



DUKE POWER

February 28, 1992

Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Subject: McGuire Nuclear Station  
Docket Nos: 50-369 and 370

Dear Sir:

On February 13, 1992 a conference call was held between NRC Region II, NRC/ONRR and Duke Power Company McGuire Site. The purpose of this call was to provide information to the NRC relative to the restart of McGuire Unit 1 from a steam generator tube leak outage. The status of work conducted in accordance with McGuire Unit 1 Action Plans provided to the NRC was covered. In addition, significant results of eddy current testing conducted on McGuire Unit 2 were also provided.

The significant issues covered and agreements established with the NRC are discussed in detail below.

1. Update of McGuire Unit 1 Action Plan provided as Attachment to my letter of February 7, 1992. This Action Plan has been revised and is included as Attachment 1 to this letter.
2. Unit 1 operating cycle after restart: There are approximately 12 months remaining in Cycle 8. Based on the worst case flaw growth rates, assumed flaw detection limits and the recommendations of draft Reg. Guide 1.121, it appears that an inspection outage would be required prior to completing the full 12 months of remaining cycle operation. This is based on a preliminary assessment of the large amount of data collected during this outage. This data, along with McGuire Unit 2 data and the tube pull information, will be fully evaluated to determine the appropriate Unit 1 operating cycle. The results of this evaluation will be presented during a meeting tentatively scheduled for May 7, 1992 at the NRC's offices in Rockville, Md.
3. McGuire Unit 2 Plans: In addition to the normal refueling outage steam generator work, a bobbin coil re-analysis and special interest MRPC program identical to the Unit 1 program was carried out. Three tubes with eddy current indications in the pre-heater region similar in character to the 1989 and 1992 Unit 1 leak indications will be removed for metallurgical examination.
4. Preliminary Agenda for the May 7, 1992 meeting:
  - a) General description of event.
  - b) Inspection plan carried out on Unit 1 and 2 including visual, UT and eddy current.
  - c) Discussion of results of inspections.
  - d) Results of pulled tube examinations.
  - e) Discussion of growth rate, indication detection limit and draft Reg. Guide 1.121 implications on cycle length for Unit 1.
  - f) Discussion of future inspection and/or tube removal plans for Units 1 and 2.

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5. Sharing of Unit 2 tube pull metallurgical examination results: The three tubes will be removed from the "C" steam generator during the last week of February. They will be shipped to B&W's Lynchburg Research Center for examination. Duke Power Company would welcome involvement of the NRC and/or its contractors during the evaluation. It is proposed that the appropriate interfaces between Duke Power Company and the NRC be established to develop a mutually agreeable plan for this involvement. Please contact D.B. Mayes at (704)373-4211 to make arrangements.

Very truly yours,

*Tony L. McMeekin for*

T. C. McMeekin

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Mr. P.K. VanDoorn  
NRC Resident Inspector  
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## ATTACHMENT 1

### McGuire Nuclear Station January 1992 Tube Leak on ID Steam Generator Recovery Action Plan Revision 1

A re-evaluation of the 1991 RFO motorized rotating pancake coil (MRPC) data on tube 47-46 indicates that the defect which leaked was incorrectly classified as a manufacturer's burnish mark (MBM). An action plan was developed to remove tubes from service with similar MBM indications.

On Tuesday, 1/28/92, additional information was obtained which caused a significant revision to the original plan. Review of the bobbin coil data taken during this outage on tube 47-46 identified several indications between the 14th and 15th TSP's. MRPC inspection of these indications showed them to be similar to the leak defect. The largest of these defects was sized at 60% through wall (TW) with MRPC. A review of data taken during the 1991 RFO showed that this indication was present but was not identified for special inspection or plugging due to it's very small amplitude.

To address this new concern, the following plan was implemented:

1. Develop revised conservative criteria for analyzing bobbin coil data. This criteria is such that all indications with characteristics similar to those of the 60% TW indication on tube 47-46 will be identified.
2. Train and qualify by test all analysts on the new criteria.
3. Review all 1991 RFO bobbin coil data using the new criteria.

Because the new criteria is conservative, many indications will be identified which are not actual defects. To prevent over-plugging the following methodology will be used to further screen the indications identified in the above process.

1. Reanalyze all "D" steam generator 1991 bobbin coil data first.

2. All accessible indications that are identified from the bobbin coil data in "D" steam generator will be eddy current tested using MRPC. This data, coupled with the existing bobbin coil data, will be analyzed by recognized technical experts with Duke Power Company and/or the industry. This detailed analysis will be used to validate the following processes that will be utilized to identify the tubes which must be removed from service:
  - A. Conduct historical review on calls to determine whether the flaws were present during previous inspections and whether there is significant change which indicates growth. This process will be validated utilizing the MRPC data collected on the "D" steam generator. Historical review will be used to disposition indications not accessible for MRPC and indications for which the MRPC data cannot be analyzed.
  - B. Conduct a review of MRPC data to identify all indications which have characteristics which are crack-like. This disposition process will be used on all bobbin coil indications which are accessible for MRPC, and for which good MRPC data can be obtained.

The process used to disposition indications on McGuire Unit 1, steam generators A, B, and C is summarized below:

1. Re-analyze all bobbin coil data using new criteria.
2. Identify all tubes from bobbin coil reanalysis list which were inaccessible for MRPC or for which no good MRPC data exists. Disposition these tubes using validated historical review process discussed above.
3. Identify all tubes from bobbin coil reanalysis list with good MRPC data. Disposition these tubes by review of MRPC data.

For the purposes of this inspection, inaccessible is defined as those tubes which will not accept an MRPC probe due to sleeve installation, or those few tubes which require an additional eddy current manipulator move to access them, resulting in unnecessary radiation exposure.