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Docket Nos: 50-369

Mr. H. B. Tucker, Vice President
 Nuclear Production Department
 Duke Power Company
 422 South Church Street
 Charlotte, North Carolina 28242

Dear Mr. Tucker:

Subject: Operation of Unit 1 at 50% Power
 (McGuire Nuclear Station)

By letter dated August 13, 1982, we informed you that your McGuire Unit 1 operating program at 50 percent power was acceptable for a period extending from July to November 1982 including operation at 75 percent power for a maximum of 720 hours (30 days). Your letter dated November 17, 1982, notified us that on November 5, 1982, Unit 1 was shutdown and eddy current testing (ECT) of tubes in Rows 47, 48 and 49 of all four steam generators was performed. As a result of your steam generator tube inspection you conclude that Unit 1 can be operated at 50 percent power with no significant steam generator tube wear. In addition, you plan to submit a detailed evaluation of the results of this recent ECT inspection.

As a result of our review of the information provided, we conclude and find acceptable your McGuire Unit 1 operating program at a power level of 50 percent for a period extending from December 1982 to February 1983.

We require that you submit a detailed evaluation of the results of your November 1982 ECT inspection within 30 days after resumption of power operation, including any request for operation above 50 percent power or beyond February 1983. In addition, we require that the staff be immediately notified in the event there is any indication of steam generator behavior contrary to the information which was provided in your August 3, 1982, ECT evaluation report. A summary of the results of our review is presented in the enclosure.

Sincerely,

TS
 Thomas M. Novak, Assistant Director
 for Licensing
 Division of Licensing

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Enclosure:
 As stated

cc: See next page

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McGuire

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REVIEW OF MCGUIRE UNIT 1 PRELIMINARY EDDY
CURRENT RESULTS OF OPERATION AT 75% POWER
AND PROPOSED OPERATING PROGRAM AT 50% POWER

REF: DUKE POWER COMPANY LETTER
REPORT DATED NOVEMBER 17, 1982

INTRODUCTION

By letter dated November 17, 1982, Duke Power Company submitted preliminary results of the November 1982 eddy current inspection (ECT) of their steam generators, and based on these results, proposes an operational plan starting November 22, 1982 for McGuire Unit 1. The licensee proposes to operate McGuire Unit 1 starting at that time at a power level no greater than 50 percent.

The licensee's technical justification for operation of McGuire 1 at 50% power is based on previous operation at 50% power without any indications of tube wear, and results of ECT conducted at Almaraz after 3000 hours at 50% power when no additional tube degradation was observed on tubes which had previously experienced tube wear due to operation at higher power levels.

DISCUSSION

McGuire 1 had accumulated the following operating history at the time it was shut down on February 26, 1982:

<u>Power Level</u>	<u>Hours at or above this Power Level</u>
50%	1500
75%	324
90%	72
100%	23

The total number of effective full power hours at that time was 1093.

On March 14, 1982 McGuire 1 recommenced operation initially at 50% power for 1500 hours and then at 75% power for 720 hours until its shut down for inspection on June 23, 1982. This latest cycle of 3 1/2 months operation after June/July 1982 ECT inspection ended on November 5, 1982 with another 720 hours at 75% power and the remainder at 50% power.

At the time of the eddy current inspection during June/July 1982, McGuire 1 had operated at 75% power and higher for a period in excess of 1,000 hours.

The first three rows of the McGuire Unit 1 steam generators preheater section were eddy current tested in June/July 1982. There are 688 steam generator tubes in the first three rows of the preheater section in the McGuire Unit 1 steam generators, and wear indications, using absolute techniques, were found on 29 of these tubes, or

about 4 percent. Significant wear (through wall penetration greater than 20 percent) was not found on any tubes. Only four tubes exhibited wear penetrations greater than 12 percent through wall (approximately 5 mils) and one tube had 20% through wall penetration. The tube with the greatest wear was tube R49-C40 in steam generator C.

In their November 17, 1982 letter, Duke Power Co. provided the following information regarding the most recent eddy current inspection. Eddy current testing of Rows 47, 48, and 49 in all four steam generators was performed. Additionally, in steam generator A, Row 46 was inspected due to the fact that more indications were observed in the previous inspections in steam generator A. Based on this ECT examination, a total of six tubes were plugged, five in steam generator A and one tube in steam generator C. The tube plugged in steam generator C (R49-C40) had the largest observed wear scar (~ 20 percent) at the last inspection and was expected to be plugged during the November outage. This tube had worn to approximately 40 percent through wall.

The five tubes plugged in steam generator A all exhibited indications of ~ 25 percent. These tubes were plugged since their projected wear rates would increase the indications to greater than 40 percent

through wall with another operating cycle similar to the August to November cycle just completed. No tubes were plugged in steam generators B and D.

A detailed tube by tube listing of the ECT results is being prepared for submittal to the NRC.

Conclusions

We find that the proposed request to operate McGuire Unit 1 at 50% power is acceptable but limited to a period of 90 days. We request that within 30 days after resumption of power operation Duke Power Co. submit the details of the ECT results and any request for operation past 90 days or above 50% power. Upon shutdown they should conduct an eddy current inspection of the first three rows of all steam generators.

We also request that the NRC staff be immediately notified in the event that further evaluation of the data presented indicates that steam generator tube behavior is contrary to the information which was provided in the November 17, 1982 submittal.