Commonwealth Edison
1400 Opus Place
Downers Grove, Illinois 60515

March 23, 1990

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Subject: Dresden Station Units 2 and 3
Quad Cities Station Units 1 and 2
Zion Station Units 1 and 2
LaSalle County Station Units 1 and 2
Byron Station Units 1 and 2
Braidwood Station Units 1 and 2
Response to Generic Letter 89-19
NRC Docket Nos. 50-237/249, 50-254/265, 50-295/304, 50-373/374, 50-454/455 and 50-456/457

Reference: Generic Letter 89-19, dated September 20, 1989.

Dear Sir:

As a result of the technical resolution of USI A-47, "Safety Implications of Control Systems in LWR Nuclear Power Plants," the NRC staff has concluded that all PWR plants should provide automatic steam generator overfill protection, and that all BWR plants should provide automatic reactor vessel overfill protection. In addition, it was concluded that plant procedures and technical specifications should include provisions to periodically verify the operability of the overfill protection and to assure that automatic overfill protection is available to mitigate main feedwater overfeed events during reactor power operation. Generic Letter 89-19 (Generic Letter) recommended acceptable overfill protection designs, and procedural and Technical Specification provisions, which licensees were requested to implement to enhance safety. Additionally, the Generic Letter required that licensees provide a response which would confirm that the Generic Letter recommendations would be implemented, and a schedule for implementation.

The Attachments (A through F) to this letter provide Commonwealth Edison Company's (CECo) response for Dresden, Quad Cities, Zion, LaSalle County, Byron and Braidwood Stations to Generic Letter 89-19.

CECo is participating with the BWR Owners' Group (BWROG) in the preparation of a generic response which will address the separation recommendations, between the overfill protection system and the main feedwater control system, presented in the Generic Letter. It is CECo's understanding that the NRC has accepted the BWROG's request to extend the response date to May 4, 1990, to allow the individual utilities time to review the BWROG response for applicability to their BWR plants. At that time (May 4, 1990), CECo will submit a more detailed response on the separation of the overfill protection system and main feedwater level control system for Dresden, Quad Cities, and LaSalle County Stations.

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Please direct any questions that you may have concerning this response to this office.

Respectfully,

Milton H. Richter

M. H. Richter
Generic Issues Administrator

Attachments: A) Dresden Station Response to Generic Letter 89-19
B) Quad Cities Station Response to Generic Letter 89-19
C) Zion Station Response to Generic Letter 89-19
D) LaSalle County Station Response to Generic Letter 89-19
E) Byron Station Response to Generic Letter 89-19
F) Braidwood Station Response to Generic Letter 89-19

cc: A.B. Davis - Regional Administrator, Region III
Resident Inspector - D/QC/LSC/Z/BY/BW

/lmw:0793T

SUBSCRIBED AND SWORN to
before me this 23 day
of March, 1990

Patricia L. Marlow
Notary Public

" OFFICIAL SEAL "
PATRICIA LYNN MARLOW
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 11/5/91

ATTACHMENT A

DRESDEN STATION RESPONSE TO GENERIC LETTER 89-19

Enclosure 2 of Generic Letter 89-19 provides guidance for acceptable reactor vessel overfill protection designs for General Electric (GE) Boiling-Water-Reactor (BWR) plants. Group II is identified as those plants having a safety-grade or commercial-grade overfill protection system initiated on a reactor pressure vessel (RPV) high-water-level signal based on a "1-out-of-1", "1-out-of-2", or a "2-out-of-2" initiating logic. The system isolates main feedwater (MFW) flow by tripping the feedwater pumps. The staff has concluded that this design is acceptable provided the following recommendations are met.

