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SUBJECT: Forwards 180-day response to GL 96-05, "Periodic Verification of Design-Basis Capability of Safety-Related Motor-Operated Valves."

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March 17, 1997

10 CFR 50.54(f)

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

Ladies/Gentlemen:

Docket 50-305
Operating License DPR-43
Kewaunee Nuclear Power Plant
Response to Generic Letter 96-05

Reference:
1) NRC Generic Letter 96-05: Periodic Verification of Design-Basis Capability of Safety-Related Motor-Operated Valves
2) WOG Letter OG-97-018: MPR Report #MPR-1807, Rev. 0, dated 2/97, Titled: Joint BWR and Westinghouse Owners' Group Program on Motor-Operated Valve (MOV) Periodic Verification
3) WOG Letter OG-97-019: Westinghouse Report #V-EC-1658, Rev. 0, dated 3/97, Titled: Risk Ranking Approach For Motor-Operated Valves in Response to Generic Letter 96-05

In accordance with the reporting requirements of Reference 1, this letter is Wisconsin Public Service Corporation's (WPSC's) 180-day response to GL 96-05. This letter provides a summary description of the Motor-Operated Valve (MOV) Periodic Verification Program at the Kewaunee Nuclear Power Plant (KNPP).

Attachment 1 to this letter provides a summary description of KNPP's proposed MOV Periodic Verification Program. In general, KNPP's program correlates with the Joint BWR and Westinghouse Owners' Group (JOG) efforts. WPSC has been participating in the development of the JOG program and intends to continue as an active participant.

If you have any questions or need additional information, please contact a member of my staff.

Sincerely,

240069

Clark R. Steinhardt
Senior Vice President - Nuclear Power

TML
Attach.
cc - US NRC Region III
US NRC Senior Resident Inspector

Subscribed and Sworn to
Before Me This 17th Day
of March, 1997

A073 1/1

Notary Public, State of Wisconsin

My Commission Expires:
June 13, 1999

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ATTACHMENT 1

Letter from C. R. Steinhardt (WPSC)

To

Document Control Desk (NRC)

Dated

March 17, 1997

Re: MOV Periodic Verification Program Summary Description
(GL 96-05 180-day Response)

Summary of KNPP Periodic Verification Program

A periodic verification test schedule has been established to verify motor-operated valve (MOV) performance. Verification testing will be performed at an interval of every three refueling outages or five years, whichever is longer, from the time of the last diagnostic test. The schedule will be adjusted if MOV maintenance and post-maintenance diagnostic testing is performed prior to the next scheduled periodic verification test.

Periodic verification testing will include, as a minimum, a static diagnostic test which provides the data to verify that the MOV actuator's design-basis capabilities are being maintained. For program valves which have been dynamically baseline tested, dynamic testing will also be performed providing data to determine valve factor and to quantify any effects of load sensitive behavior. Dynamic testing (when practicable) will be performed on new valves or when maintenance is performed on a valve that may affect the thrust requirement under differential pressure and flow conditions (e.g., disk replacement, valve seat lapping, etc.). After initial testing, an additional dynamic test will be scheduled for the next refueling outage, at least one year after the initial test, to verify the valve factor. If test results indicate the need, a more frequent test interval will be established.

For valves which KNPP is unable to diagnostically test under dynamic conditions, conservative valve factor values based on the best available industry data will continue to be used.

All valves within the current scope of our GL 89-10 Program will be included in the GL 96-05 program scope. All safety-related valves assumed to be operable when placed in their non-safety related position are included in this scope.

The Joint Owners' Group (JOG) has established a test program to address potential valve degradation. KNPP has identified six valves, of the same valve family, within the scope of its GL 96-05 program which are not covered by the JOG test program. A meaningful dynamic test can be performed on each of these valves. KNPP will ensure that at least one of these six valves is tested using the same timetable and process as the remaining JOG matrix valves.

For dynamic testing, KNPP will adhere to the MPR Test Specification #197-002-1, Rev. 0, (contained in Reference 2) as practicable. If any deviations are required, they will be documented and forwarded to the appropriate JOG contact as part of each test package. Valves tested during the current outage for the sole purpose of periodic verification will be evaluated for conformance to the MPR test specification. KNPP will continue to employ the use of Torque-Thrust Cells as the primary test transducers. Evaluation of the benefits and disadvantages of new technologies using Motor Control Center testing will continue.

KNPP's trending program will be formalized and procedures will be developed to facilitate the review and trending of MOV data. While we expect to identify and evaluate most degradations during MOV diagnostic testing or during performance of routine preventive maintenance, the trending program will assist in identifying any additional areas of concern. Appropriate corrective actions will be determined and implemented at that time, or depending on the severity of the degradation, scheduled for a time when plant conditions would facilitate maintenance on the particular MOV. The trending program will identify reoccurring degradations and provide the data needed to eliminate or reduce the degradation. The applicable trend data will be reviewed prior to periodic testing or any maintenance. As part of our Industry Operating Experience Program, valve performance degradation information or other related information promulgated by the industry, EPRI, or the NRC will be reviewed. This information includes such things as any JOG program findings or any NRC Safety Evaluation of the JOG Program. Based on the results of these reviews, the frequency of periodic testing will be adjusted accordingly.

Schedule Prioritization & Risk Ranking

Risk ranking is an essential aspect of the KNPP and JOG periodic verification programs. KNPP has had an opportunity to perform a preliminary review of the final Westinghouse report, V-EC-1658, (Reference 3) which is a generic guideline for risk ranking. Based on this review, our PRA engineering group has concluded that, as written, the guideline can be applied to our plant.

KNPP will employ the use of an expert panel in order to determine risk significance of each of our safety-related MOVs. As a minimum, the following parameters will be considered when making this determination:

Environment	-	Fluid quality, temperatures, EQ Plan relationships, ability to recover from failure (accessibility).
Operating History	-	Valve stroke frequency, maintenance and diagnostic test history.
Application	-	The impact of the loss of function, the valves diversity or redundancy, normal configuration with respect to safety function.
IST Requirements	-	Understanding that excessive stroking of some valves can induce undesirable aging which is counter to the goal of GL 96-05.
LLRT Requirements	-	Local Leak Rate Testing status.
PRA	-	Contribution to core damage frequency.
Margin	-	As defined by JOG MPR Report 1807 (Reference 2).

Regardless of the risk categorization or safety significance, our program will ensure that each program valve will have adequate margin to remain operable until the next scheduled test. The risk measurement will not be used to evaluate operability confidence but only to assist in developing optimal scheduling frequencies.