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ComEd

April 12, 1999

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

Braidwood Station, Units 1 and 2
Facility Operating License Nos. NPF-72 and NPF-77
NRC Docket Nos. STN 50-456 and STN 50-457

Byron Station, Units 1 and 2
Facility Operating License Nos. NPF-37 and NPF-66
NRC Docket Nos. STN 50-454 and STN 50-455

Dresden Nuclear Power Station, Units 2 and 3
Facility Operating License Nos. DPR-19 and DPR-25
NRC Docket Nos. 50-237 and 50-249

LaSalle County Nuclear Power Station, Units 1 and 2
Facility Operating License Nos. NPF-11 and NPF-18
NRC Docket Nos. 50-373 and 50-374

Quad Cities Nuclear Power Station, Units 1 and 2
Facility Operating License Nos. DPR-29 and DPR-30
NRC Docket Nos. 50-254 and 50-265

1/1

Subject: NRC Generic Letter 96-05, "Periodic Verification of Design Basis Capability of Safety-Related Motor-Operated Valves," Additional Information

A073

References:
(1) Generic Letter 96-05, "Periodic Verification of Design Basis Capability of Safety-Related Motor-Operated Valves," dated September 18, 1996

(2) Letter from J. Hosmer (ComEd) to U.S. NRC, "ComEd 180-day Response to GL 96-05," dated March 15, 1997

(3) Letter from R.M. Krich (ComEd) to U.S.NRC, "NRC Generic Letter 96-05, Additional Information," dated August 24, 1998

(4) Letter from L.W. Rossbach (USNRC) to O.D. Kingsley (ComEd) "Request for Additional Information Related to Generic Letter 96-05," dated February 4, 1999

In Reference 1, the Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 96-05, "Periodic Verification of Design Basis Capability of Safety-Related Motor Operated Valves." In References 2 and 3, Commonwealth Edison (ComEd) Company responded to this GL. The NRC's review of those References, subsequently generated a Request for Additional Information (RAI) transmitted by Reference 4, which requested a response within 60 days of receipt, (i.e., April 12, 1999).

The Attachment to this letter provides ComEd's response to the RAI.

If you have any questions concerning this correspondence, please contact Bob Rybak at (630) 663-7286.

Respectfully,

R.M. Krich
Vice President - Regulatory Services

Attachment

cc: Regional Administrator - NRC Region III
Senior Resident Inspector - Braidwood Station
Senior Resident Inspector - Byron Station
Senior Resident Inspector - Dresden Nuclear Power Station
Senior Resident Inspector - LaSalle County Station
Senior Resident Inspector - Quad Cities Nuclear Power Station

bcc: NRC Project Manager - NRR - Braidwood Station
NRC Project Manager - NRR - Byron Station
NRC Project Manager - NRR - Dresden Nuclear Power Station, Units 2 and 3
NRC Project Manager - NRR - LaSalle County Station
NRC Project Manager - NRR - Quad Cities Nuclear Power Station
Office of Nuclear Facility Safety - IDNS
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Vice President - Regulatory Services
Licensing Director - Byron and Braidwood Stations
Licensing Director - Dresden and Quad Cities Nuclear Power Stations
Licensing Director - LaSalle County Station
Regulatory Assurance Manager - Byron Station
Regulatory Assurance Manager - Braidwood Station
Regulatory Assurance Manager - Dresden Nuclear Power Station
Regulatory Assurance Manager - LaSalle County Station
Regulatory Assurance Manager - Quad Cities Nuclear Power Station
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ATTACHMENT
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION REGARDING GENERIC LETTER 96-05

Question 1

In separate NRC inspection reports, the NRC staff closed its review of the motor-operated valve (MOV) program implemented at each operational station in response to Generic Letter (GL) 89-10, "Safety-Related Motor-Operated Valve Testing and Surveillance." In these inspection reports, the NRC staff discussed certain aspects of the licensee's MOV program to be addressed over the long term. Commonwealth Edison Company (ComEd) should describe the actions taken to address the specific long-term aspects of the MOV program as noted in the NRC inspection report for each of the five ComEd stations. Examples from the NRC inspection reports for each of the operational ComEd stations are given beginning on the following page.