Recommendation

The overfill protection system is separate from the control portion of the MFW control system so that it is not powered from the same power source, not located in the same cabinet, and not routed so that a fire is likely to affect both systems. The design for the overfill protection system should be sufficiently separate from the MFW control system to ensure that the MFW pump will trip on a reactor high-water-level signal when required, even if a loss of power, a loss of ventilation, or a fire in the control portion of the MFW control system should occur. Common-mode failures that could disable overfill protection and the feedwater control system, but would still result in a feedwater pump trip, are considered acceptable failure modes.

In addition, it is recommended that all plants reassess their operating procedures and operator training and modify them if necessary to ensure that the operators can mitigate reactor vessel overfill events that may occur via the condensate booster pumps during reduced pressure operation of the system.

Response

Dresden Station is a GE BWR-3 plant which currently provides for automatic RPV overfill protection. The overfill protection circuitry employs a "2-out-of-2" initiating logic to automatically trip the reactor feedwater pumps when RPV level reaches 55 inches above instrument zero.

Commonwealth Edison Company (CECo) is participating with the BWR Owners' Group (BWROG) in the preparation of a generic response which will address the overfill protection/MFW level control separation recommendations of the Generic Letter. It is CECo's understanding that the NRC has accepted the BWROG's request to extend the response date to May 4, 1990, to allow the individual utilities time to review the BWROG response for applicability to their plants. At that time (May 4, 1990), CECo will submit a more detailed response on the separation of the overfill protection system and the MFW control system. Additionally, any necessary actions and schedules, or appropriate justification, will be presented.

The station determined that the appropriate operating procedure (DOA 600-1, "Transient Level Control") did not address RPV overfill events that may occur via the condensate system during reduced pressure operation. The procedure will be revised to include low pressure operation. Following the procedure revision, the licensed operating personnel will receive training on the procedure. These actions will be completed prior to startup from the next refueling outage for Unit 2 (presently scheduled to begin in September 1990), in accordance with the schedule of the Generic Letter. The current training for licensed operators includes information regarding the consequences of RPV overfill events. In addition, during simulator training, instructors monitor for cases of overfill.

Recommendation

Plant procedures and technical specifications for all BWR plants with main feedwater overfill protection include provisions to verify periodically the operability of overfill protection and ensure that automatic overfill protection to mitigate main feedwater overfeed events is operable during power operation. The instrumentation should be demonstrated to be operable by the performance of a channel check, channel functional testing, and channel calibration, including setpoint verification. The technical specifications should include appropriate limiting conditions for operation (LCOs). These technical specifications should be commensurate with the requirements of existing plant technical specifications for channels that initiate protective actions. Previously approved technical specifications for surveillance intervals and LCOs for overfill protection are considered acceptable.

Response

At this time there are no technical specifications which address the RPV overfill protection system. However, the reactor vessel water level instrumentation for overfill protection is calibrated every refuel outage. A logic system functional test is also performed every refuel outage. The calibration and functional tests are tracked by the station's general surveillance program. Additionally, the appropriate operating procedures will be revised to perform an instrument check of the overfill protection instrumentation on a daily basis. It is expected that the operating procedure revisions will be completed by August 1, 1990.

New technical specifications will be proposed for the RPV overfill protection system. The proposed technical specifications will include provisions to periodically verify the operability of the overfill protection system and ensure that automatic overfill protection is operable during power operation. The proposed technical specifications will include appropriate limiting conditions for operation and include surveillance requirements. The technical specification amendment for each unit will be submitted prior to startup from the next refueling outage for Unit 2 (presently scheduled to begin in September 1990), in accordance with the schedule of the Generic Letter.

ATTACHMENT B

QUAD CITIES STATION RESPONSE TO GENERIC LETTER 89-19

Enclosure 2 of Generic Letter 89-19 provides guidance for acceptable reactor vessel overfill protection designs for General Electric (GE) Boiling-Water-Reactor (BWR) plants. Group II is identified as those plants having a safety-grade or commercial-grade overfill protection system initiated on a reactor pressure vessel (RPV) high-water-level signal based on a "1-out-of-1", "1-out-of-2", or a "2-out-of-2" initiating logic. The system isolates main feedwater (MFW) flow by tripping the feedwater pumps. The staff has concluded that this design is acceptable provided the following recommendations are met.

