ATTACHMENT 1

PROPOSED CHANGES TO APPENDIX A

TECHNICAL SPECIFICATIONS FOR

QUAD CITIES UNITS 1 AND 2

DPR-29	DPR-30
3.5/4.5-5	3.5/4.5-4a
3.5/4.5-6	3.5/4.5-5
3.5/4.5-7	3.5/4.5-6
3.5/4.5-8	3.5/4.5-6a
3.5/4.5-23	3.5/4.5-15
	3.5/4.5-15a

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4. Containment cooling spray loops are required to be operable when the reactor water temperature is greater than 212°F and prior to reactor startup from a cold condition. Continued reactor operation is permitted provided that a maximum of one drywell spray loop may be inoperable for 30 days when the reactor water temperature is greater than 212°F.

5. If the requirements of 3.5.B cannot be met, an orderly shutdown shall be initiated, and the reactor shall be in a cold shutdown condition within 24 hours.

C. HPCI Subsystem

1. The HPCI subsystem shall be operable whenever the reactor pressure is greater than ~~90~~ 150 psig and ~~irradiated~~ fuel is in the reactor vessel ~~and prior to reactor startup from a cold condition.~~

3. ~~X.~~ ~~From and after the date that~~ the HPCI subsystem is made or found to be inoperable, ~~for any reason,~~ continued reactor operation is permissible only during the succeeding ~~7~~ 14 days unless such subsystem is sooner made operable, provided that during such ~~X~~ 14 days ~~all active components of~~ the automatic pressure relief subsystems, the core spray subsystems, LPCI mode of the RHR system, and the RCIC system are operable. Otherwise, the provisions of Specification 3.5.C.4 shall be implemented.

4. During each 5-year period, an air test shall be performed on the drywell spray headers and nozzles and a water spray test performed on the torus spray header and nozzles.

2. During startup following a refuel outage or an outage in which work was performed that directly affects HPCI system operability, if the testing requirements of 4.5.C.3 cannot be met, continued reactor startup is not permitted. The HPCI subsystem shall be declared inoperable, and the provisions of Specification 3.5.C.4 shall be implemented

C. HPCI Subsystem

See insert

~~Surveillance of HPCI subsystem shall be performed as follows:~~

1. HPCI subsystem testing shall be as specified in Specifications 4.5.A.1.a, b, c, and d, except that the HPCI pump shall deliver at least 5000 gpm against a system head corresponding to a reactor vessel pressure of 1150 psig to 150 psig, and a logic system functional test shall be performed during each refueling outage.

2. When it is determined that the HPCI subsystem is inoperable, the LPCI mode of the RHR system, both core spray subsystems, the automatic pressure relief subsystem, and the RCIC system shall be demonstrated to be operable immediately. The RCIC system shall be demonstrated to be operable daily thereafter. Daily demonstration of the automatic pressure relief subsystem

INSERT FOR TECHNICAL SPECIFICATION PAGE 3.5/4.5-5

C. Surveillance of the HPCI subsystem shall be performed as specified below with the following limitations. For item 4.5.C.3, the plant is allowed 12 hours in which to successfully complete the test once reactor vessel pressure is adequate to perform each test. In addition, the testing required by item 4.5.C.3.a shall be completed prior to exceeding 325 psig reactor vessel pressure. If HPCI is made inoperable to perform overspeed testing, 24 hours is allowed to complete the tests before exceeding 325 psig.

	Item	Frequency
1.	Valve Position	Every 31 days
2.	Flow Rate Test - HPCI Pump shall deliver at least 5000 gpm against a system head corresponding to a reactor vessel pressure of $\geq$ 1150 psig when steam is being supplied to the turbine at 920 to 1005 psig.	Every 92 days
3.	Flow Rate Test-HPCI pump shall deliver at least 5000 gpm against a system head corresponding to a reactor vessel pressure of:	During startup following a refuel outage or an outage in which work was performed that directly affects HPCI system operability.
	a. $\geq$ 300 psig when steam is being supplied to the turbine at 250 to 325 psig, and	
	b. $\geq$ 1150 psig when steam is being supplied to the turbine at 920 to 1005 psig.	
4.	Simulated Automatic Actuation Test	Each refueling outage
5.	Logic System Functional Test	Each refueling outage

1662H/0524Z

~~operability is not required~~ provided that two feedwater pumps are operating at levels above 300 MWe; and one feedwater pump is operating as normally required with one additional feedwater pump operable at power levels less than 300 MWe.

3.5.C.1, 3.5.C.2 or 3.5.C.3

4. ~~3.~~ If the requirements of Specification ~~3.5.C~~ cannot be met, an orderly shutdown shall be initiated, and the reactor pressure shall be reduced to ~~90~~ <150 psig within 24 hours.

D. Automatic Pressure Relief Subsystems

1. The automatic pressure relief subsystem shall be operable whenever the reactor pressure is greater than 90 psig, irradiated fuel is in the reactor vessel and prior to reactor startup from a cold condition.

2. From and after the date that two of the five relief valves of the automatic pressure relief subsystem are made or found to be inoperable when the reactor is pressurized above 90 psig with irradiated fuel in the reactor vessel, reactor operation is permissible only during the succeeding 7 days unless repairs are made and provided that during such time the HPCI subsystem is operable.

D. Automatic Pressure Relief Subsystems

Surveillance of the automatic pressure relief subsystem shall be performed as follows:

1. The following surveillance shall be carried out on a six-month surveillance interval:

   a. With the reactor at pressure each relief valve shall be manually opened. Relief valve opening shall be verified by a compensating turbine bypass valve or control valve closure.