ComEd continues to upgrade its MOV program and actively lead industry efforts related to MOVs. Margin improvement efforts and periodic testing efforts are underway at the ComEd stations. Differential pressure (DP) Testing in support of the Joint Owners Group (JOG) MOV Program is being performed at all stations. The status of our actions with regard with the examples from the Inspection Reports is provided below:

NRC Inspection Report No. 50-454 & 455/96003 for Byron Station:

Item 1
additional evaluation was needed to determine the acceptability of removing four service water strainer backwash MOVs from the GL 89-10 program scope;

Response: Additional evaluation was performed for removing four Essential Service water (SX) strainer backwash valves from the GL 89-10 program. This evaluation was reviewed and accepted per NRC Inspection Report No. 50-454/455 98005 dated March 16, 1998. The basis for removal from the GL 89-10 program involved the revision of the Essential Service Water backwash procedure (i.e., BOP SX-4, "Essential Service Water Manual Backwash") to ensure an operator was present at the valves to manually initiate and secure the backwash process. The procedure has instructions to manually overide the MOV, if necessary. In addition, it was verified that the radiation levels in the SX pump room during accident conditions would not preclude access for an operator.

Item 2
the licensee was evaluating eleven low margin MOVs for future margin improvements;

Response: Eleven valves were identified to have low margin to close. The valves are listed below, along with the action taken to improve margin.

- 2CV8355A, 2CV8355B, 2CV8355C, 2CV8355D, 1CV8355B, 1CV8355C, 1CV8355D: These valves are the Reactor Coolant Pump seal injection isolation valves and are open in normal and post accident conditions. They

Question 1 (continued):

do not have an active safety function to close. Since there is no safety function to close, the low margin in the close direction is acceptable and no margin improvements are required.

- 1CC685 - Unit 1 Reactor Coolant Pumps Thermal Barrier Return Isolation Valves: A modification for this valve has been initiated to change the control circuit to be limit closed. This modification will give the valve high margin to close. This modification will be installed during refueling outage B1R10, which is scheduled for the Fall of 2000.
- 2CC685 - Unit 2 Reactor Coolant Pumps Thermal Barrier Return Isolation Valves: A modification for this valve has been installed to change the control circuit to be limit closed. This modification has given the valve high margin to close. This modification was installed during refueling outage B2R07, which was completed in May 1998.
- 2WO020B - 2B and 2D Reactor Coolant Fan Cooler Coil Chilled Water Outlet Header Outside Containment Isolation Valve: This valve was VOTES tested on September 20, 1996 and the control switch trip thrust was adjusted to give the valve high margin. No modifications are required for this valve.
- 2RH8716B - 2B Residual Heat Removal Heat Exchanger Outlet Isolation Valve: A modification for this valve has been installed to change the control circuit to be limit closed. This modification has given the valve high margin to close. This modification was installed in refueling outage B2R06, which was completed in April 1996.

Item 3

the setup calculations for several MOVs did not account for high ambient temperature effects on the output of ac motors identified in a 10 CFR Part 21 notice prepared by Limitorque Corporation;

Response: The calculations referred to in the inspection report were actually the margin review sheets for these valves. The rising stem MOV datasheet calculations did account for the temperature correction factors. The temperature correction factors have now been included in the margin review sheets for all of the valves in question.

Item 4

valve-specific information was needed to justify valve factors for any non-dynamically tested MOVs that do not use the bounding values provided in the licensee's applicable white paper on the rising stem data sheets;

Response: ComEd Corporate MOV Program White Papers on valve factors allow the use of conservative, but not bounding valve factors for establishing thrust windows for MOVs. This is allowed by the ComEd MOV program because the thrust window software combines random uncertainties in an unnecessarily conservative manner. The ComEd margin review process is used to ensure that valve factor uncertainty is properly addressed. In addition, ComEd has enhanced the deterministic margin formula developed during the GL 89-10 closure inspections to include additional uncertainties such as stem factor variability,

Question 1 Continued:

packing load uncertainty, motor torque capability uncertainty and actuator efficiency uncertainty. This enhanced margin equation is used to establish Joint Owners Group (JOG) test frequencies. Both the ComEd probabilistic margin equations and the deterministic JOG margin equations, (from GL 89-10 closure), are being incorporated into the new thrust window software. Once the new software is in use, the ComEd Corporate MOV Program White Papers will be revised to require use of statistically bounding valve factors in setpoint window calculations.

