Commonwealth Edison
1400 Opus Place
Downers Grove, Illinois 60515

November 1, 1993

Dr. Thomas E. Murley, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Attn: Document Control Desk

Subject: Schedule Justification for Commonwealth Edison GL 89-10 Activities

References:
1. J.E. Dyer (NRC) to L.O. DelGeorge (CECo), dated September 9, 1993.
2. D.L. Taylor (CECo) to USNRC, dated September 28, 1990.
3. L.N. Olshan (NRC) to T.J. Kovach (CECo), dated January 23, 1991.
4. T.W. Simpkin (CECo) to A.B. Davis (NRC) letter, dated May 11, 1992.

Docket Nos. 50-454/455; 50-456/457;
50-237/249; 50-254/265;
50-295/304; 50-373/374.

Dr. Murley:

In Reference 1, the NRC requested that CECo resubmit the schedule justification for GL 89-10 activities for all six nuclear stations. As part of that submittal, the staff requested that CECo provide a status of the static testing of MOVs within CECo's GL 89-10 program to affirm their design-basis capability.

CECo's schedule commitment to GL 89-10, as documented in Reference 2, is to complete: design basis review; diagnostic static testing; and practicable full differential pressure testing with diagnostics for all Priority I MOVs by the end of the 3rd refueling outage per unit beginning with the Spring 1991 outages. CECo committed to complete the same activities on the Priority II MOVs by the fifth refueling outage per unit beginning with the Spring 1991 outages. CECo indicated in Reference 2 that the valves which have the greatest impact on plant safety would be evaluated and tested early in the implementation of the program.

In Reference 1, the NRC also indicated that CECo has not satisfied the GL 89-10 commitments made in Reference 2, or the assumptions made by the staff in accepting CECo's schedule for GL 89-10 activities.

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Based on the current progress and future schedule of MOV testing activities, CECo believes that static testing with diagnostics for all GL 89-10 MOVs (except for the butterfly valve population) will be completed for all 6 stations within 3 refueling outages on each unit from the Spring 1991 outages. The progress of dP testing activities to date at Byron, Braidwood, and Zion Stations demonstrates a commitment for those sites to meet the intent and schedule of our response to the generic letter.

CECo recognizes that dP testing progress at LaSalle, Dresden, and Quad Cities has not had the appropriate focus. However, CECo has implemented corrective actions to resolve this issue. CECo believes that the original conclusion in our response to the generic letter (Reference 2) is still applicable. That is, the extended schedule, as accepted, will result in only a marginal reduction in the net benefit resulting from the generic letter action items.

In late 1992, CECo initiated an internal assessment of MOV program activities at CECo's nuclear stations. Based upon this internal assessment, CECo established an MOV Program improvement action plan for implementation in early 1993. The most notable change that has occurred to date has been to establish onsite ownership of the MOV program at a higher level of management. This change has resulted in a more rigid focus on safety significance and the clear identification of accountability for the MOV Program at each site.

As a result of the implementation of the improvement action plan, CECo initiated a pilot program in early 1993 at LaSalle Station to reprioritize the GL 89-10 MOV population utilizing the station PRA and an expert evaluation team. This "deterministic/PRA" approach reprioritized the GL 89-10 population into 4 safety significance categories: high, medium, low, and low-low. For LaSalle Station, 54 MOVs (out of the total population of 301 GL 89-10 MOVs) fall into the high and medium safety significance categories. The original prioritization that was performed and documented in Reference 2, classified 200 MOVs as Priority I and the remainder as Priority II. A summary of the LaSalle reprioritization work was provided to the NRC during the August 26, 1993 NRC/CECo Management Meeting on MOV issues.

In August 1993, CECo initiated a margin review of the as-left settings for all of the high and medium safety significant MOVs (from the reprioritized MOV ranking) at LaSalle Station. The margin review looked at both the tested and non-tested population of valves. The current torque switch settings on the valves were compared to the minimum required thrusts to open and/or close the valves at design basis conditions. For the tested population of valves (static and/or dP), actual test data factors such as stem friction coefficients, packing load, and valve factors were fed back into the evaluation. For the non-tested population of valves, best available information was used, including, as appropriate, valve factors equal to or greater than 0.5.

The reprioritized ranking of the MOV population, along with the margin review of the as-left settings provides the basis for scheduling remaining GL 89-10 activities. CECo will complete reprioritization and margin evaluations (similar to the LaSalle effort) of all GL 89-10 MOVs for all 6 stations by June 28, 1984. These margin evaluations, along with any appropriate corrective actions, will address NRC concerns regarding CECo's resolution of safety significant MOV issues. Input to the margin evaluations will be primarily based on the CECo database of static and dP test information obtained through GL 89-10 testing activities. To date, this population represents approximately 750 MOV static tests and 225 MOV dP tests. A large number of MOV tests (static and dP) will be performed at all 6 sites during the Fall 1993 and Spring 1994 refueling outages. In addition, CECo is planning online and planned outage dP testing at Dresden and Quad Cities Stations in the upcoming months. The results from all of the MOV tests, including those performed during the upcoming outages, will be evaluated and incorporated into CECo's MOV database and program, as appropriate. Attachment A contains a summary of MOV test progress to date at CECo's stations.