2. A logic system functional test shall be performed each refueling outage.

3. If the requirements of Specification 3.5.D cannot be met, an orderly shutdown shall be initiated and the reactor pressure shall be reduced to 90 psig within 24 hours.

3. A simulated automatic initiation which opens all pilot valves shall be performed each refueling outage.

4. When it is determined that two valves of the automatic pressure relief subsystem are inoperable, the HPCI shall be demonstrated to be operable immediately.

E. Reactor Core Isolation Cooling System

E. See insert
Reactor Core Isolation Cooling System

Surveillance of the RCIC system shall be performed as follows:

1. The RCIC system will be operable whenever the reactor pressure is greater than 150 psig. ~~irradiated~~ fuel is in the reactor vessel. ~~and prior to startup from a cold condition.~~

1. RCIC system testing shall be as specified in Specification 4.5.A.1.a, b, c, and d, except that the RCIC pump shall deliver at least 400 gpm against a system head corresponding to a reactor vessel pressure of 1150 psig to 150 psig, and a logic system functional test shall be run during each refueling outage.

2. When it is determined that the RCIC system is inoperable, the HPCI system shall be demonstrated to be operable immediately and daily thereafter.

Except for the limitations of 3.5.E.2, if
3. ~~From and after the date that~~ the RCIC system is made or found to be inoperable, ~~for any reason,~~ continued reactor operation is permissible only during the succeeding 14 ~~7~~ days unless such system is sooner made operable, provided that during such 14 ~~7~~ days ~~all active components of~~ the HPCI system ~~are~~ is operable. Otherwise, the provisions of Specification 3.5.E.4 shall be implemented.

2. During startup following a refuel outage or an outage in which work was performed that directly affects the RCIC system operability, if the testing requirements of 4.5.E.3 cannot be met, continued reactor startup is not permitted. The RCIC system shall be declared inoperable, and the provisions of Specification 3.5.E.4 shall be implemented.

INSERT FOR TECHNICAL SPECIFICATION PAGE 3.5/4.5-7

E. Surveillance of the RCIC system shall be performed as specified below with the following limitations. For item 4.5.E.3, the plant is allowed 12 hours in which to successfully complete the test once reactor vessel pressure is adequate to perform each test. In addition, the testing required by item 4.5.E.3.a shall be completed prior to exceeding 325 psig reactor vessel pressure. If RCIC is made inoperable to perform overspeed testing, 24 hours is allowed to complete the tests before exceeding 325 psig.

	Item	Frequency
1.	Valve Position	Every 31 days
2.	Flow Rate Test - RCIC Pump shall deliver at least 400 gpm against a system head corresponding to a reactor vessel pressure of $\geq$ 1150 psig when steam is being supplied to the turbine at 920 to 1005 psig.	Every 92 days
3.	Flow Rate Test-RCIC pump shall deliver at least 400 gpm against a system head corresponding to a reactor vessel pressure of:	During startup following a refuel outage or an outage in which work was performed that directly affects RCIC system operability.
	a. $\geq$ 300 psig when steam is being supplied to the turbine at 250 to 325 psig, and	
	b. $\geq$ 1150 psig when steam is being supplied to the turbine at 920 to 1005 psig.	
4.	Simulated Automatic Actuation Test	Each refueling outage
5.	Logic System Functional Test	Each refueling outage

1662H/0524Z

4

~~4~~. If the requirements of Specification 3.5.E.1, ~~and~~ 3.5.E.2, or 3.5.E.3 cannot be met, an orderly shutdown shall be initiated and the reactor pressure shall be reduced to ~~90~~ 2150 psig within 24 hours.

~~During the period November 6 through November 20, 1976 the unit may be started up with the RCIC inoperable provided that (1) the facility is not more than 7 days with the RCIC inoperable and (2) all the HPCI system active components are demonstrated to be operable immediately after startup and daily thereafter.~~

F. Minimum Core and Containment Cooling System Availability

1. Any combination of inoperable components in the core and containment cooling systems shall not defeat the capability of the remaining operable components to fulfill the core and containment cooling functions.

2. When irradiated fuel is in the reactor vessel and the reactor is in the cold shutdown condition, all low-pressure core and containment cooling systems may be inoperable provided no work is being done which has the potential for draining the reactor vessel.

F. Minimum Core and Containment Cooling System Availability

Surveillance requirements to assure that minimum core and containment cooling systems are available have been specified in Specification 4.2.B.

4.5 SURVEILLANCE REQUIREMENTS BASES

The testing interval for the core and containment cooling systems is based on a quantitative reliability analysis, judgment, and practicality. The core cooling systems have not been designed to be fully testable during operation. For example, the core spray final admission valves do not open until reactor pressure has fallen to 350 psig. Thus, during operation, even if high drywell pressure were simulated, the final valves would not open. In the case of the HPCI, automatic initiation during power operation would result in pumping cold water into the reactor vessel which is not desirable.

The systems can be automatically actuated during a refueling outage and this will be done. To increase the availability of the individual components of the core and containment cooling systems, the components which make up the system, i.e., instrumentation, pumps, valve operators, etc., are tested more frequently. The instrumentation is functionally tested each month. Likewise the pumps and motor-operated valves are also tested each month to assure their operability. The combination of a yearly simulated automatic actuation test and monthly tests of the pumps and valve operators is deemed to be adequate testing of these systems. combine paragraphs.

