



Palo Verde Nuclear  
Generating Station

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102-05559-CDM/SAB/RJR  
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U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Reference: APS letter 102-05398-CDM/SAB/RJR, "Proposed Alternative to PVNGS' ASME Section XI Inservice Inspection Program for ASME Code Category B-F, B-J, C-F-1, and C-F-2 Piping (Relief Request 32)," dated January 16, 2006.

**SUBJECT: Palo Verde Nuclear Generating Station (PVNGS)  
Units 1, 2 and 3  
Docket Nos. STN 50-528/529/530  
Response to the NRC Request for Additional Information Regarding  
Risk-Informed Inservice Inspection Program Request (TAC NOS.  
MC9627, MC9628, AND MC9629)**

Dear Sirs:

In the letter referenced above, Arizona Public Service (APS) submitted proposed alternatives to section 50.55a(g) of Title 10 of the *Code of Federal Regulations* (10 CFR). Specifically, APS proposed using a risk-informed Inservice Inspection (ISI) program as an alternative to the current ISI program requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code of record for Palo Verde Nuclear Generating Station, Units 1, 2, and 3.

On August 2, 2006, the NRC requested a response to the following two questions.

NRC Question:

Please provide a paragraph or so describing a re-analysis or sensitivity study performed in response to NRC questions about Combustion Engineering Owners Group (CEOG) Peer Review Facts and Observations (F&O) DA-02, 04, 06, and 08, which concluded that the revised PRA data analyses (completed after this application was submitted) had no impact on the relative consequence importance and/or risk-rankings of pipe segments.

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**APS Response:**

The original analysis for the Risk-Informed (RI) Inservice Inspection (ISI) program was performed with Revision 13 of the PVNGS PRA model. This model had several peer review items that were still open, but considered to not substantially affect the results of the analysis. In a phone call with the NRC reviewer on July 26, 2006, the question was asked how PVNGS knew that some of the issues related to model data would not substantially affect the results.

Specifically, there were 4 CEOG Peer Review F&Os which dealt with the condition of data used within the PVNGS PRA model. They are Bayesian updating, grouping of components for each of the failure modes, common cause methodology and generic data sources. Palo Verde completed a subsequent update (Revision 14) to the PRA model in January 2006. These four F&Os were addressed and changes made to the PRA model. The changes included updating the generic data sources and revising the common cause methodology to the method described in NUREG CR-5485. As part of the next 10 year update of the ISI program, work was initiated to determine what the new segment consequence values would be. This work used the updated Revision 14 model. A comparison of the new consequence values and the current consequence values resulted in one consequence changing value from Low to Medium rank. A review of the final ranking for the welds was performed and resulted in no changes. The results of the new model did not have any impact on ISI weld ranking.

**NRC Question:**

We would like to know what the intentions are with respect to crediting inspections of nickel-based dissimilar metal welds against the required number of inspections per the RI-ISI program. If APS does have such intentions, we would like to know the rationale for taking such credit and, to the degree that APS knows now, what inspection locations are expected to be dropped in order to take this credit.

**APS Response:**

We are keeping the dissimilar metal weld (DMW) exam scope separate from the RI-ISI exam scope. For example, if a PWSCC-susceptible weld is also selected for RI-ISI, it will receive the appropriate examination based on the EPRI topical report requirements as well as an exam for PWSCC per MRP-139.

On August 16, 2006, the NRC requested that APS commit to updating the Palo Verde RI-ISI program to incorporate any NRC-approved final EPRI/MRP guidance on thermal fatigue management.

PVNGS utilized EPRI Technical Report 1000701, Thermal Fatigue Management Guideline (MRP-24) for assessing thermal stratification, cycling, and striping (TASCS). In addition, EPRI/MRP has revised the Thermal Fatigue Management Guidelines (MRP-146). These documents have not been reviewed and approved for use by the NRC. As a result, APS is making the following new commitment:

Upon NRC review and approval of MRP-24 and MRP-146, PVNGS will review and incorporate applicable NRC-approved final EPRI/MRP guidance on thermal fatigue management into the Palo Verde RI-ISI program for assessing TASCS.

If you have any questions about this change, please telephone Thomas N. Weber at (623) 393-5764.

Sincerely,

A handwritten signature in cursive script, reading "David Mandlin".

CDM/SAB/RJR/gt

cc:	B. S. Mallett	NRC Region IV Regional Administrator
	M. B. Fields	NRC NRR Project Manager
	G. G. Warnick	NRC Senior Resident Inspector for PVNGS