Recommendation

The overfill protection system is separate from the control portion of the MFW control system so that it is not powered from the same power source, not located in the same cabinet, and not routed so that a fire is likely to affect both systems. The design for the overfill protection system should be sufficiently separate from the MFW control system to ensure that the MFW pump will trip on a reactor high-water-level signal when required, even if a loss of power, a loss of ventilation, or a fire in the control portion of the MFW control system should occur. Common-mode failures that could disable overfill protection and the feedwater control system, but would still result in a feedwater pump trip, are considered acceptable failure modes.

In addition, it is recommended that all plants reassess their operating procedures and operator training and modify them if necessary to ensure that the operators can mitigate reactor vessel overfill events that may occur via the condensate booster pumps during reduced pressure operation of the system.

Response

Quad Cities Station is a GE BWR-3 plant which currently provides for automatic RPV overfill protection. The overfill protection circuitry employs a "2-out-of-2" initiating logic to automatically trip the reactor feedwater pumps when RPV level reaches 48 inches above instrument zero.

Commonwealth Edison Company (CECo) is participating with the BWR Owners' Group (BWROG) in the preparation of a generic response which will address the overfill protection/MFW level control separation recommendations of the Generic Letter. It is CECo's understanding that the NRC has accepted the BWROG's request to extend the response date to May 4, 1990, to allow the individual utilities time to review the BWROG response for applicability to their plants. At that time (May 4, 1990), CECo will submit a more detailed response on the separation of the overfill protection system and the MFW control system. Additionally, any necessary actions and schedules, or appropriate justification, will be presented.

Operating procedures were reviewed for assurance that operators could mitigate RPV overfill events, including events from the condensate system during reduced RPV pressure conditions. It was determined that no operating procedure revisions were necessary. The current training for licensed operators include the consequences of RPV overfill events. In addition, during simulator training, instructors monitor for cases of overfill.

Recommendation

Plant procedures and technical specifications for all BWR plants with main feedwater overfill protection include provisions to verify periodically the operability of overfill protection and ensure that automatic overfill protection to mitigate main feedwater overfeed events is operable during power operation. The instrumentation should be demonstrated to be operable by the performance of a channel check, channel functional testing, and channel calibration, including setpoint verification. The technical specifications should include appropriate limiting conditions for operation (LCOs). These technical specifications should be commensurate with the requirements of existing plant technical specifications for channels that initiate protective actions. Previously approved technical specifications for surveillance intervals and LCOs for overfill protection are considered acceptable.

Response

At this time there are no technical specifications which address the RPV overfill protection system. However, the reactor vessel water level instrumentation for overfill protection is calibrated every refuel outage. A functional test is presently performed (on a refueling outage basis) which verifies the operability of the actuating relays in the overfill protection circuitry; however, the trip logic of the reactor feedwater pumps is not tested. A procedure revision will be implemented to verify the trip logic of the feedwater pumps on a refueling outage basis. The testing of feedwater pump trip logic will be initially performed during the current Unit 2 refueling outage. Additionally, the appropriate operating procedures will be revised to perform an instrument check of the overfill protection instrumentation on a daily basis. It is expected that the operating procedure revisions will be completed by August 1, 1990.

New technical specifications will be proposed for the RPV overfill protection system. The proposed technical specifications will include provisions to periodically verify the operability of the overfill protection system and ensure that automatic overfill protection is operable during power operation. The proposed technical specifications will include appropriate limiting conditions for operation and include surveillance requirements. The technical specification amendment for each unit will be submitted prior to startup from the next refueling outage for Unit 1 (presently scheduled to begin in October 1990), in accordance with the schedule of the Generic Letter.

