

Z. ZUDANS, PH.D.

Senior Vice President and Chief Operating Officer

May 27, 1982

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Dr. David Okrent  
Energy & Kinetics Dept.  
5532 Boelter Hall  
School of Engineering and  
Applied Science  
University of California  
Los Angeles, CA 90024

re: ACRS Subcommittee Meeting on Midland 1 and 2,  
May 20-21, 1982

Dear Dr. Okrent:

The two day meeting on Midland Units 1 and 2 from the overall point of view was a satisfactory demonstration of the applicants management capability and determination to build a good quality plant. Site visit confirmed the applicant's claim that there is no irreparable damage done to DGB or any other structures due to earlier nonuniform settlement of the soil. The proposed remedial actions appear to be extremely conservative, except for permanent dewatering system as discussed below. Some specific comments on individual issues are as follows.

1. Although we did not have an opportunity to see the control room, the mockup of it and the discussion of the SPDS indicates that Midland will use the systems developed by B&W Owners Group. The color graphics of the plant status will indicate plant operating range bounded by saturation and certain level sub-cooling lines (B&W Owners Group's design).

2. During site visit we examined the extent of cracks in DGB and service water intake structures. No confirmation of potentially serious cracking was found and with the completion of the proposed underpinning, structures will be adequate.

3. From information presented during this meeting, there appears to be reason to believe that early problems identified with the QA/QC implementation do not have broader implications on the quality of construction. The extent to which staff uses judgement in lieu of specific criteria in this matter is large and it might be of interest to the full Committee to learn how specifically did the Staff conclude that no broad, generic type of problems exist in QA implementation at the Midland Plant.

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4. With respect to RCS high point vents, there is one on each of the two candy cane tops and one on the upper head of the pressurizer. There is no high point vent in the RPV head. Applicant states that high point vent in RPV head is not necessary to assure natural circulation (demonstrated by an analysis). The RPV vessel head volume is 14,000 cu ft. Without RPV head vent and without water level measurement in the reactor (water level measurement exist on candy cane and on hot leg from hot leg outlet to top of candy cane, also core exit TC's exist) there is no way of knowing the status in the head. Arguments claiming ability to sweep out the vapor (or gas) from head by "operational procedures" and natural circulation proof by analysis with a bubble in the head are not convincing to me. I believe some direct indication of state in RPV head should be required (HJTC or  $\Delta P$  cells and RPV head vent).

5. Process steam supply system (tertiary circuit - unique for Midland Plant) appears to be well planned and has little or no potential impact on Midland transients.

6. Because of the revised SSE, engineering review of seismic margin in various safety related structures and components is in progress. Criteria for this review are acceptable. Some of the analyses models appear to be rather primitive for the depth of detail conclusions reached by the analysts. In spite of that, I believe Midland structures are adequate to support the added loads imposed by the upgraded SSE. I am looking forward with interest to examine the fragility curves of structures and components to be used in the PRA study of the Midland plant.

7. Consumer Power Company management structure is good and staff positions are filled by personnel with significant experience in nuclear field. In spite of that, problems in QA have been experienced. See Item 3 above for further comment.

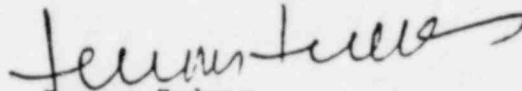
8. AFW system is the staff's pioneering effort to use reliability in licensing decisions. The Staff provides reliability data base to applicants for AFW reliability ranking. The reliability number ( $10^{-4}$ ) for AFW is used by staff not as a goal but as a trigger to make closer examination of the AFW system. This approach makes sense and might eventually lead to the definition of probabilistic safety goals.

9. Arguments leading to proposal for plant dewatering system appear to be one sided - increase of factor of safety against potential liquefaction threat in a couple of sand pockets. Negative aspects (re: potential for undermining due to washout) appear to be discounted by the fine filtering of the pumped material. I am not sure whether the dewatering system will reduce or increase the plant risk since the proposed PRA does not appear to model it completely.

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10. On pressurized thermal shock (PTS), SER indicacts for Unit 1 circumferential beltline weld (WF 7C) change of  $RT_{NDT}$  from 20°F (initial) to 180°F after the first 4 calendar years of operation. The Staff's conclusion (Page 5-25) that "Midland Unit 1 and 2 reactor vessels will not be jeopardized by thermal shock for at least 4 calendar years" is correct, however, the real question is what happens during the rest of the life of the RPV. The rate of increase of  $RT_{NDT}$  varies with time and plant and one would like to see projections as to how  $RT_{NDT}$  will increase in Midland. Since this is a new plant, it may be prudent to consider some of the steps evaluated for older plants for reduction of the fluence.

Very truly yours,



Zenons Zudans  
Senior Vice President and  
Chief Operating Officer

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cc: D.C. Fischer, ARCS