

**From:** Ho Nieh  
**To:** A. Randolph Blough; Art Howell; Bruce Mallett; Charles Casto; Ellis Merschoff; Hubert J. Miller; James Wiggins; Ken Brockman; Loren Plisco; Luis Reyes; Pat Gwynn; Wayne Lanning  
**Date:** 3/8/02 11:44AM  
**Subject:** Emerging issue at Davis-Besse

During CRDM inspections at Davis-Besse earlier this week, the licensee (FirstEnergy Nuclear Operating Company) found that the reactor vessel head base metal surrounding a CRDM penetration nozzle was significantly eroded and/or corroded...preliminary examinations showed that the depth of the degradation was up to about 5 inches into the 6.5 inch thickness of the reactor head (yes, it looks like a portion of the reactor head was reduced to about 1.5 inches in thickness). **The degradation mechanism is not known at this time.** However, it appears that it may have been related to boric acid accumulation around the penetration that may have caused corrosion of the head material. You should also note that this particular CRDM nozzle also had thru-wall axial cracking, but the source of the boric acid accumulation is not known...i.e., there may have been leakage from the CRDM nozzle flange above the head or leakage from the axial thru-wall cracks in the CRDM nozzle or a combination of both.

Attached are pictures (a bit out of focus) of the Davis-Besse reactor vessel head...looking down from the top over the affected CRDM penetration . I will also fax a sketch of the area of concern the Regional Administrator offices that shows the dimensions of the depression in the reactor head...oval in shape - roughly 8 to 10 inches wide and 4 to 5 inches deep. **Please note that the pictures and drawing are to be considered proprietary information.**

NRR staff is working to develop a communications plan on this issue, which will likely include additional generic communication (e.g., info notice or another bulletin) in the very near future, next week perhaps, to potentially affected licensees. NRR also conducted a call with the industry (NEI, MRP, and various licensees) this morning to discuss the NRC's concerns and request information from the industry. Region 3 is gearing up for a special inspection next week. This is a very significant issue with potentially significant generic implications. There are a lot of unanswered questions at this point...more to follow. Please give me a call if you would like additional details.

Ho  
301-415-1721

**CC:** Beth Wetzel; Bill Bateman; Brian Sheron; David Matthews; Douglas Pickett; Elinor Adensam; Frank Gillespie; Gary Holahan; Herbert Berkow; Jack Strosnider; John Zwolinski; Jon Johnson; Joseph Shea; Richard Barrett; Richard Borchardt; Samuel Collins; Satwant Bajwa; Stuart Richards; Suzanne Black; Tad Marsh; William Beckner; William Kane; William Travers

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