ATTACHMENT C

ZION STATION RESPONSE TO GENERIC LETTER 89-19

Enclosure 2 of Generic Letter 89-19 provides guidance for acceptable steam generator overfill protection designs for Westinghouse Pressurized-Water-Reactor (PWR) plants. Group I is identified as those plants having a safety grade overfill protection system initiated on a steam generator high-water-level signal based on "2-out-of-4" initiating logic which is safety grade, or a "2-out-of-3" initiating logic which is safety grade but uses one of the three channels for both control and protection. The system isolates the main feedwater (MFW) flow by closing the MFW isolation valves and tripping the MFW pumps. The staff has concluded that this design is acceptable provided the following recommendations are met.

Recommendation

The overfill protection system is sufficiently separate from the control portion of the MFW control system so that it is not powered from the same power source, not located in the same cabinet, and not routed so that a fire is likely to affect both systems. The design for the overfill protection system should be sufficiently separate from the MFW control system to ensure that the MFW pump will trip on a high-water-level signal when required, even if a loss of power, a loss of ventilation, or a fire in the control portion of the MFW control system should occur. Common-mode failures that could disable overfill protection and the feedwater control system, but would still result in the feedwater pump trip, are considered acceptable failure modes.

Response

Zion Station is a four loop Westinghouse-designed PWR which currently provides for automatic steam generator overfill protection. The overfill protection circuitry utilizes safety grade equipment employing "2-out-of-3" initiating logic to isolate MFW flow by closing the MFW isolation valves and tripping the feedwater pumps. This logic is part of the Reactor Protection System.

The overfill protection system is independent of the feedwater control system in terms of power supply and signal processing cabinet location. The control circuits for feedwater are located in the Balance of Plant cabinets while the overfill protection circuits are located in the Reactor Protection (RP) System cabinets. The RP System consists of two trains, and each train will isolate the feedwater system and trip all of the feedwater pumps. The RP System meets the Zion Station licensing bases for single failure criteria, separation, and power supply independency (each train is powered from separate Engineered Safeguards Feature divisions). The train separation design criteria ensures that a fire is unlikely to affect both RP System trains. Additionally, since the circuitry for feedwater control and overfill protection are located in separate cabinets, there is assurance that a fire is unlikely to affect both systems (control and overfill protection). Regarding ventilation, the cabinets which contain the feedwater control and overfill protection circuitry are located in a room provided with a safety-related ventilation system. Commonwealth Edison Company believes that adequate automatic steam generator overfill protection exists at Zion Station.

Recommendation

Plant procedures and technical specifications for all Westinghouse plants include provisions to periodically verify the operability of the MFW overfill protection and ensure that the automatic overfill protection is operable during reactor power operation. The instrumentation should be demonstrated to be operable by the performance of a channel check, channel functional testing, and channel calibration, including setpoint verification. The technical specifications should include appropriate LCOs. These technical specifications should be commensurate with existing plant technical specification requirements for channels that initiate protective actions. Plants that have previously approved technical specifications for surveillance intervals for overfill protection are considered acceptable.

Response

The Zion Station Technical Specifications do not specifically identify the overfill protection system for surveillance or operability requirements. However, the components are an integral part of the Reactor Protection System which is in the technical specifications, and the technical specification surveillance requirements for the Reactor Protection System require the inherent periodic testing of the overfill protection circuitry. Commonwealth Edison Company will specifically address the overfill protection system in the technical specifications as part of the Zion Station Technical Specification Upgrade Program. It is expected that a Technical Specification amendment for overfill protection will be submitted by the end of the first quarter of 1992.

The instrumentation, logic circuitry and actuation circuitry for the overfill protection system is routinely tested by Zion Station. The following testing is performed on a refuel outage basis: the steam generator level transmitters are calibrated, the steam generator level instrument loops are calibrated, and the overfill protection setpoint is verified. The following testing is performed on a quarterly basis: the steam generator level instrument loops are functionally tested, and the MFW isolation and feedwater pump trip actuation circuits are functionally tested. On a monthly basis, a logic test is performed on the isolation and trip actuation circuits. Additionally, Zion Station operating procedures require the performance of a channel check on a daily basis to verify steam generator level instrumentation operability. The performance of these tests are tracked by the station's general surveillance program.