With components or subsystems out of service, overall core and containment cooling reliability is maintained by demonstrating the operability of the remaining cooling equipment. The degree of operability to be demonstrated depends on the nature of the reason for the out-of-service equipment. For routine out-of-service periods caused by preventative maintenance, etc., the pump and valve operability checks will be performed to demonstrate operability of the remaining components. However, if a failure, design deficiency, etc., causes the out-of-service period, then the demonstration of operability should be thorough enough to assure that a similar problem does not exist on the remaining components. For example, if an out-of-service period is caused by failure of a pump to deliver rated capacity due to a design deficiency, the other pumps of this type might be subjected to a flow rate test in addition to the operability checks.

Insert new paragraph. See attached

The verification of the main steam relief valve operability during manual actuation surveillance testing must be made independent of temperatures indicated by thermocouples downstream of the relief valves. It has been found that a temperature increase may result with the valve still closed. This is due to steam being vented through the pilot valves during the surveillance test. By first opening a turbine bypass valve, and then observing its closure response during relief valve actuation, positive verification can be made for the relief valve opening and passing steam flow. Closure response of the turbine control valves during relief valve manual actuation would likewise serve as an adequate verification for the relief valve opening. This test method may be performed over a wide range of reactor pressures greater than 150 psig. Valve operation below 150 psig is limited by the spring tension exhibited by the relief valves.

The surveillance requirement bases described in this paragraph apply to all core and containment cooling systems except RCIC and HPCI

INSERT FOR TECHNICAL SPECIFICATION PAGE 3.5/4.5-23

The surveillance requirements bases described in this paragraph apply only to the RCIC and HPCI systems. With a cooling system out of service, overall core and containment cooling reliability is maintained by verifying the operability of the remaining cooling systems. The verification of operability, as used in this context, for the remaining cooling systems means to administratively check by examining logs or other information to verify that the remaining systems are not out-of-service for maintenance or other reasons. It does not mean to perform the surveillance requirements needed to demonstrate the operability of the remaining systems. However, if a failure, design deficiency, etc., causes the out-of-service period, then the verification of operability should be thorough enough to assure that a similar problem does not exist on the remaining systems. For example, if an out-of-service period is caused by failure of a pump to deliver rated capacity due to a design deficiency, the other pumps of this type might be subjected to a flow rate test. Following a refueling outage or an outage in which work was performed that directly affects system operability, the HPCI and RCIC pumps are flow rate tested prior to exceeding 325 psig and again at rated reactor steam pressure. This combination of testing provides adequate assurance of pump performance throughout the range of reactor pressures at which it is required to operate. The low pressure limit is selected to allow testing at a point of stable plant operation and also to provide overlap with low pressure ECC systems. A time limit is provided in which to perform the required tests during start-up. This time limit is considered adequate to allow stable plant conditions to be achieved and the required tests to be performed. Flow rate testing of the HPCI and RCIC pumps is also conducted every 92 days at rated reactor pressure to demonstrate system operability in accordance with the LCO provisions and to meet inservice testing requirements for the HPCI system. Applicable valves are tested in accordance with the provisions of the inservice testing program. In addition, monthly checks are made on the position of each manual, power operated or automatic valve installed in the direct flowpath of the suction or discharge of the pump or turbine that is not locked, sealed, or otherwise secured in position. At each refueling outage, a logic system functional test and a simulated automatic actuation test is performed on the HPCI and RCIC systems. The tests and checks described above are considered adequate to assure system operability.

C. HPCI Subsystem

1. The HPCI subsystem shall be operable whenever the reactor pressure is greater than 150 psig and fuel is in the reactor vessel.

2. During startup following a refuel outage or an outage in which work was performed that directly affects HPCI system operability, if the testing requirements of 4.5.C.3 cannot be met, continued reactor startup is not permitted. The HPCI subsystem shall be declared inoperable, and the provisions of Specification 3.5.C.4 shall be implemented.

3. Except for the limitations of 3.5.C.2, if the HPCI subsystem is made or found to be inoperable, continued reactor operation is permissible only during the succeeding 14 days unless such subsystem is sooner made operable, provided that during such 14 days the automatic pressure relief subsystem, the core spray subsystems, LPCI mode of the RHR system, and the RCIC system are operable. Otherwise, the provisions of Specification 3.5.C.4 shall be implemented.

4. If the requirements of Specification 3.5.C.1, 3.5.C.2 or 3.5.C.3 cannot be met, an orderly shutdown shall be initiated, and the reactor pressure shall be reduced to <150 psig within 24 hours.

C. HPCI Subsystem

Surveillance of the HPCI subsystem shall be performed as specified below with the following limitations. For item 4.5.C.3, the plant is allowed 12 hours in which to successfully complete the test once reactor pressure is adequate to perform each test. In addition, the testing required by item 4.5.C.3.a shall be completed prior to exceeding 325 psig reactor vessel pressure. If HPCI is made inoperable to perform overspeed testing, 24 hours is allowed to complete the tests before exceeding 325 psig.

	Item	Frequency
1.	Valve Position	Every 31 days
2.	Flow Rate Test - HPCI pump shall deliver at least 5000 gpm against a system head corresponding to a reactor vessel pressure of ≥1150 psig when steam is being supplied to the turbine at 920 to 1005 psig.	Every 92 days
3.	Flow Rate Test - HPCI pump shall deliver at least 5000 gpm against a system head corresponding to a reactor vessel pressure of: a. ≥ 300 psig when steam is being supplied to the turbine at 250 to 325 psig, and b. ≥ 1150 psig when steam is being supplied to the turbine at 920 to 1005 psig.	During startup following a refuel outage or an outage in which work was performed that directly affects HPCI system operability.
4.	Simulated Automatic Actuation Test	Each refueling outage
5.	Logic System Functional Test	Each refueling outage

D. Automatic Pressure Relief Subsystems

1. The automatic pressure relief subsystem shall be operable whenever the reactor pressure is greater than 90 psig, irradiated fuel is in the reactor vessel and prior to reactor startup from a cold condition.

