From: Stephen Sands > NRR
To: Jin Chung
Date: 12/20/01 4:07PM
Subject: Re: Davis Besse CRDM Inspections

Jin,

I received a phone call from Doug Simpkins, the resident at Davis-Besse, and he did not concur with some of the information in the write-up you sent me. He faxed me the TS requirements in Modes 1-4 for the personnel required. I than had him make the appropriate changes in the table of the write up. I have attached Doug's revise table and text to reflect the correct numbers with respect to staffing. Please take a look at the attached and see if that changes anything - I don't think it does, but we want to be sure and reflect accurately the information concerning the personnel staffing at Davis-Besse.

Thanks,
Stephen

B-209

Compensatory Measures to Reduce Risk during a CRDM failure-induced MLOCA at Davis-Besse (12/19/2001)

Questions had been raised concerning the implementation of compensatory measures during the manual swap from BWST injection to recirculation of the emergency sump at Davis-Besse. The concerns focused particularly on the meaning of the "dedicated" operator, to reduce the MLOCA CCDP in an event of a CRDM failure. During a telephone conference with the licensee on December 19, 2001, the licensee offered the following clarifications:

	Technical Specifications Requirement (Modes 1-4)	Typical Shift Complement (Existing)
SRO	2*	3
RO	2	3
STA	1*	1 (SRO)
NLO	2	5
Total	7	12

*One of the two SRO's may also assume the STA function if they meet the requirements for SRO and STA.

The staffing requirements for Fire Brigade were removed from the Technical Specifications via amendment, and placed into the Fire Hazards Analysis Report, Section 8.3, Fire Brigade. However, a minimum of five Fire Brigade members is required, and members must not be relied upon for safe shutdown essential functions in the event of a fire emergency. Therefore, to meet minimum staffing requirements for the Technical Specifications and the FHAR, the licensee must maintain 9 personnel: 3 watchstanders in the Control Room (1 SRO, 2 RO's), one NLO responsible for safe shutdown essential functions, and five additional members for Fire Brigade functions, which may include the SRO/STA.

Therefore, the station is typically manned with three additional people: 2 additional SROs and an additional RO. The Fire Brigade members usually consist of four NLO's and one SRO. An additional NLO is responsible for performing the safe shutdown actions, for a total of 5 NLO's onshift. The licensee emphasized the station would continue with this "typical" operating crew with the following additional compensatory measures:

1. The Zone 3 equipment operator (EO), not licensed but well qualified, would be assigned (dedicated) to local plant operation outside the control room in the event of the MLOCA as a result of the CRDM failure. The term, "dedicated" does not mean the EO would have only one duty assigned, nor does it mean there would be another additional operator. It means the EO is "functionally dedicated." This dedicated EO would be briefed on a "standing order" every shift and recorded in the unit operating logs accordingly. The procedures associated with the standing order includes a check list to be performed by the EO in the event of the MLOCA, and includes pertinent equipment location and identification, as well as actions to be performed to close the unblocking breakers for HPI and RHR isolation valves. These actions are an integral part of, and may be the most critical and time-consuming steps of, the injection-to-recirculation switch over. Consequently, the NRC staff believes the pre-briefing, familiarization with the procedure, and in-hand checklist would minimize

potential human error and delay in the injection-to-recirculation switch over.

2. The licensee stated that the "dedicated" EO may have other collateral assignments. However, should this event occur, the EO would be directed to the "dedicated" duty. The EO should have at least 100 minutes, but possibly hours according to the licensee's simulator, to complete the switch over.