TABLE 3.3.2-3

ISOLATION SYSTEM INSTRUMENTATION RESPONSE TIME

TRIP FUNCTION	RESPONSE TIME (Seconds)#
A. AUTOMATIC INITIATION	
1. PRIMARY CONTAINMENT ISOLATION	2.0
a. Reactor Vessel Water Level	
1) Low, Level 3	N.A.
2) Low Low, Level 2	≤1.0*/≤13[a]**
b. Drywell Pressure - High	≤13[a]
c. Main Steam Line	
1) Radiation - High[b]	≤1.0*/≤13[a]**
2) Pressure - Low	≤~~1.0~~*/≤13[a]**
3) Flow - High	≤0.5*/≤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]	≤13[a]
b. Drywell Pressure - High	≤13[a]
c. Reactor Vessel Water Level - Low, Level 2	≤13[a]
d. Fuel Pool Vent Exhaust Radiation - High[b]	≤13[a]
3. REACTOR WATER CLEANUP SYSTEM ISOLATION	
a. Δ Flow - High	≤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	≤13[a]
4. REACTOR CORE ISOLATION COOLING SYSTEM ISOLATION	
a. RCIC Steam Line Flow - High	≤13[a]###
b. RCIC Steam Supply Pressure - Low	≤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.
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.

ATTACHMENT 2

EVALUATION OF SIGNIFICANT HAZARDS CONSIDERATION

Description of Amendment Request

An amendment to the Technical Specification for LaSalle County Station Unit 2 is requested which will increase the Main Steam Line Low Pressure Instrument response time from "less than or equal to 1 second" to "less than or equal to 2 seconds".

Basis for Proposed No Significant Hazards Consideration Determination

The Commission has provided guidance concerning the application of the standards for determining whether a significant hazards consideration exists by providing certain examples (48 FR 14870). The examples of actions involving no significant hazards consideration include: "(vi) a change which either may 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 Standard Review Plan...."

No Significant Hazards Consideration

The FSAR treatment of MSIV closure transients include: 1) the overpressure aspects from rapid closure in Section 5.4.5 with Figure 15.2-4 summarizing the effects from 3 second MSIV closure at 105% steam flow conditions; and (2) the long-term MSIV closure where 105% steam flow is assumed to persist for 30 seconds due to loss of AC power and other adverse failures with Figure 15.2.6-1 indicating acceptable results. FSAR Response Q212.64 as corrected by Response Q212.116 treats this long-term event. The safety analysis of concern to this Tech Spec revision is the long-term MSIV closure related to the Main Steam Line low pressure isolation function where the present value in Tech Spec Table 3.3.2-3.A.1.c(2) apportions the response time as follows:

Sensor	1.0 second	
MSIV	13.0 second	(actually Diesel Generator start interval dominates the MSIV actual closure time which is 3 to 5 seconds.)

The safety analysis for the Main Steam Line low pressure isolation via MSIVs was done at 825 psi (analytical minimum limit to assure validity above the GEXL fuel correlation threshold). The allowable Tech Spec setpoint is 834 psig and the nominal setpoint is 854 psig. At the analytical limit of 825 psi, the 30 second MSIV closure time (total of sensor and valve and its auxiliaries) is acceptable (Figure 15.2.6-1). At this condition, the present Tech Spec utilizes 14 total seconds of this 30 second safety analysis interval. The revised Tech Spec extends this utilization to 15 total seconds (2 seconds for the sensor and the same 13 seconds for the valve) of the 30 second interval. This is an insignificant change in the pre-analyzed safety envelope because the protective isolation action (MSIV closure) occurs prior to the time when the system pressure decreases to the analytical limit (825 psi) even from the lowest allowable Tech Spec valve (834 psi).

GE performed a sensitivity study on this isolation low pressure setpoint which terminates the rapid depressurization phase of FSAR transient 15.1.3. The low pressure was varied by 25 psi for the standard pressure regulator failed-open transient. Lowering the pressure by 25 psi delayed the start of isolation by approximately 4 seconds, thus bounding the requested change. The depressurization phase of this bounding case lasts approximately 30-35 seconds during which the maximum pressure drop, including the effect of this 4 second delay in isolation, was 220 psi below the initial pressure. This corresponds to a temperature decrease of less than 40°F on the fuel. The cooldown criteria of no more than 100°F per hour was not jeopardized. The requested 2 second response time qualifies for this same conclusion and justifies the requested Tech Spec change.

No new nor unanalyzed safety issue results from the extension of this sensor response time to 2 seconds versus 1 second. It is a matter of allocation within the pre-analyzed envelope. The purpose of this low pressure isolation is to protect the fuel by restricting reactor operation to pressure regimes at which the GEXL fuel correlation is beyond serious question. The use of 2 seconds for instrument response, as determined according to Tech Spec definitions, does not challenge nor violate this fuel protection criteria. In fact, the pre-analyses represented in the LaSalle Fuel Chapter 15.1.3 and 15.2.6 remain valid.

Therefore, since the application for amendment involves a proposed change that is similar to an example for which no significant hazards consideration exists, Commonwealth Edison has made a proposed determination that the application involves no significant hazards consideration.

ATTACHMENT 3

SUITABILITY OF THE NEW EQ SWITCHES

Appendix C of SSER #2 for LaSalle acknowledged the need to replace unqualified safety-related equipment with environmentally qualified equipment. The Barton pressure sensors used to monitor main steam line low pressure and to provide an isolation signal to the MSIVs to close when the pressure decreased to 854 psig (nominal setpoint) are a part of that LaSalle EQ equipment upgrade. The isolation action of the MSIVs provide a backup scram by integral position switches that function as part of the reactor protection system. This pressure switch, therefore, prevents power operation unless the system pressure exceeds 854 psig.

Operation of the original Barton sensors was justified for the first two fuel cycles via the LaSalle "Justification for Interim Operation" because the Barton's were not qualified for the HARSH environment per NUREG 0588 Category II standards. A replacement instrument, which as qualified to Category I standards, was not available. Therefore, in 1982 Edison (1) entered a development program with Static-O-Ring Corporation, (2) evolved a series of pressure switches from their well-logging models, (3) established and installed a 10 CFR 50, Appendix B production capability at SOR, (4) performed seismic and qualification on the new switches, and (5) obtained delivery of the upgraded instrumentation in late 1984. These were first installed during the present EQ upgrade outage of May 1985.

The new SOR pressure switch is a diaphragm device which drives a microswitch. It has improved precision (0.004 versus 0.025). Its much reduced inertial mass (diaphragm-piston) and reduced wetted area results in a slightly slower action time. Its drift is expected to be 1/4 to 1/5 that of the unit it replaced based on developmental test results.

The response time of the instrument itself is one part of the entire response time interval. The remaining parts originate from sensing line delay (approximately 200 milliseconds) and the delay increment added by use of pressure spike attenuators (pressure snubbers) in the sensing line (approximately 115 milliseconds). When these are combined with the sensor uncertainty (deadband) correction of approximately 600 milliseconds, the accumulated delay approaches the 1.0 second limit of the Tech Spec. The measured response times sometimes exceed the 1.0 second limit.