2. From and after the date that two of the five relief valves of the automatic pressure relief subsystem is made or found to be inoperable when the reactor is pressurized above 90 psig with irradiated fuel in the reactor vessel, reactor operation is permissible only during the succeeding 7 days unless repairs are made and provided that during such time the HPCI subsystem is operable.

3. If the requirements of Specification 3.5.D cannot be met, an orderly shutdown shall be initiated and the reactor pressure shall be reduced to 90 psig within 24 hours.

D. Automatic Pressure Relief Subsystems

Surveillance of the automatic pressure relief subsystem shall be performed as follows:

1. The following surveillance shall be carried out on a six-month surveillance interval:

   a. With the reactor at pressure each relief valve shall be manually opened. Relief valve opening shall be verified by a compensating turbine bypass valve or control valve closure.

2. A logic system functional test shall be performed each refueling outage.

3. A simulated automatic initiation which opens all pilot valves shall be performed each refueling outage.

4. When it is determined that two relief valves of the automatic pressure relief subsystem are inoperable, the HPCI shall be demonstrated to be operable immediately.

E. Reactor Core Isolation Cooling System	E. Reactor Core Isolation Cooling System
	Surveillance of the RCIC system shall be performed as specified below with the following limitations. For item 4.5.E.3, the plant is allowed 12 hours in which to successfully complete the test once reactor vessel pressure is adequate to perform each test. In addition, the testing required by item 4.5.E.3.a shall be completed prior to exceeding 325 psig reactor vessel pressure. If RCIC is made inoperable to perform overspeed testing, 24 hours is allowed to complete the tests before exceeding 325 psig.
	Item — Frequency
1. The RCIC system will be operable whenever the reactor pressure is greater than 150 psig and fuel is in the reactor vessel.	1. Valve Position — Every 31 days
2. During startup following a refuel outage or an outage in which work was performed that directly affects RCIC system operability, if the testing requirements of 4.5.E.3 cannot be met, continued reactor startup is not permitted. The RCIC system shall be declared inoperable, and the provisions of Specification 3.5.E.4 shall be implemented.	2. Flow Rate Test - RCIC pump shall deliver at least 400 gpm against a system head corresponding to a reactor vessel pressure of ≥1150 psig when steam is being supplied to the turbine at 920 to 1005 psig. — Every 92 days
3. Except for the limitations of 3.5.E.2, if the RCIC system is made or found to be inoperable, continued reactor operation is permitted only during the succeeding 14 days unless such system is sooner made operable, provided that during such 14 days the HPCI system is operable. Otherwise, the provisions of Specification 3.5.E.4 shall be implemented.	3. Flow Rate Test - RCIC pump shall deliver at least 400 gpm against a system head corresponding to a reactor vessel pressure of: a. ≥ 300 psig when steam is being supplied to the turbine at 250 to 325 psig, and b. ≥ 1150 psig when steam is being supplied to the turbine at 920 to 1005 psig. — During startup following a refuel outage or an outage in which work was performed that directly affects RCIC system operability.
4. If the requirements of Specification 3.5.E.1, 3.5.E.2 or 3.5.E.3 cannot be met, an orderly shutdown shall be initiated and the reactor pressure shall be reduced to <150 psig within 24 hours.	4. Simulated Automatic Actuation Test — Each refueling outage 5. Logic System Functional Test — Each refueling outage

F. Minimum Core and Containment Cooling System Availability

1. Any combination of inoperable components in the core and containment cooling systems shall not defeat the capability of the remaining operable components to fulfill the core and containment cooling functions.

2. When irradiated fuel is in the reactor vessel and the reactor is in the cold shutdown condition, all low-pressure core and containment cooling systems may be inoperable provided no work

F. Minimum Core and Containment Cooling System Availability

Surveillance requirements to assure that minimum core and containment cooling systems are available have been specified in Specification 4.2.B.

4.5 SURVEILLANCE REQUIREMENTS BASES

The testing interval for the core and containment cooling systems is based on a quantitative reliability analysis, judgment, and practicality. The core cooling systems have not been designed to be fully testable during operation. For example, the core spray final admission valves do not open until reactor pressure has fallen to 350 psig. Thus, during operation, even if high drywell pressure were simulated, the final valves would not open. In the case of the HPCI, automatic initiation during power operation would result in pumping cold water into the reactor vessel which is not desirable.

The surveillance requirements bases in this paragraph apply to all core and containment cooling systems except RCIC and HPCI. The systems can be automatically actuated during a refueling outage and this will be done. To increase the availability of the individual components of the core and containment cooling systems, the components which make up the system, i.e., instrumentation, pumps, valve operators, etc., are tested more frequently. The instrumentation is functionally tested each month. Likewise the pumps and motor-operated valves are also tested each month to assure their operability. The combination of a yearly simulated automatic actuation test and monthly tests of the pumps and valve operators is deemed to be adequate testing of these systems. With components or subsystems out of service, overall core and containment cooling reliability is maintained by demonstrating the operability of the remaining cooling equipment. The degree of operability to be demonstrated depends on the nature of the reason for the out-of-service equipment. For routine out-of-service periods caused by preventative maintenance, etc., the pump and valve operability checks will be performed to demonstrate operability of the remaining components. However, if a failure, design deficiency, etc., causes the out-of-service period, then the demonstration of operability should be thorough enough to assure that a similar problem does not exist on the remaining components. For example, if an out-of-service period caused by failure of a pump to deliver rated capacity due to a design deficiency, the other pumps of this type might be subjected to a flow rate test in addition to the operability checks.

