



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

Docket File

September 9, 1993

Docket Nos. STN 50-454, STN 50-455
STN 50-456, STN 50-457
50-237, 50-249, 50-373
50-374, 50-254, 50-265
50-295, and 50-304

Mr. L. O. DelGeorge
Vice President of Nuclear Operations
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1400 OPUS Place
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Dear Mr. DelGeorge:

SUBJECT: SCHEDULE FOR COMMONWEALTH EDISON RESPONSE TO GENERIC LETTER 89-10,
"SAFETY-RELATED MOTOR-OPERATED VALVE TESTING AND SURVEILLANCE"

On June 28, 1989, the NRC issued Generic Letter (GL) 89-10, "Safety-Related Motor-Operated Valve Testing and Surveillance," requesting that licensees establish a program to verify the design-basis capability of safety-related motor-operated valves (MOVs) and certain other MOVs in safety-related systems in nuclear power plants. In GL 89-10, the NRC requested that licensees complete the verification of the design-basis capability of MOVs within the scope of the generic letter by June 28, 1994, or the third refueling outage after December 28, 1989 (whichever was later).

On September 28, 1990, following discussions with the NRC staff, Commonwealth Edison Company (CECo) submitted its plan for responding to GL 89-10. In that submittal, it was stated that the corporate MOV program developed in response to NRC Bulletin 85-03 would be expanded to address the recommended actions of GL 89-10. At that time, CECO had determined a total of 1540 MOVs at its 12 nuclear units to be within the scope of GL 89-10 and of these, 1090 had been categorized as Priority 1 MOVs (those that were required to (a) ensure adequate core cooling, ensure reactor shutdown, or minimize consequences of a high energy line break, or (b) mitigate accidents described in the Final Safety Analysis Report or other events covered in the Emergency Operating Procedures). The remaining MOVs in the program were categorized as Priority 2. Other actions CECO committed to were: 1) to statically test all MOVs in safety-related systems using diagnostic equipment; 2) to test these MOVs under full differential pressure using diagnostics where practicable; 3) to assign the highest priority to the most critical valves for design-basis review and for scheduling of testing; and 4) to utilize analytical correlations between static test data and industry full dynamic test data to verify correct MOV torque switch settings (correlations between different CECO stations, or between other utilities and test facilities would be included).

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In the September 1990 submittal, CECO stated that its implementation of the program would reflect its corporate objective of focusing limited discretionary resources such that improvement in plant safety and reliability was maximized. Consequently, CECO's schedule for its MOV program extended significantly beyond the recommended schedule in GL 89-10. Specifically, CECO stated that design-basis reviews, static and practicable dynamic testing for Priority 1 MOVs would be completed by the end of the third refueling outage per unit beginning with the Spring 1991 outages and that activities for Priority 2 MOVs would be completed by the end of the fifth refueling outage per unit beginning with 1991 outages. For MOVs that could not be in situ tested, analytical correlations between static and dynamic test data would be completed within the respective schedule for their assigned priority. CECO has contended that its longer schedule should result in only a marginal reduction in the net benefit resulting from the generic letter action items.

In the NRC staff's reply (dated January 23, 1991) to your response to GL 89-10, the staff accepted the schedule for your response to GL 89-10, but requested that you make every effort to complete the first stage of the two-stage approach (that is, setting MOVs using the best available information) for all GL 89-10 MOVs within the schedule recommended in the generic letter. Since then, the nuclear industry has identified significantly more problems with the performance of MOVs than the staff believed to exist when GL 89-10 was issued. The most widespread problem involves the design weakness resulting from the underprediction of the thrust required to operate gate valves during the sizing and setting of their motor operators. Therefore, the staff has been conducting inspections at nuclear power plants to ensure that licensees are making progress toward resolving the MOV issue in a timely manner.

The staff has conducted inspections to review the programs being developed at each CECO nuclear power station. Recently, the staff initiated inspections of the implementation of those programs. During these inspections, the staff raised concerns regarding the safety focus of the programs, the management control over the programs, and several important technical issues related to ensuring the design-basis capability of your safety-related MOVs. The staff has met several times with CECO to discuss the staff concerns and your plans to improve the GL 89-10 programs at CECO facilities.

As discussed during a meeting in the NRC Region III office on August 26, 1993, the staff believes that CECO has not satisfied the commitments made in its September 1990 response to GL 89-10 or the assumptions made by the staff in accepting CECO's extended schedule for responding to GL 89-10. In particular, the staff found that CECO: 1) has not implemented its programs such that Priority 1 MOVs are tested in advance of lower priority MOVs; 2) has not attempted to complete the first stage of the two-stage approach within the GL 89-10 recommended schedule; 3) has not incorporated either the findings of significant MOV problems or the test data identified at CECO and other nuclear plants into the methodology for ensuring the adequate sizing and setting of MOVs; and 4) continues to use an outdated valve factor of 0.3 in its methodology for sizing and setting many gate valves despite CECO and industry

testing that reveals this valve factor to be inadequate for general use. (During the August 26, 1993 meeting, CECO stated that it recently began assuming a 0.55 valve factor for Westinghouse gate valves.) During the inspections, the staff found CECO to be reducing the number of MOVs to be dynamically tested from the large number characterized by CECO in meetings with the staff when it accepted the CECO schedule. Further, CECO has not tested any MOVs under dynamic conditions at the Dresden station in response to GL 89-10. Based on these findings, it appears that the CECO schedule will result in a much larger reduction in safety benefit than CECO asserted when the staff accepted the extended CECO schedule for responding to GL 89-10 in 1991.

Based on the above concerns, the staff requests that CECO resubmit justification for the schedule for its response to GL 89-10 within 45 days of receipt of this letter. As part of that submittal, the staff requests CECO to provide a status of its static testing of the MOVs within its GL 89-10 program to set the MOVs using the best available information such that CECO can affirm their design-basis capability. As previously discussed, the staff does not consider a 0.3 valve factor to represent the best available information for verifying the design-basis capability of gate valves. The staff will evaluate the requested information to determine whether CECO's extended schedule for responding to GL 89-10 continues to be acceptable.

If there are any questions related to this issue or request, please contact Byron Siegel at (301) 504-3019.

Sincerely,

Original signed by
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cc: See next page

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*Please see previous concurrence

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COPY	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO

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