June 21, 2002

Martin W. Schwartz
2244 University Ave.
Sacramento, CA 95825

Dear Mr. Schwartz:

Thank you for your letter of June 3, 2002, regarding Davis-Besse's management decision to purchase the unused reactor pressure vessel head from Consumers Power Midland 2 facility. In your letter, you propose design changes applicable to the reactor pressure vessel (RPV) head to replace the existing damaged Davis-Besse RPV head.

Considerations beyond the issues discussed in your letter dictate the design of any RPV head. First, design of the head is required to meet the rules of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section III, Division 1, entitled, "Rules for Construction of Nuclear Facility Components." This requirement stems from Title 10 of the Code of Federal Regulations, Part 50.55a,"Codes and Standards." The specific parts of ASME Section III that apply to head design are Subarticles NB-3100, NB-3200 and NB-3300. In particular, I refer you to subparagraph NB-3337.3 in which partial penetration welded nozzles of the current configuration are allowed for the following examples: control rod housings, pressurizer heater wells, and openings for instrumentation. The design rules cited above have determined the current configuration of all Pressurized Water Reactor (PWR) upper head penetrations in this country and for many PWRs in foreign countries. ASME Section III design rules can be changed however, and as a matter of practice, they are modified frequently. The mechanism required for such an action entails a letter to ASME outlining the specific changes to Section III that you propose and the bases for each change. The letter should be addressed to: The American Society of Mechanical Engineers, Three Park Avenue, New York, N.Y. 10016-5990, Attention: Christian A. Sanna, Secretary, Subcommitee on Nuclear Power.

Finally, the use of the Midland head at Davis-Besse is only an interim measure, in that, its service life is intended to be about 10 years. At that time a new head, currently on order, will replace the Midland head. The new head will be constructed of materials more resistant to Primary Water Stress Corrosion Cracking (PWSCC), e.g., Alloy 690 base material and Alloy 152 weld material. Although the Midland head will be susceptible to PWSCC, it takes time to initiate PWSCC, and if cracking is initiated, frequent and more effective inspections will manage any degradation that may occur.

Thank you for your interest in these important matters. If you have any further questions, please contact me.

Sincerely,

/RA/

Anthony Mendiola, Section Chief
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

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Dated: June 21, 2002

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