ATTACHMENT D

LASALLE COUNTY STATION RESPONSE TO GENERIC LETTER 89-19

Enclosure 2 of Generic Letter 89-19 provides guidance for acceptable reactor vessel overfill protection designs for General Electric (GE) Boiling-Water-Reactor (BWR) plants. Group I is identified as those plants having a safety-grade or commercial-grade overfill protection system initiated on a reactor pressure vessel (RPV) high-water-level signal based on a "2-out-of-3" or a "1-out-of-2" taken twice (or equivalent) initiating logic. The system isolates main feedwater (MFW) flow by tripping the feedwater pumps. The staff has concluded that this design is acceptable provided the following recommendations are met.

Recommendation

The overfill protection system is separate from the control portion of the MFW control system so that it is not powered from the same power source, not located in the same cabinet, and not routed so that a fire is likely to affect both systems. The design for the overfill protection system should be sufficiently separate from the MFW control system to ensure that the MFW pump will trip on a reactor high-water-level signal when required, even if a loss of power, a loss of ventilation, or a fire in the control portion of the MFW control system should occur. Common-mode failures that could disable overfill protection and the feedwater control system, but would still result in a feedwater pump trip, are considered acceptable failure modes.

In addition, it is recommended that all plants reassess their operating procedures and operator training and modify them if necessary to ensure that the operators can mitigate reactor vessel overfill events that may occur via the condensate booster pumps during reduced pressure operation of the system.

Response

LaSalle Station is a GE BWR-5 plant which currently provides for automatic RPV overfill protection. The overfill protection circuitry employs a "2-out-of-3" initiating logic to automatically trip the reactor feedwater pumps when RPV level reaches 55.5 inches above instrument zero.

Commonwealth Edison Company (CECo) is participating with the BWR Owners' Group (BWROG) in the preparation of a generic response which will address the overfill protection/MFW level control separation recommendations of the Generic Letter. It is CECo's understanding that the NRC has accepted the BWROG's request to extend the response date to May 4, 1990, to allow the individual utilities time to review the BWROG response for applicability to their plants. At that time (May 4, 1990), CECo will submit a more detailed response on the separation of the overfill protection system and the MFW control system. Additionally, any necessary actions and schedules, or appropriate justification, will be presented.

LaSalle Station has previously assessed the operating procedures and training programs related to RPV overfill resulting from increased flow from the condensate system during reduced RPV pressure conditions. This type of overfill event has been covered extensively during simulator training modules, and the applicable operating procedures have the appropriate cautions/guidance incorporated.

Recommendation

Plant procedures and technical specifications for all BWR plants with main feedwater overfill protection include provisions to verify periodically the operability of overfill protection and ensure that automatic overfill protection to mitigate main feedwater overfeed events is operable during power operation. The instrumentation should be demonstrated to be operable by the performance of a channel check, channel functional testing, and channel calibration, including setpoint verification. The technical specifications should include appropriate limiting conditions for operation (LCOs). These technical specifications should be commensurate with the requirements of existing plant technical specifications for channels that initiate protective actions. Previously approved technical specifications for surveillance intervals and LCOs for overfill protection are considered acceptable.

Response

Technical Specification 3/4.3.8, Feedwater/Main Turbine Trip System Actuation Instrumentation, addresses the reactor vessel overfill instrumentation channels. The operability requirements are defined in Table 3.3.8-1, and the trip setpoints are identified on Table 3.3.8-2. Surveillance requirements to demonstrate instrument channel operability are specified on Table 4.3.8.1-1 (Channel Check (S), Channel Function Test (M), and Channel Calibration (R)). Additionally, Surveillance Requirement 4.3.8.2 requires logic system functional tests, and simulated automatic operation of all channels, on an 18 month basis. LaSalle Station procedures have been developed and implemented to address these technical specification requirements. The existing Technical Specification, and associated procedures, satisfy this recommendation.

