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INSTRUMENTATION

3/4.3.2 ISOLATION ACTUATION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.2 The isolation actuation instrumentation channels shown in Table 3.3.2-1 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3.2-2 and with ISOLATION SYSTEM RESPONSE TIME as shown in Table 3.3.2-3.

APPLICABILITY: As shown in Table 3.3.2-1.

ACTION:

a. With an isolation actuation instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3.2-2, declare the channel inoperable until the channel is restored to OPERABLE status with its trip setpoint adjusted consistent with the Trip Setpoint value.

b. With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement for one trip system, place the inoperable channel(s) and/or trip system in the tripped condition* within one hour. The provisions of Specification 3.0.4 are not applicable.

c. With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement for both trip systems, place at least one trip system** in the tripped condition*** within one hour and take the ACTION required by Table 3.3.2-1.

*An inoperable channel need not be placed in the tripped condition where this would cause the Trip Function to occur. In these cases, the inoperable channel shall be restored to OPERABLE status within 2 hours or the ACTION required by by Table 3.3.2-1 for that Trip Function shall be taken.

**If more channels are inoperable in one trip system than in the other, select that trip system to place in the tripped condition except when this would cause the Trip Function to occur.

***An inoperable channel need not be placed in the tripped condition where this would cause the Trip Function to occur. In these cases, the inoperable channel shall be restored to OPERABLE status within 1 hour or the ACTION required by Table 3.3.2-1 for that Trip Function shall be taken.

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SURVEILLANCE REQUIREMENTS

4.3.2.1 Each isolation actuation instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL FUNCTIONAL TEST and CHANNEL CALIBRATION operations for the OPERATIONAL CONDITIONS and at the frequencies shown in Table 4.3.2.1-1.

4.3.2.2 LOGIC SYSTEM FUNCTIONAL TESTS and simulated automatic operation of all channels shall be performed at least once per 18 months.

4.3.2.3 The ISOLATION SYSTEM RESPONSE TIME of each isolation trip function shown in Table 3.3.2-3 shall be demonstrated to be within its limit at least once per 18 months. Each test shall include at least one channel per trip system such that all channels are tested at least once every N times 18 months, where N is the total number of redundant channels in a specific isolation trip system.

TABLE 3.3.2-3

ISOLATION SYSTEM INSTRUMENTATION RESPONSE TIME

TRIP FUNCTION	RESPONSE TIME (Seconds)#
A. AUTOMATIC INITIATION	
1. PRIMARY CONTAINMENT ISOLATION	
a. Reactor Vessel Water Level	
1) Low, Level 3	$\leq 13^{(a)}$
2) Low Low, Level 2	$\geq 1.0^{*}$ / $\leq 13^{(a)**}$
3) Low Low Low, Level 1	$\leq 13^{(a)}$
b. Drywell Pressure - High	$\leq 1.0^{*}$ / $\leq 13^{(a)**}$
c. Main Steam Line	
1) Radiation - High	$\leq 2.0^{*}$ / $\leq 13^{(a)**}$
2) Pressure - Low	$\geq 0.5^{*}$ / $\leq 13^{(a)**}$
3) Flow - High	NA
d. M in Steam Line Tunnel Temperature - High	NA
e. Condenser Vacuum - Low	NA
f. Main Steam Line Tunnel Δ Temperature - High	
2. SECONDARY CONTAINMENT ISOLATION	
a. Reactor Building Vent Exhaust Plenum Radiation - High	$\leq 13^{(a)}$
b. Drywell Pressure - High	$\leq 13^{(a)}$
c. Reactor Vessel Water Level - Low, Level 2	$\leq 13^{(a)}$
d. Fuel Pool Vent Exhaust Radiation - High	$\leq 13^{(a)}$
3. REACTOR WATER CLEANUP SYSTEM ISOLATION	
a. Δ Flow - High	$\leq 13^{(a)\#\#}$
b. Heat Exchanger Area Temperature - High	NA
c. Heat Exchanger Area Ventilation ΔT-High	NA
d. SLCS Initiation	NA
e. Reactor Vessel Water Level - Low Low, Level 2	$\leq 13^{(a)}$
4. REACTOR CORE ISOLATION COOLING SYSTEM ISOLATION	
a. RCIC Steam Line Flow - High	$\leq 13^{(a)\#\#\#}$
b. RCIC Steam Supply Pressure - Low	$\leq 13^{(a)}$
c. RCIC Turbine Exhaust Diaphragm Pressure - High	NA
d. RCIC Equipment Room Temperature - High	NA
e. RCIC Steam Line Tunnel Temperature - High	NA
f. RCIC Steam Line Tunnel Δ Temperature - High	NA
g. Drywell Pressure - High	NA
h. RCIC Equipment Room Δ Temperature - High	NA
5. RHR SYSTEM STEAM CONDENSING MODE ISOLATION	
a. RHR Equipment Area Δ Temperature - High	NA
b. RHR Area Cooler Temperature - High	NA
c. RHR Heat Exchanger Steam Supply Flow High	NA

