the PVNGS responses are as follows:

NRC Identified Area

1. The present procedural guidance for performing low-risk-significant procurement and CGI dedication activities needed improvement. Specifically, the NRC considered a lack of prescriptive text on the use of the grading criteria to be a weakness in the PVNGS safety-related low-risk-significant CGI dedication program.

PVNGS Response

In the June 5 meeting, PVNGS and the NRC reviewed pending changes to PVNGS procurement procedures. The changes provide improved procedural control and will result in better documentation of the decisions made when identifying critical characteristics for low-risk-significant item procurements. One revised procedure requires the responsible Materials Engineer to address specific questions based on the PVNGS Quality Assurance Plan's requirements for implementing a graded approach. The procedure now addresses weaknesses identified by the NRC in their previous visit.

NRC Identified Area

2. One QA program element which the NRC staff has consistently considered to be necessary for a GQA process was appropriate consideration of feedback information. During the earlier visit, the NRC determined that PVNGS had not yet incorporated the requisite feedback sources into its new GQA program.

PVNGS Response

PVNGS concurs that process feedback is essential to a successful GQA program. While required feedback mechanisms were in place for the Expert Panel and for PRA, both for specific equipment problems and for system performance problems, the feedback to Materials Engineering for equipment problems was left to the judgment of the system or maintenance engineering personnel conducting the failure analysis.

The root cause of failure procedure had been recently revised. The revision now requires summaries for all significant and adverse conditions to be distributed to the Nuclear Materials Management GQA program manager. In addition, the recent revision to procurement procedures has changed the Post Installation Testing (PIT) requirements. One of the changes is to require maintenance personnel to return material which has failed a PIT to the warehouse for inclusion in the Warehouse Discrepancy Notice process. This will require Materials Engineering to evaluate all Commercial Grade Dedication PIT failures to include Graded QA material.

NRC Identified Area

3. During the earlier visit, the NRC found that the process for confirming that dedicated CGIs would perform their intended safety function appeared to be inconsistent with the intent of the revised 10 CFR 21 rule. The NRC recommended that PVNGS reevaluate the practice of generally excluding functional testing, including normal post-installation testing, from the dedication process.

PVNGS Response

During the June 1996 meeting, PVNGS personnel discussed the addition of Appendix I to the Item Procurement Specification procedure. Appendix I streamlines the PIT process at PVNGS. The original PIT process was overly conservative with excessive controls. This resulted in a process which increased the time needed to deliver a part to the field. Consequently, the PIT process was seen as an undesirable option to the Materials Engineer in the dedication process. The new process relieves some of these unnecessary controls while improving the feedback mechanism for failed parts. This new process can be used for those attributes which, based on the Material Engineer's judgment or equipment failure feedback, require testing for the attribute.

In addition, PVNGS maintains a post maintenance retest process for all equipment. Retest requirements under this program are specified by maintenance planners and are based on a graded philosophy which evaluates the extent and complexity of the maintenance, the nuclear safety significance, and the importance to reliability of the equipment being tested. Post maintenance testing failures for Maintenance Rule components will be identified as described in item 2 above, and this information will be fed back to the procurement process. Although not specifically credited in the dedication process, post maintenance testing combined with feedback mechanisms provides additional assurance of acceptable product quality.

NRC Identified Area

4. The NRC team had concluded in their earlier visit that additional provisions were warranted to ensure the equivalency of dedicated items with components that were originally seismically qualified by test or analysis.

PVNGS Response

Seismic qualification is maintained through a similar process to that used in Commercial Grade dedication. Seismic qualification of an item is developed through type testing. Safety related material required to meet technical seismic requirements are procured from a vendor with an approved 10 CFR 50, Appendix B program or are purchased as commercial grade and dedicated. Both methods provide assurance that the procured material is equivalent technically to that which was type tested. Due to the inherent low risk nature of items procured in the Graded QA process, PVNGS has decided to question the vendor about possible changes to the item's design to satisfy seismic requirements. Commercial grade vendors should not have any reason to be adverse about this information. However, the vendors may determine that certain changes are insignificant and not consider them changes when in fact the changes do affect seismic qualification. For this reason, PVNGS procedures provide guidance to the Materials Engineer when questioning the manufacturer/vendor about seismic parts to specifically ask about design changes since the prototype test or analysis was performed. In all cases, Materials Engineering must address changes in design of an item. If there are changes in the design, a substitution evaluation must be completed in accordance with PVNGS materials procedures. Differences in seismic characteristics are evaluated in this process. Since this process is based on the industry accepted process for maintaining seismic qualification, this is acceptable for GQA.

General

The changes discussed in areas 1, 3, and 4 were not yet formalized during the NRC's June visit. Those areas involve changes in the Item Procurement Specification procedure.. Since the visit, a revision to the procedure has been issued and a copy of it is attached for your use.

During the visit, the NRC attended an Expert Panel meeting. The Expert Panel had been meeting almost daily for several weeks in order to re-rank Maintenance Rule systems to revised importance criteria. At the time of the visit, the Expert Panel was in the process of finalizing the revised ranking. Since structure, system, and component performance will cause changes in feedback to the

Expert Panel, the PRA, and the graded or risk informed process, allowance must be made for changes in the ranking. A PVNGS corrective action document was written to document that the Expert Panel Risk Ranking procedure does not currently contain a formal feedback mechanism to Materials Engineering for changes to the system risk ranking. This corrective action is in the disposition process. The attached Item Procurement Specification procedure, section 3.2.9 addresses how PVNGS manages this "living process" for graded procurement once notification of a risk ranking change has been made.

Other

During the June visit, PVNGS noted that there are currently three utility "volunteer" plants assisting the NRC prepare guidance for GQA. The "volunteer" plants are all implementing or planning to implement GQA in the procurement functional area. It was noted that PVNGS is currently in the process of implementing a graded approach to Quality Assurance Audits and Evaluations. PVNGS volunteered to provide assistance to the NRC for this application if desired, since PVNGS believes that there are many potential applications of GQA and since PVNGS believes that a broader input base to the NRC's guidance might be helpful.

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

Sincerely,

Gregg R. Overbeck

GRO/AKK/ACR/dpr

Attachment

cc: S. Black
J. Clifford
K. Johnston
A. Heymer (NEI)
M. Meisner (GGNS)
R. Rehkugler (HL&P)