Item 5
the licensee was to monitor industry information that may be applicable to its Borg Warner valves

Response: ComEd is monitoring industry information for data supporting the valve factor basis for several MOV groups that are not DP testable at ComEd plants, including Borg-Warner gate valves. ComEd has found no additional information other than that being collected by the JOG MOV Program. The JOG program is collecting high accuracy valve factor information for a large cross-section of valve manufacturers and designs, which includes six Borg-Warner gate valves. ComEd is very actively involved in this program and will monitor the results of the program for impact on ComEd valve factor assumptions.

Item 6
diagnostic testing of 44 butterfly valves was scheduled for the next three refueling outages.

Response : The testing of the 44 butterfly valves is proceeding on schedule with all valves still on schedule to be completed within the third outage following the GL 89-10 closure inspection. Presently a total of 10 valves for both units remain to be tested. This testing will be completed this year.

NRC Inspection Report No. 50-456 & 457/96009 for Braidwood Station:

Item 1
the licensee was relying on a valve degradation margin to offset a weakness in the valve factors used by rising stem data sheets for some non-dynamically tested MOVs;

Response : This question is discussed above in ComEd's response to Byron Station, Question 1 Item 4.

Item 2
the licensee planned to revise the minimum required thrust determination contained in procedure BwHS 4002-061, "Rising Stem Motor Operated Valve Diagnostic Test (Gate and Globe Valves)" to properly account for variations in torque switch repeatability;

Question 1 (continued):

Response: Braidwood Station has revised the referenced procedure to account for the proper torque switch inaccuracy associated with the test.

Item 3
the licensee had developed a plan to resolve torque switch repeatability issues for RHR pump miniflow control valves 1RH611 and 2RH610;

Response: This was an issue due to low margin when a value of 20% for torque switch repeatability (TSR) was included in the error calculation. TSR testing was performed on these valves when they were statically tested to determine the correct value. The testing showed the TSR was equal to or less than 5%. Additionally, the recent DP testing performed on three of the four valves in the group have shown the measured valve factors to be less than what was used when the low margin was determined. Therefore, Braidwood Station has concluded that there is no longer a margin concern with these MOVs.

Item 4
diagnostic testing of 15 butterfly valves was planned for the next two refueling outages.

Response: All of the planned butterfly valve diagnostic testing was performed during the referenced refueling outages. The butterfly valves are now included and scheduled for periodic verification (PV) testing in accordance with the JOG program.

Additional open item from Braidwood Station GL 89-10 Closure Inspection Report: For gate valves that were considered to have outlier performance, the Rising Stem MOV Data Sheet (RSMDS) substituted lower values for the as-measured valve factors (VFs) or load sensitive behavior. Licensee personnel stated that they intended to reverify the original parameters by retesting these valves under dynamic conditions. The licensee agreed to generate a revised thrust calculation using the as-measured VFs and/or load sensitive behavior should any diagnostic testing be performed prior to future dynamic tests.

Response: Specifically, this question refers to the RH610 and RH611 valves. These valves were considered outliers with measured apparent valve factors greater than the 1.0 value used in the RSMDS. Braidwood Station personnel have since retested three of the four valves under dynamic conditions with all of the measured valve factors being less than the 1.0 value. After re-evaluating the fourth valve's original test data, with insight from the new test data, it also had a valve factor less than 1.0. Additionally, a review of the rest of the MOV program population for these concerns was performed. MOVs identified where the valve factor or rate of loading used in the RSMDS was less than the tested values were addressed in the following manner. The DP tests were re-evaluated to determine if the valve factors and rate of loading values were valid or if the data was invalid. The MOV program was revised so that if the data was valid, the tested values are incorporated into the RSMDS prior to the next static or DP test. If the values were determined to be invalid, the data was disregarded and the grouping valve factor and rate of loading are used in the RSMDS.

Question 1 (continued):

NRC Inspection Report No. 50-237 & 249/96015 for Dresden Nuclear Power Station:

Item 1
the licensee established a margin improvement plan for several MOVs, including Crane MOVs that used flow isolation valve factors;

Response: At the time of the Dresden Nuclear Power Station GL 89-10 closure inspection, flow isolation valve factors were used for Crane MOVs in blowdown applications to provide margin. Subsequent to the inspection, Quad Cities Nuclear Power Station successfully used the Electric Power Research Institute (EPRI) Performance Prediction Methodology (PPM) software to verify that these valves have sufficient margin to reach hard seat contact. These calculations are available for review.