CECo's original approved commitment (Reference 3), was to perform dP testing on a minimum of 10% of our GL 89-10 MOVs at each site. Upon NRC request, CECo revised the estimate of MOVs to be dP tested to approximately 30% of the MOVs within the GL 89-10 program (Reference 4). Based on our dP testing progress to date and current scheduling, we will meet or exceed this estimate. In addition, the reprioritization efforts and margin assessments will provide a more appropriate focus for the remaining test activities, ensuring that the intent of our original commitment to focus on safety significance is met, and fundamentally, that valve operability questions are resolved. Remaining dP testing subsequent to June 28, 1994 will focus on safety significance, available margin, and requirements for obtaining necessary information to group valves that cannot or will not be dP tested.

The population of MOVs that CECo is currently evaluating to reduce the scope of necessary dP testing are those MOVs which have the highest degree of predictability and margin, i.e. certain globe valves and low dP gate valves. The decision to not dP test certain MOVs will be based on evaluation of the large database of dP test data already obtained by CECo. This allows CECo to more properly focus resources on the appropriate MOV dP tests, i.e. safety significant gate valves. Thus, any decision to not dP test certain valves will have no impact on safety significance. Even with the planned reduction of dP testing on certain globe and low dP gate valves, the total scope of MOV dP tests will exceed the 30% estimate discussed in Reference 4.

Note that the plan, as discussed here, (MOV reprioritization and exclusion of certain globe and low dP gate valves) does represent a change to CECo's GL 89-10 commitment, as stated in Reference 4, which has CECo performing dP tests on all practicable and meaningful MOVs where greater than 80% design basis conditions can be achieved. In addition, CECo has not determined an appropriate method for diagnostically testing the butterfly valve population. However, CECo has initiated corrective actions to address operability concerns on the safety significant butterfly valve population. CECo will submit plans for closure of GL 89-10 on the butterfly valve population, when available. CECo expects that this submittal will be avialable in mid-1994.

In Reference 1, the NRC expressed concern with the assumptions that CECo has made with respect to valve factors for a large portion of the gate valve population. Please note that the assumption of a 0.55 valve factor for Westinghouse gate valves is not a recent change to CECo's program. A population of the MOVs at Byron and Braidwood Stations were originally procured and sized assuming the 0.48 and 0.55 valve factors in the open and closed directions, respectively. In addition, the population of the remaining gate valves at CECo plants have not all been evaluated with 0.3 valve factors. Higher valve factors have been used on selected groups of MOVs such as the new Anchor Darling double disk gate valves, the GL 89-10, Supplement 3 class of blowdown valves at the BWR stations, certain VELAN gate valves at Byron and Braidwood, and others.

Based on the results of the reprioritization and margin review effort for LaSalle Station and the expectation of similar results from the efforts at the other stations, CECo believes that the original conclusion in our response to the generic letter, Reference 2, is still applicable. The extended schedule, as accepted, will result in only a marginal reduction in the net benefit resulting from the generic letter action items.

In summary, CECo is committing to the following actions to address the NRC concerns detailed in Reference 1:

1. CECo will perform a "deterministic/PRA" reprioritization ranking of GL 89-10 MOVs and perform margin reviews of all GL 89-10 MOVs for all 6 CECo stations by 6/28/94. Appropriate corrective actions will be initiated, as necessary. The evaluations will be performed with best available information, including valve factors, as appropriate, equal to or greater than 0.5.

2. CECo will perform remaining dP test activities, for the sites that require it (primarily LaSalle, Dresden, and Quad Cities) on a schedule guided by the results of the reprioritization efforts and the margin assessments.

3. CECo will complete static testing for all GL 89-10 MOVs (except for the butterfly valve population) by the end of the 3rd refueling outage on each unit, commencing with the Spring 1991 outages.

4. CECo will docket our plan for closure of GL 89-10 activities on the butterfly valve population, when available. CECo expects that this will be in mid-1994.

Please direct any questions you have regarding this response to this office.

L.O. DelGeorge
Vice President Nuclear Operations Support
Commonwealth Edison Company

Attachment: Status of MOV Testing at CECo Stations

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cc: J. Martin, Regional Administrator - RIII
J. Dyer, Project Director - NRR
R. Assa, Project Manager - NRR
S. Dupont, Senior Resident Inspector - Braidwood
H. Peterson, Senior Resident Inspector - Byron
J. Stang, Project Manager - NRR
M. Leach, Senior Resident Inspector - Dresden
J. Kennedy, Project Manager - NRR
D. Hills, Senior Resident Inspector - LaSAlle
C. Patel, Project Manager - NRR
T. Taylor, Senior Resident Inspector - Quad Cities
C. Shiraki, Project Manager - NRR
J. Smith, Senior Resident Inspector - Zion
Office of Nuclear Facility Safety, IDNS

Attachment

Status of MOV Testing at CECo Stations

Station	89-10 MOVs	Completed 89-10 Outages (both units)	MOVs Statically Tested	MOVs dP Tested	MOV dP Tests Planned @
Byron	257	4	159	85	100
Braidwood	237	4	135	68	96
Zion*	249	2	125	48	122
Dresden	170	2	82	2	68
Quad Cities	196	3	116	15#	78
LaSalle*	301	3	191	25	110
Total	1410	18	808	243	574

* Does not reflect MOV testing from ongoing refueling outages.

@ Subject to change pending resolution of CECo's corporate initiative to reduce the scope of necessary dP testing on certain classes of globe valves and low dP gate valves. Such a change will be provided to the NRC prior to a major modification of the valve dP testing scope.

\# Includes 6 recent online dP tests.