

## **2008 Unit 2 Steam Generator Tube Inspection Report**

**An August 21, 2009 Nuclear Regulatory Commission (NRC) email asked four questions with respect to the 2008 Unit 2 steam generator (SG) tube inspection report, which was submitted on April 27, 2009 (ADAMS Accession No. ML091180466):**

**NRC question 1.) Confirm that no crack-like indications were left in service except for those that would have been permitted to be left in service with the F\* repair criteria.**

Northern States Power company, a Minnesota corporation (NSPM) response: NSPM confirms no crack like indications detected were left inservice except those permitted to be left in service by the F\* and/or EF\* alternate repair criteria.

**NRC question 2.) Confirm that the only crack-like indications detected were either located in the tubesheet crevice or the sludge pile at the top of the tubesheet.**

NSPM response: NSPM confirms that all the crack like indications detected were located either completely within the tubesheet or in the case of three tubes (SG21 R21 C30, SG22 R12 C31 and SG22 R17 C74) a portion of the crack length mathematically appears to extend above the top of the tubesheet into the freespan sludge accumulation zone of the tube. A review of the raw data on the three suspect tubes indicates the entire crack length to be completely within the tubesheet crevice (entirely below the top of the tubesheet). NSPM's practice is to report cracks in the tubesheet crevice from the TRH, 1BH, 2BH or EBH landmark location and to report cracks located above the tubesheet from the TSH landmark location (see Figure 1 and the Legend of Fields and Codes in the subject report).

**NRC question 3.) Confirm that no degradation was observed during the inspections of the upper internals of the steam generators.**

NSPM response: The upper internals of 22 Steam Generator were inspected as described in Table 1, footnote 3, of our submittal. NSPM confirms no degradation was observed on any of these components.

**4. Confirm that no wear was attributed to loose parts. In addition, confirm that if any loose parts were left in the steam generators, an evaluation was performed and that it confirmed the acceptability of leaving the parts in service.**

NSPM response: NSPM confirms that two tubes in SG21 (R8 C59 and R9 C59) were left in service with legacy loose part wear. These two tubes were previously subject to an NRC staff request for additional information (NRC Question 2) on the 2006 Unit 2 steam generator tube inspection report which was dispositioned in responses dated February 21, 2008 (ADAMS Accession No. ML080520187). No additional wear attributed to loose parts was detected or left in service. A secondary side inspection was performed on all potential loose parts (PLP) identified by the tubing inspection. The items observed by this secondary inspection were evaluated based on size, shape, potential to wear adjacent tubes, and potential damage that could result from removal of the item, and were acceptable for leaving service.