TABLE 3.3.2-3 (Continued)

ISOLATION SYSTEM INSTRUMENTATION RESPONSE TIME

TRIP FUNCTION	RESPONSE TIME (Seconds)#
6. RHR SYSTEM SHUTDOWN COOLING MODE ISOLATION	N/A
a. Reactor Vessel Water Level - Low, Level 3	≤ 13(a)
b. Reactor Vessel (RHR Cut-In Permissive) Pressure - High	N.A.
c. RHR Pump Suction Flow - High	N.A.
d. RHR Area Cooler Temperature High	N.A.
e. RHR Equipment Area ΔT High	N.A.
B. MANUAL INITIATION	N/A → N.A.
1. Inboard Valves	
2. Outboard Valves	
3. Inboard Valves	
4. Outboard Valves	
5. Inboard Valves	
6. Outboard Valves	
7. Outboard Valve	

TABLE NOTATIONS

(a) The isolation system instrumentation response time shall be measured and recorded as a part of the ISOLATION SYSTEM RESPONSE TIME. Isolation system instrumentation response time specified includes the delay for diesel generator starting assumed in the accident analysis.

(b) Radiation detectors are exempt from response time testing. Response time shall be measured from detector output or the input of the first electronic component in the channel.

* Isolation system instrumentation response time for MSIVs only. No diesel generator delays assumed.

** Isolation system instrumentation response time for associated valves except MSIVs.

\# Isolation system instrumentation response time specified for the Trip Function actuating each valve group shall be added to isolation time shown in Table 3.6.3-1 and 3.6.5.2-1 for valves in each valve group to obtain ISOLATION SYSTEM RESPONSE TIME for each valve.

Without 45±1 second time delay.

Without < 5 second time delay.

N.A. Not Applicable.

N/A

3/4.3.2 ISOLATION ACTUATION INSTRUMENTATION

This specification ensures the effectiveness of the instrumentation used to mitigate the consequences of accidents by prescribing the OPERABILITY trip setpoints and response times for isolation of the reactor systems. When necessary, one channel may be inoperable for brief intervals to conduct required surveillance. Both channels of each trip system for the main steam tunnel ambient temperature and ventilation system differential temperature may be placed in an inoperable status for up to 4 hours for required reactor building ventilation system maintenance and testing and 12 hours for the required secondary containment Leak Rate test without placing the trip system in the tripped condition. This will allow for maintaining the reliability of the ventilation system and secondary containment. Some of the trip settings may have tolerances explicitly stated where both the high and low values are critical and may have a substantial effect on safety. The setpoints of other instrumentation, where only the high or low end of the setting have a direct bearing on safety, are established at a level away from the normal operating range to prevent inadvertent actuation of the systems involved.

Except for the MSIVs, the safety analysis does not address individual sensor response times or the response times of the logic systems to which the sensors are connected. For D.C. operated valves, a 3 second delay is assumed before the valve starts to move. For A.C. operated valves, it is assumed that the A.C. power supply is lost and is restored by startup of the emergency diesel generators. In this event, a time of 13 seconds is assumed before the valve starts to move. In addition to the pipe break, the failure of the D.C. operated valve is assumed; thus the signal delay is concurrent with the 13 second diesel startup. The safety analysis considers an allowable inventory loss in each case which in turn determines the valve speed in conjunction with the 13 second delay. It follows that checking the valve speeds and the 13 second time for emergency power establishment will establish the response time for the isolation functions. However, to enhance overall system reliability and to monitor instrument channel response time trends, the isolation actuation instrumentation response time shall be measured and recorded as a part of the ISOLATION SYSTEM RESPONSE TIME.

3/4.3.3 EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION

The emergency core cooling system actuation instrumentation is provided to initiate actions to mitigate the consequences of accidents that are beyond the ability of the operator to control. This specification provides the OPERABILITY requirements, trip setpoints and response times that will ensure effectiveness of the systems to provide the design protection. Although the instruments are listed by system, in some cases the same instrument may be used to send the actuation signal to more than one system at the same time.