In addition to the blowdown valves, a margin improvement effort was initiated for sixteen MOVs that had less than 10% margin in either the open or close direction. Margin improvement efforts have been completed for all sixteen of these MOVs. More than 10% margin is now available for all of these valves in safety related direction(s) of operation.

Item 2
additional industry information was needed to justify valve factors for Anchor/Darling double disc gate valves under high temperature applications;

Response: ComEd is monitoring industry information for data supporting the valve factor basis for several MOV groups that are not DP testable at ComEd plants, including Anchor/Darling double-disk gate valves. ComEd has found no additional information other than that being collected by the JOG MOV Program. The JOG program is collecting high accuracy valve factor information for a large cross-section of valve manufacturers and designs. This includes four Anchor/Darling double-disk gate valves in steam flow fluid conditions. ComEd is very actively involved in this program and will monitor the results of the program for impact on ComEd valve factor assumptions.

Item 3
a long-term valve factor basis was needed for 28" Crane flex-wedge gate valves 2-202-05A/B and 3-202-05A/B; and

Response: ComEd is monitoring industry information for data supporting the valve factor basis for several MOV groups that are not DP testable at ComEd plants including Crane-Chapman gate valves. ComEd has found no additional information for these valves. The JOG program is collecting valve factor information for a large cross-section of valve manufacturers and designs. While this program is not collecting valve factor information on this particular valve design, ComEd anticipates that information from this program will provide

Question 1 (continued):

insights into valve design features which may result in unpredictable valve performance. ComEd will continue to monitor industry information for valve factor information for this valve group and will incorporate insights from the JOG program into the valve factor assumptions for these valves, as appropriate. In the interim, the current setup of these MOVs using the EPRI PPM methodology is considered to be conservative.

Item 4
the Dresden MOV program would be revised to account for concerns regarding load sensitive behavior in the valve opening direction.

Response: ComEd Corporate MOV Program White Paper 107 now requires that open motor gearing capability at a stem friction factor of 0.20 be compared to the open required thrust under design basis conditions when preparing an MOV thrust window. In addition, the new MOV thrust window software will automatically perform this comparison.

The 0.20 stem friction coefficient is used to statistically bound test data for open friction coefficients under dynamic conditions. The data supporting a 0.20 stem friction coefficient was reviewed with the NRC during the GL 89-10 closure inspections at Dresden Nuclear Power Station and Quad Cities Nuclear Power Station.

Question 1 (continued):

NRC Inspection Report No. 50-254 & 265/95018 for Quad Cities Nuclear Power Station:

Item 1
the licensee established a margin improvement plan for several MOVs, including Crane MOVs that used flow isolation valve factors;

Response: At the time of the Quad Cities Nuclear Power Station GL 89-10 closure inspection, flow isolation valve factors were used for Crane MOVs in blowdown applications to provide margin. Subsequent to the inspection, Quad Cities Nuclear Power Station successfully used the EPRI PPM software to verify that these valves have adequate margin to reach hard seat contact. These calculations are available for review.

In addition to the blowdown valve margin concerns, 82 other MOVs were identified as requiring margin improvement actions. This includes 48 valves that were outside the thrust windows due to the issue discussed in item (5) below. Problem Identification Form (PIF) 96-3296 documents a Margin Improvement Plan matrix and the proposed testing schedule to address these margin concerns. This margin improvement plan was supplied to the NRC at the time of the GL 89-10 Closure Inspection.

- During refueling outage Q2R14, Margin Improvement efforts were performed on 18 valves,
- During refueling outage Q1R15, Margin Improvement efforts were performed on 16 valves,
- During upcoming refueling outage Q2R15, Margin Improvement efforts are scheduled for 28 valves,7 of these valves have been completed early,
- During upcoming refueling outage Q1R16, Margin Improvement efforts were scheduled for 20 valves,4 of these valves have been completed early.

At this time, six valves have less than 10% margin to close under design basis conditions and 32 valves remain outside of target thrust windows. ComEd plans to address these MOVs prior to the end of the next refueling outage for each unit. Based on the discussion above, Quad Cities Nuclear Power Station is meeting the proposed Margin Improvement Plan schedule.

