Wisconsin Electric
POWER COMPANY

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NPL 99-0611

October 25, 1999

10CFR50.54

Document Control Desk
U.S. NUCLEAR REGULATORY COMMISSION
Mail Station P1-137
Washington, DC 20555

Ladies and Gentlemen:

DOCKETS 50-266 and 50-301
GENERIC LETTER 96-05 UPDATE
PERIODIC VERIFICATION OF DESIGN-BASIS CAPABILITY OF
SAFETY-RELATED MOTOR-OPERATED VALVES
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

Generic Letter 96-05, "Periodic Verification of Design-Basis Capability of Safety-Related Motor-Operated Valves," was issued on September 18, 1996. The Wisconsin Electric Power Company (WE) 60-day response to this generic letter was submitted to the Commission via letter dated November 18, 1996, while the required 180-day response was subsequently submitted on March 17, 1997.

Our March 17, 1997, response contained three commitments that were made in response to the Generic Letter 89-10 closeout inspection conducted at Point Beach Nuclear Plant on June 19-23, 1995, as documented in inspection report 50-266/95007(DRS); 50-301(95007(DRS), dated July 13, 1995. Generic Letter 89-10, issued on June 28, 1989, was entitled, "Safety-Related Motor-Operated Valve Testing and Surveillance." In the March 17, 1997, letter, we stated we would complete three commitments within five years of the date the aforementioned inspection report was issued.

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The three commitments were:

1. *We will diagnostically test 26 valves under differential pressure conditions to evaluate our assumptions regarding age degradation. This item is currently in progress. In addition, we will establish a specific age-related degradation margin.*

2. *We will review NRC and industry valve performance degradation and specifically, the EPRI MOV performance prediction program. Applicable information from the EPRI program will be incorporated into our MOV program.*

PDR ADOCK

3. *We will collect and trend further static and dynamic periodic results to validate the valve factor study and rate of loading assumptions and prediction methodology.*

During the period June 14-18, 1999, an inspection of our inservice testing program was conducted. The results of this inspection were documented in inspection report 50-266/99012(DRS); 50-301/99012(DRS). This inspection included a review to determine whether activities associated with Generic Letter 96-05 were sufficient to ensure the continued capability of motor-operated valves. While there was no response to the inspection report required, we committed to providing a status update on our GL 96-05 program.

The purpose of this letter is to provide you with an update on progress we have made to implement GL 96-05, to resolve questions and concerns raised in the aforementioned inspection report, and to provide our plan and schedule for program implementation. For clarity in responding to the issues raised in the inspection report, the following discussion references the issues documented in the report.

There are no new individual commitments identified in this program update and schedule. There is one revised commitment associated with full implementation of our GL 96-05 program.

1. Commitments to GL 96-05 (TI 2515/140, Paragraph 03.01); 50-266/99012(DRS); 50-301/99012(DRS); Page 8: This paragraph of the inspection report summarized the three commitments made in our March 17, 1997, reply to GL 96-05. As noted, we have an established MOV static test program that has been implemented in response to GL 89-10 to perform testing of the scoped valves on a five-year frequency.

   At the time we made our commitment, we were not participating in the MOV Joint Owners Group (JOG) program. In addition, we did not have prescribed criteria for selecting valves for testing. Our original scope was based on a random selection of valves within the scope of Generic Letter (GL) 89-10 that were testable during normal and shutdown operation. Since we made our original commitment to test 26 valves, we have developed draft criteria contained in procedure CMP 2.2, "Selection of Valves for Dynamic Testing." This document is used to select valves for dynamic testing based on available stem thrust margin using conservative valve factors. Conservative valve factors were used to identify valves that had the lowest margin to failure, should internal valve degradation occur over time.

   Stem thrust margins for valves within the GL 89-10 program were recalculated using conservative valve factors for the purposes of identifying low margin valves. These valve factors were provided in inspection report 50-266/99012(DRS); 50-301/99012(DRS) following the June 14-18, 1999, inspection. Valves that were identified as low margin valves and were testable were selected for testing using the criteria contained in CMP 2.2.11. If more than one valve was identified in a family of similar valves, only one valve in the family will be tested. If that valve fails to meet the acceptance criteria, corrective actions will include testing of additional valves within the valve family and other families, as appropriate, to establish the extent of the condition.

The draft criteria for selecting valves for testing was used to select valves for testing during the current Unit 1 refueling outage and the on-line period through July 2000. The selection criteria will be finalized and published in November 1999.