BYRON STATION RESPONSE TO GENERIC LETTER 89-19

Enclosure 2 of Generic Letter 89-19 provides guidance for acceptable steam generator overfill protection designs for Westinghouse Pressurized-Water-Reactor (PWR) plants. Group I is identified as those plants having a safety grade overfill protection system initiated on a steam generator high-water-level signal based on "2-out-of-4" initiating logic which is safety grade, or a "2-out-of-3" initiating logic which is safety grade but uses one of the three channels for both control and protection. The system isolates the main feedwater (MFW) flow by closing the MFW isolation valves and tripping the MFW pumps. The staff has concluded that this design is acceptable provided the following recommendations are met.

Recommendation

The overfill protection system is sufficiently separate from the control portion of the MFW control system so that it is not powered from the same power source, not located in the same cabinet, and not routed so that a fire is likely to affect both systems. The design for the overfill protection system should be sufficiently separate from the MFW control system to ensure that the MFW pump will trip on a high-water-level signal when required, even if a loss of power, a loss of ventilation, or a fire in the control portion of the MFW control system should occur. Common-mode failures that could disable overfill protection and the feedwater control system, but would still result in the feedwater pump trip, are considered acceptable failure modes.

Response

Byron Station is a four loop Westinghouse-designed PWR which currently provides for automatic steam generator overfill protection. The overfill protection circuitry utilizes safety grade equipment employing "2-out-of-4" initiating logic to isolate MFW flow by closing the MFW isolation valves and tripping the feedwater pumps. This logic is part of the Solid State Protection System.

The overfill protection system is independent of the feedwater control system in terms of power supply and signal processing cabinet location. The control circuits for feedwater are located in the Balance of Plant cabinets while the overfill protection circuits are located in the Solid State Protection System (SSPS) cabinets. The SSPS consists of two trains, and each train will isolate the feedwater system and trip all of the feedwater pumps. The SSPS meets the Byron Station licensing bases for single failure criteria, separation, and power supply independency (each train is powered from separate Engineered Safeguards Feature divisions). The train separation design criteria ensures that a fire is unlikely to affect both trains of SSPS. Additionally, since the circuitry for feedwater control and overfill protection are located in separate cabinets, there is assurance that a fire is unlikely to affect both systems (control and overfill protection). Regarding ventilation, the cabinets which contain the feedwater control and overfill protection circuitry are located in a room provided with a safety-related ventilation system. Commonwealth Edison Company believes that adequate automatic steam generator overfill protection exists at Byron Station.

Recommendation

Plant procedures and technical specifications for all Westinghouse plants include provisions to periodically verify the operability of the MFW overfill protection and ensure that the automatic overfill protection is operable during reactor power operation. The instrumentation should be demonstrated to be operable by the performance of a channel check, channel functional testing, and channel calibration, including setpoint verification. The technical specifications should include appropriate LCOs. These technical specifications should be commensurate with existing plant technical specification requirements for channels that initiate protective actions. Plants that have previously approved technical specifications for surveillance intervals for overfill protection are considered acceptable.

Response

Technical Specification 3/4.3.2, Engineered Safety Features Activation System Instrumentation, specifically addresses the steam generator overfill protection system. The operability requirements are defined in Table 3.3-3 (item 5b), and the trip setpoints are defined on Table 3.3-4 (item 5b). Surveillance requirements are identified in Table 4.3-2 (item 5): item 5a specifies the testing of the automatic circuitry which includes the Actuation Logic Test, the Master Relay Test and the Slave Relay Test; and item 5b specifies the Channel Check (S), the Channel Calibration (R), and the Analog Channel Operational Test (M). Byron Station procedures have been developed and implemented to address these technical specification requirements. The existing Technical Specification, and associated procedures, satisfy this recommendation.