Item 2
additional industry information was needed to justify valve factors for Anchor/Darling double disc gate valves under high temperature applications;

Response: This question is discussed above in ComEd's response to Dresden Nuclear Power Station, Question 1 Item 2.

Question 1 (continued):

Item 3
a long-term valve factor basis was needed for 28" Crane flex-wedge gate valves 2-202-05A/B;

Response: This question is discussed above in ComEd's response to Dresden Nuclear Power Station, Question 1 Item 3.

Item 4
the rising-stem data sheets would be revised to account for concerns regarding load sensitive behavior in the valve opening direction; and

Response: This question is discussed above in ComEd's response to Dresden Nuclear Power Station, Question 1 Item 4.

Item 5
the licensee would revise its white papers to ensure that current MOV switch settings are reviewed when the thrust windows on rising-stem data sheets are modified.

Response: ComEd Corporate MOV Program White Paper 107 has been revised to require that existing MOV settings are reviewed when rising stem MOV datasheets are revised. When the current MOV setting is outside the new thrust window, White Paper 107 now requires that the basis for accepting the current setpoint be documented on the rising stem MOV datasheet or that a Problem Identification Form be initiated to evaluate the discrepancy between the current setpoint and thrust window.

Question 1 (continued):

NRC Inspection Report No. 50-373 & 374/95009 for LaSalle County Station:

Item 1
the licensee stated that marginal MOVs (including 1E12-F017B) would be modified during the next outage to improve thrust margins;

Response: All MOVs, identified to require modifications for GL 89-10 commitments, have been completed. This included the replacement of the
Question 1 (continued):
actuator for valve1E12-F017B to a larger size. Currently, LaSalle County Station does not have any pending modifications on MOVs for margin enhancement.

Item 2
several globe valve calculations required revisions to incorporate guide-based area terms;

Response: LaSalle County Station has reviewed all the globe valves in the GL89-10 program. For globe valves that are in incompressible systems and are classified as guide based, the EPRI methodology has been used to revise rising stem datasheets and Margin Reviews to use the appropriate seat diameter dimension.

Item 3
the licensee planned to review the NRC safety evaluation (dated March 15, 1996) on the methodology developed by the Electric Power Research Institute (EPRI) to predict the torque required to operate butterfly valves.

Response: The LaSalle County Station GL 89-10 Closure inspection was held in late 1995. At this time, the NRC Safety Evaluation on the EPRI MOV program had not been issued and the ComEd Corporate MOV Program White Papers on butterfly valve design assumptions had not been reconciled with the EPRI Program. Subsequent to the inspection, ComEd determined that the ComEd Corporate MOV Program White Papers on butterfly valves were consistent with the EPRI program. During subsequent GL 89-10 closure inspections at Byron Station and Braidwood Station in 1996, the NRC reviewed the ComEd butterfly valve program and found it to be acceptable.

Question 2

The Joint Owners Group (JOG) program focuses on the potential age-related increase in the thrust or torque required to operate valves under their design-basis conditions. In the NRC safety evaluation dated October 30, 1997, on the JOG program, the NRC staff specified that licensees are responsible for addressing the thrust or torque delivered by the MOV motor actuator and its potential degradation. ComEd should describe the plan at each of it's five operational nuclear stations for ensuring adequate ac and dc MOV motor actuator output capability, including consideration of recent guidance in Limitorque Technical Update 98-01 and its Supplement 1.

Corporate Response: ComEd has taken the following steps to ensure adequate AC and DC MOV motor actuator output capability for all five stations.

AC Motor Gearing Capability (MGC): ComEd uses the MGC methodology described in ComEd Corporate MOV Program White Paper 125 to assess actuator torque output capability. This methodology is based on comprehensive motor and actuator test data. The methodology has been reviewed and accepted by the NRC during GL 89-10 closure inspection.

DC MGC: ComEd has used the Limitorque methodology to ensure that DC motor actuators provide sufficient capability to cycle MOVs under design basis conditions. However, ComEd recognizes that recent testing raises concerns over the adequacy of the Limitorque methodology. Consequently, ComEd is participating in a BWR Owners' Group (BWROG) Valve Technical Resolution Group (VTRG) effort to assess output capability and stroke time for MOVs with DC motors. This methodology will be comprehensive in nature and will address the impact of voltage, temperature, motor heatup, and efficiency sensitivity to speed. Available motor and actuator test data will be considered in validating the methodology. Limitorque has agreed to work with the BWROG VTRG in this task. Once a validated methodology has been accepted by Limitorque, ComEd will use the methodology to verify actuators on DC MOVs are properly sized to stroke MOVs under design basis conditions within required stroke times. Please note that no safety related DC MOVs fall within the MOV Program at Braidwood Station and Byron Station.