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3/4.3.2 ISOLATION ACTUATION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.2 The isolation actuation instrumentation channels shown in Table 3.3.2-1 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3.2-2 and with ISOLATION SYSTEM RESPONSE TIME as shown in Table 3.3.2-3.

APPLICABILITY: As shown in Table 3.3.2-1.

ACTION:

a. With an isolation actuation instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3.2-2, declare the channel inoperable until the channel is restored to OPERABLE status with its trip setpoint adjusted consistent with the Trip Setpoint value.

b. With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement for one trip system, place the inoperable channel(s) and/or trip system in the tripped condition* within one hour. The provisions of Specification 3.0.4 are not applicable.

c. With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement for both trip systems, place at least one trip system** in the tripped condition*** within one hour and take the ACTION required by Table 3.3.2-1.

*An inoperable channel need not be placed in the tripped condition where this would cause the Trip Function to occur. In these cases, the inoperable channel shall be restored to OPERABLE status within 2 hours or the ACTION required by Table 3.3.2-1 for that Trip Function shall be taken.

**If more channels are inoperable in one trip system than in the other, select that trip system to place in the tripped condition except when this would cause the Trip Function to occur.

***An inoperable channel need not be placed in the tripped condition where this would cause the Trip Function to occur. In these cases, the inoperable channel shall be restored to OPERABLE status within 1 hour or the ACTION required by Table 3.3.2-1 for that Trip Function shall be taken.

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SURVEILLANCE REQUIREMENTS

4.3.2.1 Each isolation actuation instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL FUNCTIONAL TEST and CHANNEL CALIBRATION operations for the OPERATIONAL CONDITIONS and at the frequencies shown in Table 4.3.2.1-1.

4.3.2.2 LOGIC SYSTEM FUNCTIONAL TESTS and simulated automatic operation of all channels shall be performed at least once per 18 months.

4.3.2.3 The ISOLATION SYSTEM RESPONSE TIME of each isolation trip function shown in Table 3.3.2-3 shall be demonstrated to be within its limit at least once per 18 months. Each test shall include at least one channel per trip system such that all channels are tested at least once every N times 18 months, where N is the total number of redundant channels in a specific isolation trip system.

TABLE 3.3.2-3

ISOLATION SYSTEM INSTRUMENTATION RESPONSE TIME

TRIP FUNCTION	RESPONSE TIME (Seconds)#
A. AUTOMATIC INITIATION	
1. PRIMARY CONTAINMENT ISOLATION	
a. Reactor Vessel Water Level	
1) Low, Level 3	N.A.
2) Low Low, Level 2	$\leq 13^{(a)}$
3) Low Low Low, Level 1	$\leq 1.0^{*}$ / $\leq 13.0^{(a)**}$
b. Drywell Pressure - High	$\leq 13^{(a)}$
c. Main Steam Line	
1) Radiation - High (b) (c) (d)	$\leq 1.0^{*}$ / $\leq 13^{(a)**}$
2) Pressure - Low	$\geq 2.0^{*}$ / $\leq 13^{(a)**}$
3) Flow - High	$\leq 0.5^{*}$ / $\leq 13^{(a)**}$
d. Main Steam Line Tunnel Temperature - High	N.A.
e. Condenser Vacuum - Low	N.A.
f. Main Steam Line Tunnel Δ Temperature - High	N.A.
2. SECONDARY CONTAINMENT ISOLATION	
a. Reactor Building Vent Exhaust Plenum Radiation - High (b)	$\leq 13^{(a)}$
b. Drywell Pressure - High	$\leq 13^{(a)}$
c. Reactor Vessel Water Level - Low, Level 2 (b)	$\leq 13^{(a)}$
d. Fuel Pool Vent Exhaust Radiation - High (b)	$\leq 13^{(a)}$
3. REACTOR WATER CLEANUP SYSTEM ISOLATION	
a. Δ Flow - High	$\leq 13^{(a)\#\#}$
b. Heat Exchanger Area Temperature - High	N.A.
c. Heat Exchanger Area Ventilation ΔT-High	N.A.
d. SLCS Initiation	N.A.
e. Reactor Vessel Water Level - Low Low, Level 2	$\leq 13^{(a)}$
4. REACTOR CORE ISOLATION COOLING SYSTEM ISOLATION	
a. RCIC Steam Line Flow - High	$\leq 13^{(a)\#\#\#}$
b. RCIC Steam Supply Pressure - Low	$\leq 13^{(a)}$
c. RCIC Turbine Exhaust Diaphragm Pressure - High	N.A.
d. RCIC Equipment Room Temperature - High	N.A.
e. RCIC Steam Line Tunnel Temperature - High	N.A.
f. RCIC Steam Line Tunnel ΔTemperature - High	N.A.
g. Drywell Pressure - High	N.A.
h. RCIC Equipment Room Δ Temperature - High	N.A.
5. RHR SYSTEM STEAM CONDENSING MODE ISOLATION	
a. RHR Equipment Area ΔTemperature - High	N.A.
b. RHR Area Cooler Temperature - High	N.A.
c. RHR Heat Exchanger Steam Supply Flow High	N.A.