The surveillance requirements bases described in this paragraph apply only to the RCIC and HPCI systems. With a cooling system out of service, overall core and containment cooling reliability is maintained by verifying the operability of the remaining cooling systems. The verification of operability, as used in this context, for the remaining cooling systems means to administratively check by examining logs or other information to verify that the remaining systems are not out-of-service for maintenance or other reasons. It does not mean to perform the surveillance requirements needed to demonstrate the operability of the remaining systems. However, if a failure, design deficiency, etc., causes the out-of-service period, then the verification of operability should be thorough enough to assure that a similar problem does not exist on the remaining systems. For example, if an out-of-service period is caused by failure of a pump to deliver rated capacity due to a design deficiency, the other pumps of this type might be subjected to a flow rate test. Following a refueling outage or an outage in which work was performed that directly affects system operability, the HPCI and RCIC pumps are flow rate tested prior to exceeding 325 psig and again at rated reactor steam pressure. This combination of testing provides adequate assurance of pump performance throughout the range of reactor pressures at which it is required to operate. The low pressure limit is selected to allow testing at a point of stable plant operation and also to provide overlap with low pressure ECC systems. A time limit is provided in which to perform the required tests during startup. This time limit is considered adequate to allow stable plant conditions to be achieved and the required tests to be performed. Flow rate testing of the HPCI and RCIC pumps is also conducted every 92 days at rated reactor pressure to demonstrate system operability in accordance with the LCO provisions and to meet inservice testing requirements for the HPCI system. Applicable valves are tested in accordance with the provisions of the inservice testing program. In addition, monthly checks are made on the position of each manual, power operated or automatic valve installed in the direct flowpath of the suction or discharge of the pump or turbine that is not locked, sealed, or otherwise secured in position. At each refueling outage, a logic system functional test and a simulated automatic actuation test is performed on the HPCI and RCIC systems. The tests and checks described above are considered adequate to assure system operability.

The verification of the main steam relief valve operability during manual actuation surveillance testing must be made independent of temperatures indicated by thermocouples downstream of the relief valves. It has been found that a temperature increase may result with the valve still closed. This is due to steam being vented through the pilot valves during the surveillance test. By

first opening a turbine bypass valve, and then observing its closure response during relief valve actuation, positive verification can be made for the relief valve opening and passing steam flow. Closure response of the turbine control valves during relief valve manual actuation would likewise serve as an adequate verification for the relief valve opening. This test method may be performed over a wide range of reactor pressures greater than 150 psig. Valve operation below 150 psig is limited by the spring tension exhibited by the relief valves.

The surveillance requirements to ensure that the discharge piping of the core spray, LPCI mode of the RHR, HPCI, and RCIC systems is filled provides for a visual observation that water flows from a high point vent. This ensures that the line is in a full condition.

Instrumentation has been provided on core spray and LPCI mode of RHR to monitor the pressure of water in the discharge piping between the monthly intervals at which the lines are vented and alarm the control room if the pressure is inadequate. This instrumentation will be calibrated on the same frequency as the safety system instrumentation and the alarm system tested monthly. This testing ensures that, during the interval between the monthly venting checks, the status of the discharge piping is monitored on a continuous basis. An alarm point of 40 psig for the low pressure of the fill system has been chosen because, due to elavations of piping within the plant, 39 psig is required to keep the lines full. The shutoff head of the fill system pumps is less than 90 psig and therefore will not defeat the low-pressure cooling pump discharge press interlock 100 psig as shown in Table 3.2-2. A margin of 10 psig is provided by the high pressure alarm point of 90 psig.

HPCI and RCIC systems normally take a suction from the Contaminated Condensate Storage Tanks (CCST's). The level in the CCST's is maintained at or above 9.5 feet. This level corresponds to an elevation which is greater than the elevation of the last check valves in the discharge pipes of either the HPCI or RCIC systems. Therefore, filled discharge piping of HPCI or RCIC systems is ensured when lined up to the CCST and tank level is at or above 9.5 feet.

The watertight bulkhead and submarine doors and the penetration seals for pipes and cables penetrating the vault walls and ceilings have been designed to withstand the maximum flood conditions. To assure that their installation is adequate for maximum flood conditions, a method of testing each seal has been devised.

In order to test an electrical penetration or pipe seal, compressed air is supplied to a test connection and the space between the fittings is pressurized to approximately 15 psig. The outer faces are then tested for leaks using a soap bubble solution.

ATTACHMENT 2

SUMMARY OF CHANGES

The following changes have been identified for Quad Cities Station Units 1 and 2 Technical Specifications:

1. Pages 3.5/4.3-5 and 3.5/4.5-6 (DPR-29)
   Pages 3.5/4.5-4a and 3.5/4.5-5 (DPR-30)

   (a) Limiting Condition for Operation (LCO), Technical Specification 3.5.C.1.

   - Change the requirement for HPCI to be operable from greater than 90 psig and irradiated fuel in the reactor vessel to greater than 150 psig and fuel in the reactor vessel.

