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~~APR 11 1976~~

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Docket No. 50-263

Northern States Power Company
ATTN: Mr. L. O. Mayer, Manager
Nuclear Support Services
414 Nicollet Mall - 8th Floor
Minneapolis, Minnesota 55401

Gentlemen:

RE: Change to Bases

In a letter dated March 12, 1975, you requested several changes to the Technical Specifications for the Monticello Nuclear Generating Plant. Amendment No. 14, dated October 30, 1975, responded to all items of your request with the exception of items 3, 4, and 5 which concerned changes to the technical specification bases to delete obsolete information, to correct errors, and to incorporate changes reflecting the adoption of the General Electric BWR Thermal Analysis Basis (GETAB).

We have reviewed the proposed changes and conclude that:

1. The deletion of bases information related to a reporting requirement ("Summary Status of Fuel") which was eliminated as part of License Amendment No. 15 dated January 22, 1976, is acceptable.
2. The correction of the high steam flow setpoint of the Reactor Core Isolation Cooling (RCIC) system from 150%, as originally shown, to 300%, is required to make the bases consistent with the applicable specification (Table 3.2.1) and is therefore acceptable.
3. The changes to the bases for Section 3.2 to incorporate the new terminology associated with GETAB [Minimum Critical Power Ratio (MCPR) instead of Minimum Critical Heat Flux Ratio (MCHFR)] and the related changes referencing the Safety Limit of Technical Specification 2.1.A are acceptable.

Revised pages 16 and 67 incorporating the above bases changes are enclosed.

Sincerely,

Original signed by
Richard D. Silver
Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Enclosure:

Revised pages 16 and 67

OFFICE ➤		<i>[Signature]</i> OR:ORB #2	<i>[Signature]</i> OR:ORB #2 for	<i>KRG</i> OR:AD/OR
SURNAME ➤		RPSnaider:ro	DLZiemann	KRGoller
DATE ➤		4/7/76	4/7/76	4/13/76

April 13, 1976

cc w/enclosure:

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Bases Continued:

References

1. General Electric BWR Thermal Analysis Basis (GETAB): Data, Correlation and Design Application, NEDO 10958.

Bases Continued:

3.2 The HPCI and/or RCIC high flow and temperature instrumentation is provided to detect a break in the HPCI and/or RCIC piping. Tripping of this instrumentation results in actuation of HPCI and/or RCIC isolation valves; i.e., Group 4 and/or Group 5 valves. The trip settings of 200°F and 150% of HPCI and 300% of RCIC design flows and valve closure times are such that the core will not be uncovered and fission product release will not exceed 10 CFR 100 guidelines.

The instrumentation which initiates ECCS action is arranged in a dual bus system. As for other vital instrumentation arranged in this fashion the Specification preserves the effectiveness of the system even during periods when maintenance or testing is being performed.

The control rod block functions are provided to prevent excessive control rod withdrawal so that MCPR remains above the Safety Limit (T.S.2.1.A). The trip logic for this function is 1 out of n; e.g., any trip on one of the six APRM's, eight IRM's, or four SRM's will result in a rod block. The minimum instrument channel requirements for the IRM and REM may be reduced by one for a short period of time to allow for maintenance, testing, or calibration. See Section 7.3 FSAR.

The APRM rod block trip is referenced to flow and prevents a significant reduction in MCPR especially during operation at reduced flow. The APRM provides gross core protection; i.e., limits the gross core power increase from withdrawal of control rods in the normal withdrawal sequence. The trips are set so that MCPR is maintained greater than the Safety Limit.

The REM provides local protection of the core; i.e., the prevention of critical power in a local region of the core, for a single rod withdrawal error from a limiting control rod pattern. The trip point is referenced to flow. The worst case single control rod withdrawal error has been analyzed and the results show that with the specified trip settings rod withdrawal is blocked at MCPR greater than the Safety Limit, thus allowing adequate margin. Below 60% power, MCPR remains above the Safety Limit for the worst case withdrawal of a single control rod without rod block action, thus below this level it is not required. This subject is discussed in General Electric EWR Thermal Analysis Basis (GETAB): Data, Correlation and Design Application, NEDO-10958. Requiring at least half of the normal LPRM inputs from each level to be operable assures that the REM response will be adequate to prevent rod withdrawal errors.

The IRM rod block function provides local as well as gross core protection. The scaling arrangement is such that trip setting is less than a factor of 10 above the indicated level. Analysis of the worst case accident results in rod block action before MCPR approaches the Safety Limit (T.S.2.1.A).

A downscale indication of an APRM or IRM is an indication the instrument has failed or the instrument is not sensitive enough. In either case the instrument will not respond to changes in control rod motion and thus control rod motion is prevented. The downscale trips are set at 3/125 of full scale.