

FROM: Northern States Power Co. Minneapolis, Minn L.O. Mayer, PE			DATE OF DOC 4-29-75	DATE REC'D 5-1-75	LTR xxx	TWX	RPT	OTHER
TO: Mr. A. Giambusso			ORIG 1-signed	CC	OTHER	SENT AEC PDR <u>xxxx</u> SENT LOCAL PDR <u>xxx</u>		
CLASS	UNCLASS xxxxxxx	PROP. INFO	INPUT	NO CYS REC'D 40		DOCKET NO: 50-263		

DESCRIPTION:

Ltr furn Summary Status of Fuel Report for the Monticello Nuclear Generating Plant according to the Tech- Specs

ENCLOSURES:

PLANT NAME:

Monticello

FOR ACTION/INFORMATION

5-6-75 JGB

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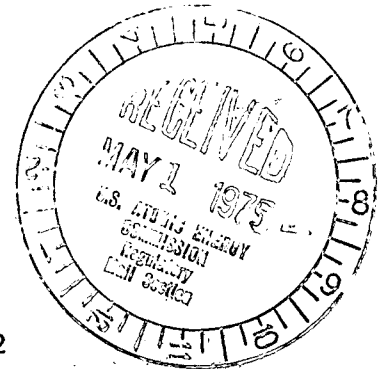
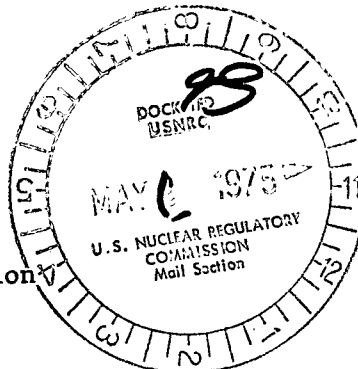


NORTHERN STATES POWER COMPANY

MINNEAPOLIS, MINNESOTA 55401

April 29, 1975

Mr. A. Giambusso, Director
Division of Reactor Licensing
U. S. Nuclear Regulatory Commission
Washington, DC 20555



Dear Mr. Giambusso:

MONTICELLO NUCLEAR GENERATING PLANT
Docket No. 50-263 License No. DPR-22

SUMMARY STATUS OF FUEL REPORT

This report is submitted in compliance with Technical Specification 6.7.C.6, "Summary Status of Fuel Report," which is required following each refueling. The Monticello generator was taken off line on January 9, 1975, and the reactor was made subcritical on the following day. During the outage 80 Reload 3 fuel assemblies were inserted into the core to replace initial core fuel. Cycle 4 commenced as the reactor was again made critical on February 6, 1975, and the generator put on line the following day.

The performance of fuel is monitored at the plant by the offgas level during plant operation and by fuel sipping during a refueling outage. A summary of fuel performance through Cycle 2 is reported in the document entitled, "Monticello Nuclear Generating Cycle 3 Startup Report and Summary Status of Fuel Report," submitted July 19, 1974. As reported, a thorough sipping program at the end of Cycle 2 revealed cladding perforations in a number of initial core fuel assemblies. The offgas level was found substantially reduced during the initial power ascension in Cycle 3, but prior to reaching rated conditions it became apparent that additional perforations had developed. Power was restricted to 90% of rated early in the cycle, decreasing to 75% at the end of Cycle 3 to meet an administrative limit on offgas which was established well below the licensed limit.

During the last refueling outage the 348 initial core fuel assemblies in the core were wet/dry sipped in the fuel pool. A total of 49 leaking assemblies were identified. All 20 Reload-1 (7x7) assemblies and a 25% sample of the 116 Reload-2 (8x8) assemblies were sipped with no leakers identified. These findings are consistent with previous cycles. To date 157 of the initial core fuel assemblies have been classified as leakers; no replacement fuel has failed.

NORTHERN STATES POWER COMPANY

Mr. A. Giambusso, Director

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April 29, 1975


The wet/dry sipping technique was used at Monticello for the first time during the Spring '75 outage. This method appears to be more sensitive than techniques used in the past. It differs from the wet sipping method used previously in that a gas sample is taken and analyzed for noble gas rather than analyzing iodine in a water sample.

The average exposure of the 49 Cycle 3 leakers was 13,805 MWD/STU. Based on limited visual inspection and previous experience at Monticello and other reactors, the predominant failure mechanism was concluded to be pellet-clad interaction. Plans are presently underway to discharge all initial core fuel this fall and replace it with fuel designed and manufactured like the reload fuel currently in use.

The Monticello Reload 2 was one of the first loadings of General Electric production 8x8 fuel. In cooperation with General Electric's on-going fuel surveillance program, Northern States Power agreed to insert a pre-characterized 8x8 assembly in a high exposure location. During the refueling outage special measurements were taken for comparison to pre-characterized data. No unusual behavior was noted. While removing the assembly from the measuring device, four spacer grids were forced free of the locking tabs on the water spacer rod. An NDT examination of each fuel pin showed no damage. A new skeleton for the assembly was provided which consisted of upper and lower tie plates, a water spacer rod and all spacer grids. The fuel pins were assembled into the new skeleton and pre-characterization measurements were again taken. These measurements will serve as base data for subsequent inter-cycle and post-operation surveillance.

Stack offgas levels since the outage have been reduced substantially by the removal of the defective fuel assemblies and by the increased delay time due to the augmented offgas treatment system currently undergoing startup testing. Corresponding comparisons of pre-outage and post-outage offgas levels at the air ejector show that a substantial reduction has occurred. Prior to the outage the air ejector level was 10 R/hr at 75% of rated power. Following the outage the level was 8 R/hr at 100% power. During the initial two months of operation in Cycle 4, the air ejector level has remained essentially unchanged. The current offgas mixture has a lower concentration of long lived isotopes than in Cycle 3, which is to be expected following removal of the leaking fuel assemblies. If the current trend continues, no substantial power reduction due to offgas levels will be necessary this cycle.

Yours very truly,



L. O. Mayer, PE
Manager of Nuclear Support Services

LOM/MHV/deb

cc: J. G. Keppler
G. Charnoff
Minnesota Pollution Control Agency
Attn: E. A. Pryzina