ATTACHMENT F

BRAIDWOOD STATION RESPONSE TO GENERIC LETTER 89-19

Enclosure 2 of Generic Letter 89-19 provides guidance for acceptable steam generator overfill protection designs for Westinghouse Pressurized-Water-Reactor (PWR) plants. Group I is identified as those plants having a safety grade overfill protection system initiated on a steam generator high-water-level signal based on "2-out-of-4" initiating logic which is safety grade, or a "2-out-of-3" initiating logic which is safety grade but uses one of the three channels for both control and protection. The system isolates the main feedwater (MFW) flow by closing the MFW isolation valves and tripping the MFW pumps. The staff has concluded that this design is acceptable provided the following recommendations are met.

Recommendation

The overfill protection system is sufficiently separate from the control portion of the MFW control system so that it is not powered from the same power source, not located in the same cabinet, and not routed so that a fire is likely to affect both systems. The design for the overfill protection system should be sufficiently separate from the MFW control system to ensure that the MFW pump will trip on a high-water-level signal when required, even if a loss of power, a loss of ventilation, or a fire in the control portion of the MFW control system should occur. Common-mode failures that could disable overfill protection and the feedwater control system, but would still result in the feedwater pump trip, are considered acceptable failure modes.

Response

Braidwood Station is a four loop Westinghouse-designed PWR which currently provides for automatic steam generator overfill protection. The overfill protection circuitry utilizes safety grade equipment employing "2-out-of-4" initiating logic to isolate MFW flow by closing the MFW isolation valves and tripping the feedwater pumps. This logic is part of the Solid State Protection System.

The overfill protection system is independent of the feedwater control system in terms of power supply and signal processing cabinet location. The control circuits for feedwater are located in the Balance of Plant cabinets while the overfill protection circuits are located in the Solid State Protection System (SSPS) cabinets. The SSPS consists of two trains, and each train will isolate the feedwater system and trip all of the feedwater pumps. The SSPS meets the Braidwood Station licensing bases for single failure criteria, separation, and power supply independency (each train is powered from separate Engineered Safeguards Feature divisions). The train separation design criteria ensures that a fire is unlikely to affect both trains of SSPS. Additionally, since the circuitry for feedwater control and overfill protection are located in separate cabinets, there is assurance that a fire is unlikely to affect both systems (control and overfill protection). Regarding ventilation, the cabinets which contain the feedwater control and overfill protection circuitry are located in a room provided with a safety-related ventilation system. Commonwealth Edison Company believes that adequate automatic steam generator overfill protection exists at Braidwood Station.

Recommendation

Plant procedures and technical specifications for all Westinghouse plants include provisions to periodically verify the operability of the MFW overfill protection and ensure that the automatic overfill protection is operable during reactor power operation. The instrumentation should be demonstrated to be operable by the performance of a channel check, channel functional testing, and channel calibration, including setpoint verification. The technical specifications should include appropriate LCOs. These technical specifications should be commensurate with existing plant technical specification requirements for channels that initiate protective actions. Plants that have previously approved technical specifications for surveillance intervals for overfill protection are considered acceptable.

Response

Technical Specification 3/4.3.2, Engineered Safety Features Activation System Instrumentation, specifically addresses the steam generator overfill protection system. The operability requirements are defined in Table 3.3-3 (item 5b), and the trip setpoints are defined on Table 3.3-4 (item 5b). Surveillance requirements are identified in Table 4.3-2 (item 5): item 5a specifies the testing of the automatic circuitry which includes the Actuation Logic Test, the Master Relay Test and the Slave Relay Test; and item 5b specifies the Channel Check (S), the Channel Calibration (R), and the Analog Channel Operational Test (M). Braidwood Station procedures have been developed and implemented to address these technical specification requirements. The existing Technical Specification, and associated procedures, satisfy this recommendation.