   - Delete the HPCI operability requirement prior to a reactor startup from a cold condition.

   (b) LCO Technical Specification 3.5.C.2

   - Renumber the specification to 3.5.C.3 to accomodate a new Specification 3.5.C.2.

   - Change the 7 days allowance for the system out of service time to 14 days.

   - State that this specification shall not apply during the conditions described in Specification 3.5.C.2, i.e., during startup following a refuel outage or an outage in which work was performed that directly affected HPCI system operability.

   - Require that the provisions of Specification 3.5.C.4 be implemented if the provisions of the specification cannot be met.

   (c) LCO Technical Specification 3.5.C.2 (new)

   - Provide limitations for continued reactor startup from a refuel outage or an outage in which work was performed that directly affected HPCI system operability.

   - Add a statement which invokes the implementation of Specification 3.5.C.4 in the event that the testing requirements, as delineated in Specification 4.5.C.3, cannot be met.

(d) LCO Technical Specification 3.5.C.3.

- Renumber specification to 3.5.C.4.
- Change the reactor pressure reduction requirement from 90 psig to 150 psig.
- Change the reference from Specification 3.5.C to Specification 3.5.C.1, 3.5.C.2, or 3.5.C.3.

(e) Surveillance Requirements 4.5.C.1 and 4.5.C.2

- Delete current HPCI testing requirements and replace with testing based on Standard Technical Specifications.

2. Pages 3.5/4.5-7 and 3.5/4.5-8 (DPR-29)
Pages 3.5/4.5-6 (DPR-30)

(a) LCO Technical Specification 3.5.E.1

- Change RCIC system operability requirement from whenever irradiated fuel is in the reactor vessel to whenever fuel is in the reactor vessel.
- Delete the RCIC operability requirement prior to a reactor startup from a cold condition.

(b) LCO Technical Specification 3.5.E.2

- Renumber the specification to 3.5.E.3 to accommodate a new Specification 3.5.E.2.
- Change the 7 day allowance for the system out of service time to 14 days.
- State that the Specification shall not apply during the conditions described in 3.5.E.2, i.e., during startup following a refuel outage or following an outage in which work was performed that directly affected RCIC system operability.
- Require that the provisions of Specification 3.5.E.4 be implemented if the provisions of the Specification cannot be met.

(c) LCO Technical Specification 3.5.E.2 (new)

- Provides limitations for continued reactor startup from a refuel outage or an outage in which work was performed that directly affected the RCIC system operability.

- Add a statement which invokes the implementation of Specification 3.5.E.4 in the event that the RCIC testing requirements, as delineated in Specification 4.5.E.3, cannot be met.

(d) LCO Technical Specification 3.5.E.3.

- Renumber as 3.5.E.4.

- Change the reactor pressure reduction requirement from 90 psig to 150 psig.

- Change the reference from Specifications 3.5 E.1 and 3.5.E.2 to Specifications 3.5.E.1, 3.5.E.2 or 3.5.E.3.

(e) Surveillance Requirements 4.5.E.1 and 4.5.E.2.

- Delete current RCIC testing requirements and replace with testing based on the Standard Technical Specifications.

3. Page 3.5/4.5-8 (DPR-29)

(a) LCO Technical Specification 3.5.4

- Delete the exception to allow a unit startup with an inoperable RCIC system during the period November 6-20, 1976.

4. Page 3.5/4.5-23 (DPR-29)
Page 3.5/4.5-15 (DPR-30)

(a) Surveillance Requirement Bases 4.5

- The bases have been revised to require verification of remaining system operability in lieu of an operability demonstration via the conduct of surveillances. The operability verification definition was added as well as a description of the bases for HPCI and RCIC system operability.

ATTACHMENT 3

DESCRIPTION AND BASES FOR AMENDMENT REQUEST

HPCI OPERABILITY

Current Technical Specification 3.5.C, HPCI System, requires the HPCI system to be operable whenever the reactor pressure is greater than 90 psig, irradiated fuel is in the reactor vessel and prior to reactor startup from a cold condition. If the requirements of the 3.5.C.1 and 3.5.C.2 are not met, the Technical Specifications require an orderly shutdown with a reduction in reactor pressure to 90 psig.

The proposed Technical Specification requires the HPCI system to be operable whenever the reactor pressure is greater than 150 psig and fuel is in the reactor vessel. If the requirements are not met, the proposed change requires an orderly shutdown with a reduction in reactor pressure to 150 psig.

The present LCO requirement of 90 psig for operability of HPCI is not based on HPCI subsystem design or testing requirements. The HPCI system (FSAR Table 6.2.6) is designed to pump 5000 gpm into the reactor vessel within a reactor pressure range of 1150 psig to 150 psig. For pressure lower than 150 psig, flow is estimated to decrease linearly to zero at 50 psig reactor pressure. The proposed change to 150 psig will retain a large margin of overlap with the low pressure cooling systems which will inject water to the reactor at approximately 325 psig. One of the HPCI automatic isolation signals is low steam line pressure of less than 100 psig (FSAR Table 7.7.2). Since the HPCI is isolated below 100 psig in the steam line, the present LCO requirement of 90 psig for operability of HPCI should be increased. The proposed change to the pressure reduction, in the event of inoperable HPCI, to 150 psig provides consistency between the operability and shutdown pressures. The proposed change to 150 psig is supported by system design flow and pressure and provides a margin to the present setpoint for system isolation on low steam line pressure.

