

From: Jacob Zimmerman
To: Borchardt, Richard; Collins, Samuel; Johnson, Jon; Sheron, Brian
Date: 11/16/01 2:00PM
Subject: November 16, 2001 Director's Highlight

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Gentlemen,

The attached file contains a Director's highlight prepared today on information associated with Davis Besse and D.C. Cook, Unit 2 Bulletin 2001-01 review efforts, a November 8, 2001 public meeting on the Staff's Preliminary Technical Assessment for VHP Nozzle Cracking, and the TMI-1 once-through steam generator tube failure.

A hard copy of the highlight is on its way to you all.

I am also working on a Daily Status Report on Bulletin 2001-01. That will be delivered via email and hard copies by COB today, Friday, November 16, 2001.

Jake Zimmerman, Lead PM Bulletin 2001-01

CC: Adensam, Elinor; Barrett, Richard; Bateman, Bill; Black, Suzanne; Burkhart, Lawrence; Chung, Jin; Colburn, Timothy; Collins, Daniel; Eltawila, Farouk; Hiser, Allen; Holahan, Gary; Lee, Andrea; Marsh, Tad; Marshall, Michael; Pickett, Douglas; Raghavan, Lakshminaras; Reinhart, F. Mark; Stang, John; Strosnider, Jack; Wichman, Keith; Zwolinski, John

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November 16, 2001 Director's Highlight

Davis-Besse - Bulletin 2001-01 Review

A telecon was held between EMCB and the Davis-Besse (DB) licensee on Thursday, November 14. The purpose of the call was to summarize the staff's assessment of the DB bulletin response.

The staff pointed out that (1) DB is a high susceptible plant per the bulletin; (2) 11 of the 13 high susceptible plants have performed inspections per the bulletin and 10 of these have found cracks; and (3) the 6 other B&W plants have performed inspections and found cracks. Three of the six B&W plants have found circumferential cracks.

Based on this information, we informed the licensee that we believe there is a reasonable likelihood that DB currently has multiple cracks in the VHP nozzles and that one or more may be circumferential. We informed them that we could not make an independent assessment of the VHP nozzles based on the photographs and videotapes from previous refueling outages. In addition, we informed them that their PSA was not sufficient to provide reasonable assurance of VHP nozzle integrity through March 2002.

In conclusion, we informed the licensee that based on the information available, we cannot reconcile the inspection results described above and that the only means to provide reasonable assurance of VHP integrity would be to perform the inspections as recommended in the bulletin. We also stated that any future discussions or submittals should focus on how the licensee considers DB to be unique or distinguished from the other, high susceptible facilities.

D.C. Cook, Unit 2 - Bulletin 2001-01 Review

The Indiana Michigan Power Company (I&M) response to the bulletin for Donald C. Cook Nuclear Plant (CNP), Units 1 and 2, was provided by letter dated September 4, 2001. The licensee determined that, since a crack was discovered and repaired in Unit 2 in the 1994-96 time period, Unit 2 will be in the NRC category of, "Previously experienced either leakage from or cracking in VHP nozzles." The response stated, in part, that, "CNP intends to perform a remote visual examination of all accessible VHPs under the reactor vessel head insulation during the next 2001 Unit 2 refueling outage." Due to a recent forced outage, you subsequently shifted your Unit 2 planned refueling outage date to begin on January 19, 2002.

By letter dated October 12, 2001, a revised response to the bulletin was submitted to eliminate reference to the year 2001 for the next Unit 2 refueling outage.

The response to the bulletin and justification for delaying VHP examinations beyond the end of 2001 were discussed in telephone calls on October 11, 2001, between W. Bateman, et al. (NRC) and M. Rencheck, et al. (I&M) and on October 12, 2001, between B. Sheron, et al. (NRC) and M. Rencheck, et al. (I&M). At the conclusion of this telephone conference, the licensee indicated that they would like to provide additional information to the staff regarding this issue.

By letter dated November 5, 2001, the licensee provided additional information. The information has been reviewed by our technical Staff and the following three areas of concern were raised:

1. Crack growth rate
2. Risk assessment
3. Qualified visual examination

These issues were discussed in telephone calls on November 15, 2001, between J. Stang et al. and M. Rencheck, et al. (I&M).

A public meeting has been scheduled for November 20, 2001, to discuss each of the above issues with the licensee.

Public Meeting on the Staff's Preliminary Technical Assessment for Vessel Head Penetration (VHP) Nozzle Cracking.

On Thursday, November 8, 2001, the staff met with NEI, EPRI Materials Reliability Program members, PWR licensees, and other external stakeholders on the staff's Preliminary Technical Assessment for Vessel Head Penetration Nozzle Cracking. In addition to those in attendance in the Commissioners' Hearing Room, a phone bridge was established for remote participation. Prior to the meeting, slides were distributed for remote participants to follow along. The purpose of this meeting was for the staff to present the results of their preliminary technical assessment and its' basis. Participants were informed that the assessment is generic, and that licensees should contact their project managers to talk about plant-specific issues. Presentations were made by Allen Hiser, the lead technical reviewer, and RES contractors assisting with the evaluation of this issue. The staff indicated that any feedback or new information is welcomed and would be considered and discussed. The staff will continue to dialogue with the industry and external stakeholders and work on long term solutions to this issue.

TMI-1 Once-Through Steam Generator (OTSG) Tube Failure

A meeting was held on November 9, 2001, between Exelon/Amergen, the licensee for TMI1, and the NRC staff. The purpose of the meeting was for the licensee to provide (1) its root cause assessment of the two OTSG severed tubes that were discovered during the 2001 refueling outage (1R14) steam generator eddy current inspection; and (2) its planned corrective actions.

During performance of the 1R14 steam generator eddy current inspections, the licensee identified two OTSG tubes that had severed circumferentially. Both tubes had been previously plugged when the licensee identified Inner Diameter - Inter Granular Attack (IGA) that was sufficient enough to require them to be removed from service.

The licensee postulates that the circumferential severing failure of the tubes is the result of three simultaneous phenomenon: a tube expansion effect, flow induced vibration, and ID - IGA. The licensee's corrective action plan is to: de-plug tubes that have been removed from service for inspection (with a bobbin probe and, if swelling or indications are observed, a rotating probe inspection will be performed), install stabilizers in all plugged tubes in both OTSGs from the hot leg, regardless of their location in the OTSG (and, therefore, regardless of their exposure to high flow velocities), and install new UTS plugs. In cases where they are unable to remove an already installed plug, that tube will be "caged" by stabilizing and plugging the surrounding tubes. The stabilizers to be installed extend down to the fourteenth TSP; for tubes that already exhibit signs of tube expansion, full-length stabilizers will be installed