WE is now participating in the MOV JOG. As such, we will adopt the criteria for categorizing valves based upon safety significance and valve margin and selecting them for testing. Once this effort is completed, the existing dynamic test program will be adjusted to incorporate the guidance provided in the WOG JOG document.

Accordingly, we are proposing the following revised commitment:

Revised Commitment 1: By July 15, 2000, we will dynamically test nine (9) MOVs that were selected in accordance with the guidance contained in CMP 2.2.11, "Selection of Valves for Dynamic Testing."

NRC Inspection Report 50-266/99012(DRS); 50-301/99012(DRS) indicates that we committed to statically test non-safety related MOVs every 10 years. A review of the record does not indicate that we have made a regulatory commitment on this subject or that such testing is required within the scope of GL 96-05. However, we do intend to extend the static testing program to nonsafety-related valves, where appropriate, to enhance the performance of the valves critical to the reliable operation of Point Beach Nuclear Plant. We consider that such testing constitutes a good engineering practice and should be an integral part of our program.

Commitment 2: We committed to review NRC and industry valve performance degradation information and the EPRI performance prediction program information. At PBNP we have a well-established operating experience review program. We continue to regularly receive and evaluate MOV industry operating experience. Additionally, we have reviewed the EPRI performance prediction program documents and are incorporating information from that source, as appropriate into our MOV programs.

In a March 15, 1996, transmittal of Electrical Power Research Institute (EPRI) Topical Report TR-103237, "EPRI MOV Performance Prediction Program," Revision 1, the NRC provided a safety evaluation report (SER) of Revision 2 of the EPRI MOV performance prediction program. In this report, the NRC recommended that a conservative valve factor of 1.1 be used for globe valves, instead of the less conservative factor specified in the EPRI program. WE is utilizing the more conservative factor specified in the NRC SER.

We are participating in the MOV JOG and will continue to actively support this industry effort. Our commitment to operating experience review is ongoing and adequate administrative controls are in place ensuring that applicable industry information is evaluated and incorporated into our MOV program.

Commitment 3: This commitment deals with development of a specific age-related degradation margin. While we have included a degradation factor in the MOV setup criteria for a stem-to-stem nut lubrication degradation, we agree that the process needs to be upgraded to include

criteria for adjusting valve factors and rate of loading (ROL). This is necessary to select valves for testing and to provide acceptance criteria for valve factor variations, ROL assumptions and stem factor variations. Procedure CMP 2.2.6, "Analysis of MOV Test Signatures Taken During Differential Pressure Tests of Gate and Globe Valves," provides guidance for evaluation of dynamic stem thrust signatures.

2. GL 89-10 Long-Term Actions (TI 2515/140, Paragraph 03.02); 50-266/99012(DRS); 50-301/99012(DRS); Pages 8-9). The inspection report states that PBNP had not completed the overall review of the assumptions for valve factor and load sensitive behavior because of the limited progress made in performing dynamic testing as part of the long-term MOV program. This statement is accurate. Our plans for developing and implementing a periodic dynamic test plan documented in CMP 2.2.11, and implementing callups to execute the plan are as indicated on the attached project schedule.

   Following completion of the first round of dynamic valve tests, we will evaluate the valve factor, stem factor and load sensitive behavior using CMP 2.2.6, "Analysis of MOV Test Signatures Taken During Differential Pressure Tests of Gate and Globe Valves." This will validate the assumptions upon which our original calculations were based.

   As documented in the inspection report, we have made only limited progress with our plans for tracking and trending MOV performance. We currently do not trend qualitative and quantitative information on MOV performance. Our project plan includes provisions to develop a CMP to define the type of information that is to be periodically reviewed and trended. The CMP will include requirements to trend rate of loading, valve factor, stem factor, failure history and the backlog of outstanding corrective actions. Periodic callups will be established to initiate an action to trend data gathered on a periodic basis and to analyze the data. The trending program will be developed and implemented in accordance with the attached project plan and schedule.

3. Degradation Rate for Potential Increase in Thrust or Torque Operating Requirements (50-266/99012(DRS); 50-301/99-14(DRS), Page 10: CMP 2.2.6 provides screening criteria for valve factor, stem factor and load sensitive behavior and specifically delineates the method by which out-of-tolerance values will be dispositioned. Additionally, the procedure provides specific instructions that a condition report will be generated to document test results that exceed acceptance criteria. The condition reporting system includes provisions for the performance of operability determinations using guidance contained in Generic Letter 91-18, Revision 1, should the operability of a valve be questioned based on test results that exceed acceptance criteria.