With respect to the impact of aging on MGC, ComEd has established the following six element program to monitor any age related changes.

- MOV Actuator Periodic Maintenance: To minimize the impact of aging on MOV actuator performance, ComEd performs periodic maintenance on safety related MOV actuators that includes periodic stem lubrication, periodic actuator grease inspections, Environmental Qualification inspections, and motor control center (MCC) inspections.

- Stem Factor Variation: ComEd currently includes margin in MOV margin calculations (i.e., typically ~15%) to allow for variations in stem friction factor. ComEd stations are collecting as-found test data for a large sample of MOVs to verify adequacy of these assumptions.

Question 2 (continued):

- Rate of Loading Variation: For non-DP tested MOVs, ComEd margin calculations include sufficient bias and random margin to bound test data at a 95% confidence level. For DP tested MOVs, ComEd margin calculations are based on a nominal measured rate of loading with margin for random variations over time. Over the next four years, ComEd will review its DP test data, including JOG tests, and will share data with other utilities to ensure that margin assumptions for rate of loading variation are adequate.

- Springpack Relaxation: ComEd includes margin for springpack relaxation in MOV margin calculations consistent with guidance in Limitorque Technical Update 93-02.

- Motor Degradation: ComEd currently monitors motor running current during VOTES testing to ensure that motors are performing properly. ComEd is considering the use of MCC based testing in lieu of VOTES testing for MOVs in the future. ComEd believes that MCC based testing can be significantly more predictive of motor problems.

- Gearbox Efficiency: ComEd margin calculations are based on pullout efficiency and include 5% random uncertainty for variations in efficiency. ComEd is considering MCC based testing in the future which will be more predictive of MOV efficiency degradation.

Question 3:

In a letter dated August 24, 1998, ComEd updated its commitment to implement the Joint Owners Group (JOG) Program on MOV Periodic Verification at its five operational nuclear stations in response to GL 96-05. The JOG program specifies that the methodology and discrimination criteria for ranking MOVs according to their safety significance are the responsibility of each participating licensee. In a previous letter dated March 15, 1997, the licensee stated that the ranking of MOVs at its nuclear stations (including Byron and Braidwood) matched the Boiling Water Reactor Owners' Group (BWROG) methodology as described in BWROG Topical Report NEDC 32264, "Application of Probabilistic Safety Assessment to Generic Letter 89-10." As Byron and Braidwood are pressurized water reactor (PWR) nuclear plants designed by Westinghouse, the licensee should describe the application of the BWROG methodology to Byron and Braidwood, including (1) the preparation of a sample list of high-risk MOVs from other Westinghouse nuclear plants, and (2) consideration of the conditions and limitations discussed in the NRC safety evaluation dated February 27, 1996, on the BWROG methodology. In responding to this request, the licensee might apply insights from the guidance provided in the Westinghouse Owners' Group (WOG) Engineering Report V-EC-1658-A (Revision 2, dated August 13, 1998), "Risk Ranking Approach for Motor-Operated Valves in Response to Generic Letter 96-05," and the NRC safety evaluation dated April 14, 1998, on the WOG methodology for risk ranking MOVs at Westinghouse-designed PWR nuclear plants.

Response: ComEd is currently updating the PRA evaluations for both Byron Station and Braidwood Station. Once the new PRA evaluations are available, ComEd plans to review all MOV safety rankings at the ComEd PWRs and adjust the rankings as appropriate. The WOG methodology will be used since this methodology was developed for Westinghouse design plants.

ComEd MOV engineers and Probabilistic Risk Assessment (PRA) engineers have started reviewing the WOG risk ranking methodology against the process used to rank MOVs at Byron Station and Braidwood Station. Based on this preliminary review, a few MOVs may being elevated to the Medium or High safety significance due to high Fussel-Vesely values and due to high importance during external events. In addition, the RHR min flow valves may be elevated to the Medium safety significance category based on the WOG report categorization of these valves as safety significant. Most MOVs' safety rankings are not impacted.