The proposed change deletes the requirement for HPCI operability prior to a reactor startup. The HPCI system cannot be operable until the reactor pressure is adequate for system operation; therefore, HPCI cannot be operable prior to a reactor startup from a cold condition. This change is considered to be administrative in nature and is being made to clarify the current requirements.

The proposed change from "irradiated fuel" to "fuel" in the reactor vessel for HPCI operability is considered to be more conservative and administrative in nature.

HPCI OUT OF SERVICE TIME ALLOWANCE

Current Technical Specifications require that from and after the date the HPCI subsystem is made or found to be inoperable, continued reactor operation is permitted for 7 days. The proposed change creates a new 3.5.C.2 which describes actions to be taken during a startup from a refuel outage or

an outage in which work was performed that directly affected HPCI operability. The old 3.5.C.2 has been renumbered as 3.5.C.3 and is applicable for the conditions other than those described in Section 3.5.C.2. The allowed out of service time in the proposed 3.5.C.3 has been extended from 7 days to 14 days.

The proposed out of service period for the HPCI system from 7 days to 14 days adopts the philosophy of later BWR operating plants for the HPCI systems. The proposed period reflects a low probability of the need for the system and reflects the availability of low and high pressure core cooling systems for post accident mitigation functions.

A statement is proposed to the new Specification 3.5.C.3 (current Specification 3.5.C.2) to indicate that the specification is not applicable during reactor startup from refuel outages or an outage in which work was performed that directly affected HPCI operability. The actions required during these conditions are addressed under the proposed Specification 3.5.C.2. Separation of the conditions provides clarification to the required action in the event of an inoperable system. The proposed revision includes a statement that requires an orderly shutdown if the specification's requirements are not met.

HPCI SURVEILLANCE REQUIREMENTS

Current Technical Specifications require HPCI testing to be performed as follows:

Simulated Auto Actuation: Each refueling
Flow Rate Test: After pump maintenance and every 3 months
Pump Operability: Once/month
Motor-Operated Valve: Once/month
Logic System Functional Test: Once/Refuel

In addition, current Technical Specification requires the testing of the LPCI mode of RHR, both core spray systems, the automatic pressure relief subsystem and RCIC system when HPCI is determined to be inoperable. The proposed change to the HPCI testing requirements is as follows:

Valve Position: Every 31 days
Flow Rate Test: Every 92 days
Flow Rate Test @ Low and High Pressure: During startup following a refuel outage or an outage in which work was performed that directly affects HPCI system operability.
Simulated Auto Actuation: Each refuel outage
Logic System Functional Test: Each refuel outage

Testing of other systems immediately following the declaration of an inoperable HPCI system has been deleted.

The proposed change to Surveillance Requirement 4.5.C.1 will detail HPCI testing requirements in the HPCI Section of Specification 4.5 rather than reference the Core Spray and LPCI subsystem testing in Section 4.5.A.1. The proposed changes to HPCI pump flow rate testing will add a pump flow rate test which is performed at low reactor steam pressure during startup following a refueling outage or an outage in which work was performed that directly affected system operability. The present HPCI flow rate test criteria does not clearly specify a single test pressure. Present testing methods allow acceptance criteria to be met if one point on the pump curve is met against a system head pressure corresponding to a reactor vessel pressure of 1150 psig to 150 psig. STS and later BWR industry practice is to perform two (2) flow rate tests for HPCI, i.e., one test every 92 days and another under certain startup conditions. The flow test to be performed at least once per 92 days will demonstrate pump operability by meeting ECCS design flow requirements when steam is being supplied to the turbine at rated reactor pressure. This test requirement will also satisfy the testing provisions of the Inservice Testing Program.

The flow rate tests to be performed during startup, following a refueling outage or an outage in which work was performed that directly affected HPCI system operability, involve testing at low reactor pressure (250 to 325 psig) followed by a test at rated reactor pressure. This testing combination will demonstrate ECCS design flow and system performance prior to continuing the reactor startup. For the low pressure test, the 325 psig limit for testing is selected to allow the plant to be stable and to conform with the reactor pressure corresponding to the reactor injection valve permissive of the low pressure ECCS systems. The permissive for opening of the reactor injection valves for the low pressure ECCS systems is set at 325 psig. In order for the plant to be stabilized for testing, 12 hours are allowed to perform testing once reactor steam pressure is adequate. The manufacturer of the HPCI turbine, General Electric, recommends additional testing of the system to demonstrate operability of the turbine overspeed trip. This overspeed trip test is performed approximately once per 18 months and involves disconnecting the HPCI pump and turbine and therefore the HPCI system is declared inoperable during the test period. After the overspeed test completion, the system flow test is performed. The performance of both of these tests in series will take longer than the 12 hours proposed to allow performance of the flow test by itself and thus 24 hours is proposed to be allowed to perform these tests, i.e., overspeed trip test and system flow test, in series prior to exceeding 325 psig.

The proposed change to the Surveillance Requirement 4.5.C.1 deletes the monthly pump surveillance and changes the monthly valve operability checks to monthly valve lineup checks. The quarterly pump flow tests performed in accordance with Inservice Testing Program are sufficient to demonstrate pump operability and justify the deletion of the present monthly pump surveillance. The present monthly valve operability checks can also be deleted since valves are included and tested in accordance with the Quad Cities Inservice Testing Program. The monthly valve operability check is made on the position of each manual, power operated or automatic valve, in the flow path that is not locke ealed or otherwise secured in position. These proposed changes

reflect operating practices at later BWR plants and since the Quad Cities ECCS systems are similar to those at later plants, the proposed changes are justified and should be implemented.