4. MOV Performance Evaluation (50-266/99012(DRS); 50-301/99-14(DRS), Page 12: The report stated that. "... the licensee had a significant backlog of condition reports related to MOV performance..." A comprehensive review of all outstanding condition reports relating to MOVs has been performed. There are 19 outstanding condition reports that have not been resolved. Of these 19 condition reports, two are considered to be significant based upon the priority system established via our corrective action program.

The first significant condition report deals with the material condition of MOV subcomponents, specifically torque switches. This condition report can only be resolved during a refueling outage. Unit 2 valves were corrected during the 1999 Unit 2 refueling outage completed earlier this year. Unit 1 valves are being addressed during the current refueling outage with resolution being tracked via our condition reporting system.

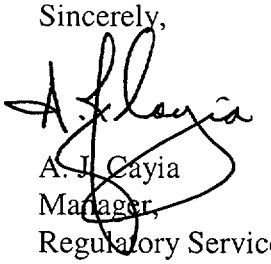
The second significant condition report was associated with a personnel-training issue. This issue was resolved on October 13, 1999, and the condition report is awaiting final review verification and closure.

Our review of open condition reports resulted in the identification of an opportunity for improving the method by which the we can sort open MOV condition reports and thus, also enhance our tracking and trending programs. Our information technology support group has made changes in the software used to administer our condition reporting system to implement suggested changes.

5. Conclusions (50-266/99012(DRS; 50-301/99012; Page 12): Items 1, 2 and 3 of this letter address each of the three issues presented in the conclusion of the inspection report. This letter provides the update to our March 17, 1997, response to GL 96-05, as documented in the inspection report.

Please do not hesitate to contact us if you have any further questions on this matter.

Sincerely,



A. J. Cayia
Manager,
Regulatory Services & Licensing

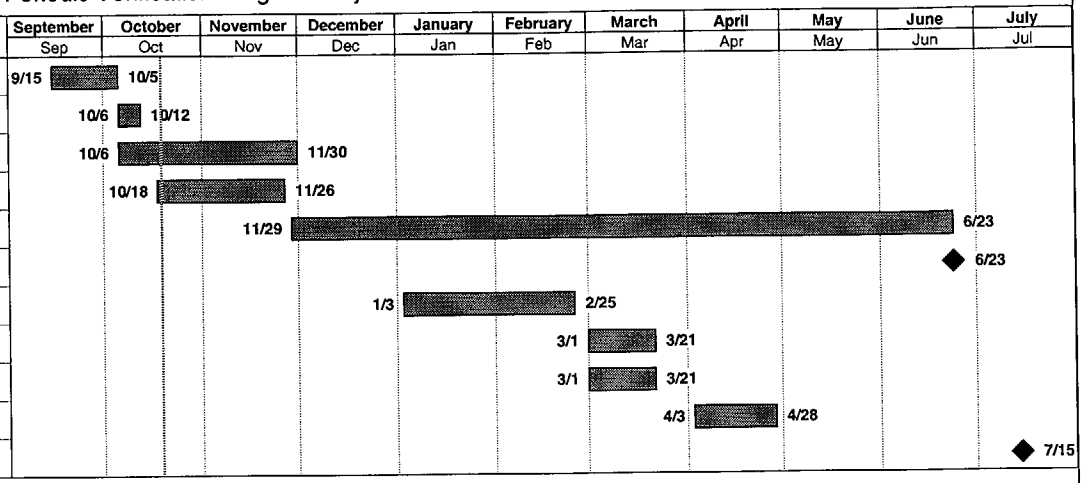
FAF/tat

Attachment

cc: NRC Resident Inspector
NRC Regional Administrator
NRC Project Manager
PSCW

Generic Letter 96-05 Periodic Verification Program Project Plan

ID	Task Name	Start	Finish
1	Develop draft valve selection guideline for MOV testing	9/15	10/5
2	Select valves for dynamic testing	10/6	10/12
3	Finalize and issue valve selection guideline	10/6	11/30
4	Dynamically test outage related valves during U1R25	10/18	11/26
5	Dynamically test nonoutage related valves	11/29	6/23
6	Complete dynamic testing of selected valves		6/23
7	Develop guideline for trending MOV performance data	1/3	2/25
8	Initiate preventive maintenance callups to schedule periodic verification tasks	3/1	3/21
9	Initiate preventive maintenance callups to schedule MOV performance trending and analysis	3/1	3/21
10	Prepare first trend report	4/3	4/28
11	Fully implement MOV periodic verification program		7/15



Project: GL 96-05 Action Plan.MPP
Date: Tue 10/19/99

Task | Milestone | Rolled Up Task | Rolled Up Progress
Progress | Summary | Rolled Up Milestone