TABLE 3.3.2-3 (Continued)

ISOLATION SYSTEM INSTRUMENTATION RESPONSE TIME

TRIP FUNCTION	RESPONSE TIME (Seconds)#
6. RHR SYSTEM SHUTDOWN COOLING MODE ISOLATION	N/A
a. Reactor Vessel Water Level - Low, Level 3	$\leq 13^{(a)}$
b. Reactor Vessel (RHR Cut-In Permissive) Pressure - High	N.A.
c. RHR Pump Suction Flow - High	N.A.
d. RHR Area Cooler Temperature High	N.A.
e. RHR Equipment Area ΔT High	N.A.
B. MANUAL INITIATION	N/A N.A.
1. Inboard Valves	
2. Outboard Valves	
3. Inboard Valves	
4. Outboard Valves	
5. Inboard Valves	
6. Outboard Valves	
7. Outboard Valve	

TABLE NOTATIONS

(a) The isolation system instrumentation response time shall be measured and recorded as a part of the ISOLATION SYSTEM RESPONSE TIME. Isolation system instrumentation response time specified includes the delay for diesel generator starting assumed in the accident analysis.

(b) Radiation detectors are exempt from response time testing. Response time shall be measured from detector output or the input of the first electronic component in the channel.

* Isolation system instrumentation response time for MSIVs only. No diesel generator delays assumed.

** Isolation system instrumentation response time for associated valves except MSIVs.

\# Isolation system instrumentation response time specified for the Trip Function actuating each valve group shall be added to isolation time shown in Table 3.6.3-1 and 3.6.5.2-1 for valves in each valve group to obtain ISOLATION SYSTEM RESPONSE TIME for each valve.

Without 45±1 second time delay.

Without ≤ 5 second time delay.

N.A. Not Applicable.

N/A

3/4.3.2 ISOLATION ACTUATION INSTRUMENTATION

This specification ensures the effectiveness of the instrumentation used to mitigate the consequences of accidents by prescribing the OPERABILITY trip setpoints and response times for isolation of the reactor systems. When necessary, one channel may be inoperable for brief intervals to conduct required surveillance. Both channels of each trip system for the main steam tunnel ambient temperature and ventilation system differential temperature may be placed in an inoperable status for up to 4 hours for required reactor building ventilation system maintenance and testing and 12 hours for the required secondary containment Leak Rate test without placing the trip system in the tripped condition. This will allow for maintaining the reliability of the ventilation system and secondary containment. Some of the trip settings may have tolerances explicitly stated where both the high and low values are critical and may have a substantial effect on safety. The setpoints of other instrumentation, where only the high or low end of the setting have a direct bearing on safety, are established at a level away from the normal operating range to prevent inadvertent actuation of the systems involved.

Except for the MSIVs, the safety analysis does not address individual sensor response times or the response times of the logic systems to which the sensors are connected. For D.C. operated valves, a 3 second delay is assumed before the valve starts to move. For A.C. operated valves, it is assumed that the A.C. power supply is lost and is restored by startup of the emergency diesel generators. In this event, a time of 13 seconds is assumed before the valve starts to move. In addition to the pipe break, the failure of the D.C. operated valve is assumed; thus the signal delay is concurrent with the 13 second diesel startup. The safety analysis considers an allowable inventory loss in each case which in turn determines the valve speed in conjunction with the 13 second delay. It follows that checking the valve speeds and the 13 second time for emergency power establishment will establish the response time for the isolation functions. However, to enhance overall system reliability and to monitor instrument channel response time trends, the isolation actuation instrumentation response time shall be measured and recorded as a part of the ISOLATION SYSTEM RESPONSE TIME.

3/4.3.3 EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION

The emergency core cooling system actuation instrumentation is provided to initiate actions to mitigate the consequences of accidents that are beyond the ability of the operator to control. This specification provides the OPERABILITY requirements, trip setpoints and response times that will ensure effectiveness of the systems to provide the design protection. Although the instruments are listed by system, in some cases the same instrument may be used to send the actuation signal to more than one system at the same time.

ATTACHMENT C

EVALUATION OF SIGNIFICANT HAZARDS CONSIDERATION

LaSalle has evaluated the proposed Technical Specification Amendment. Based upon the criteria for defining a Significant Hazards Consideration established in 10 CFR 50.92(c), operation of LaSalle County Station in accordance with the proposed amendment will not:

1) Involve a significant increase in the probability or consequences of an accident previously evaluated because:

The proposal seeks to eliminate response time testing requirements for selected instrumentation in the isolation system. The proposal does not introduce changes in the response times themselves. The probability and consequences of an accident previously evaluated are not increased because accepted licensing criteria are maintained. The requirements for channel checks, functional tests, calibrations, and logic system functional tests are not altered by this proposal. The ability to detect degrading trends of response times is available via the above Technical Specification required tests. Therefore, the response times of these systems will be maintained within the acceptance limits assumed in plant safety analyses and required for successful mitigation of an initiating event because of the continued Technical Specification testing.

2) Create the possibility of a new or different kind of accident from any accident previously evaluated because:

The proposal does not change component or system interactions. Accident analyses assume a loss of AC power which is restored by startup of emergency diesel generators. The 13 second interval associated with the restoration of AC power, which establishes the response time for the isolation functions, is maintained. The starting, sequencing, and loading functions associated with the diesel generators is not affected by the proposed change. The response times include the instrument response times, which are typically measured in fractions of a second, and the response times of the actuation logic circuits, which are typically less than a second. These times are small in comparison to the diesel generator start time (13 seconds). The ability of the isolation system to perform its intended function to mitigate the consequences of an initiating event within the acceptance limits assumed in plant safety analyses is not altered by the proposed change.

ATTACHMENT C

EVALUATION OF SIGNIFICANT HAZARDS CONSIDERATION

3) Involve a significant reduction in a margin of safety because:

The proposal does not involve the relaxation of any criteria identified in the SAR or reduce any of the requirements of Technical Specifications. The proposed revision does not affect licensing acceptance limits associated with accidents. With the exception of MSIVs, the safety analyses do not address individual sensor response times or the response times of the logic systems to which the sensors are connected. These analyses conservatively establish the margin of safety. Deleting the requirement to perform unnecessary response time testing does not affect the results of accident and transient analyses. Plant and system response to an initiating event will remain in compliance within the assumptions of safety analyses.

The proposed change does not increase the probability or consequences of an accident, and there is no impact on equipment important to safety or systems, structures or components. There is no associated change to the type, amount, or control of radioactive effluents, nor is there an associated increase in individual or cumulative occupational radiation exposure. There is no effect upon the capabilities of the associated systems to perform their intended functions within the allowed response times assumed in safety analyses. Therefore, the margin of safety is preserved.

Guidance has been provided in "Final Procedures and Standards on No Significant Hazards Considerations," Final Rule, 51 FR 7744, for the application of standards to license change requests for determination of the existence of significant hazards considerations. This document provides examples of amendments which are and are not considered likely to involve significant hazards considerations. These proposed amendments most closely fit the example of a change which may either result in some increase to the probability or consequences of a previously analyzed accident or may reduce in some way a safety margin, but where the results of the change are clearly within all acceptable criteria with respect to the system or component specified in the applicable Standard Review Plan.

ATTACHMENT C

EVALUATION OF SIGNIFICANT HAZARDS CONSIDERATION

This proposed amendment does not involve a significant relaxation of the criteria used to establish safety limits, a significant relaxation of the bases for the limiting safety system settings or a significant relaxation of the bases for the limiting conditions for operations. Therefore, based on the guidance provided in the Federal Register and the criteria established in 10 CFR 50.92(c), the proposed change does not constitute a significant hazards consideration.

ATTACHMENT D

ENVIRONMENTAL ASSESSMENT STATEMENT APPLICABILITY REVIEW

Commonwealth Edison has evaluated the proposed amendment against the criteria for identification of licensing and regulatory actions requiring environmental assessment in accordance with 10 CFR 51.21. It has been determined that the proposed changes meet the criteria for a categorical exclusion as provided under 10 CFR 51.22(c)(9). This conclusion has been determined because the changes requested do not pose significant hazards consideration or do not involve a significant increase in the amounts, and no significant changes in the types, of any effluents that may be released off-site. Additionally, this request does not involve a significant increase in individual or cumulative occupational radiation exposure.