The proposed change will delete present Surveillance Requirement 4.5.C.2 which requires, with HPCI inoperable, testing of the LPCI mode of RHR, both core spray subsystems, the automatic pressure relief subsystem and the RCIC system. The present testing requirements for ECCS are very conservative since, at the time, there was a lack of plant operating history and a lack of sufficient equipment failure data base to choose other testing methods. Since the initial development of the Quad Cities Units 1 and 2 Technical Specifications, plant operating experience has demonstrated that multiple testing of other ECCS systems when one system is inoperable, is not necessary to provide adequate assurance of system operability. The system's operability is verified by reviewing records to ensure that valve and electrical lineups and instrumentation requirements have not been changed since the last time that the system was demonstrated to be operable. This description is in the surveillance bases. More recent BWR Technical Specifications accept system operability based on past satisfactory performance of monthly, quarterly, refueling interval, post maintenance and other specified performance tests without requiring additional testing when another system is inoperable. The purpose of this change is to remove excessive system testing requirements while maintaining adequate assurance of system operability when needed for accident mitigation. One concern with equipment failures is common mode failure affecting the same parts in other system. Engineering evaluation for common mode failure is more effective than running systems and trying to find another failure of the same part. Once the potential for common mode failure has been identified, system operability is evaluated and potentially defective parts are replaced.

RCIC OPERABILITY

Current Technical Specifications require that the RCIC system shall be operable whenever the reactor pressure is greater than 150 psig, irradiated fuel in the vessel and prior to startup from a cold condition. If the requirements cannot be met, an orderly shutdown is required and pressure shall be reduced to 90 psig. The proposed Technical Specification LCO requires that the RCIC system shall be operable when reactor pressure is greater than 150 psig and fuel is in the vessel. The reactor shutdown pressure has been increased to 150 psig.

The proposed change deletes the requirement for RCIC operability prior to reactor startup. The RCIC system cannot be considered operable until reactor pressure is adequate for system operation; therefore, RCIC cannot be operable prior to reactor startup from a cold condition. This change is considered to be administrative in nature and is being made to clarify current requirements.

The proposed change from "irradiated fuel" to "fuel" in the reactor vessel for RCIC operability is considered to be more conservative and administrative in nature.

The change to increase the required reactor pressure reduction is proposed in order to be consistent with the operability pressure requirement.

RCIC OUT OF SERVICE TIME ALLOWANCE

Current Technical Specification requires that from and after the date the RCIC subsystem is made or found to be inoperable, continued reactor operation is permitted for 7 days. The proposed change creates a new 3.5.E.2 which describes actions to be taken during a startup from a refuel outage or an outage in which work was performed that directly affected RCIC operability. The old 3.5.E.2 has been renumbered as 3.5.E.3 and is applicable for the conditions other than those described in Section 3.5.E.2. The allowed out of service time in the proposed 3.5.E.3 has been extended from 7 to 14 days.

The proposed Section 3.5.E.2 was developed to clearly establish the requirements during a reactor startup from a refuel outage or an outage in which work was performed that directly affected RCIC operability. The new Specification describes the limitations of the unit startup under these conditions and requires the implementation of Specification 3.5.E.4 in the event testing requirements are not met.

The proposed out of service period for the RCIC system from 7 days to 14 days adopts the philosophy of later BWR operating plants for the RCIC systems. The proposed period reflects the availability of low and high pressure core cooling systems for post accident mitigation functions.

A statement is proposed to the new Specification 3.5.E.3 (current Specification 3.5.E.2) to indicate that the specification is not applicable during reactor startup from a refuel outage or an outage in which work was performed that directly affected RCIC operability. The actions required during these conditions are addressed under the newly proposed Specification 3.5.E.2. Separation of the conditions provides clarification to the required actions in the event of an inoperable system. The proposed revision includes a statement that requires an orderly shutdown to commence if the Specification requirements are not met.

RCIC SURVEILLANCE REQUIREMENT

Current Technical Specifications require RCIC testing to be performed as follows:

Simulated Auto Actuation: Each refueling
Flow Rate Test: After pump maintenance and every 3 months
Pump Operability: Once/month
Motor-Operated Valve: Once/month
Logic System Functional Test: Once/month

In addition, current Technical Specification require the testing of the HPCI system when RCIC is determined to be inoperable. The proposed change to the RCIC testing requirements are as follows:

Valve Position: Every 31 days
Flow Rate Test: Every 92 days
Flow Rate Test @ Low and High Pressure: During startup following a refuel outage or an outage in which work was performed that directly affects RCIC system operability.
Simulated Auto Actuation: Each refuel outage
Logic System Functional Test: Each refuel outage

Testing of other systems immediately following the declaration of an inoperable RCIC system has been deleted.

The proposed change to Surveillance Requirement 4.5.E.1 for RCIC is similar to those for HPCI. It should be noted that for RCIC, the only valves that are required to be tested per the Inservice Testing Program are the containment isolation valves. Even though the RCIC pump is not required to be tested per the IST program, testing at least every 92 days is specified and has been demonstrated to be adequate at other BWR facilities with similar system arrangements. The proposed flow test every 92 days for RCIC will demonstrate operability of the entire system, up to the reactor injection valve, including steam and water side valves, pump and turbine. The deletion of Surveillance Requirement 4.5.E.2 is similar to changes proposed to HPCI subsystem testing in that with RCIC inoperable, immediate and daily testing of HPCI will not be required.

RCIC OPERABILITY EXEMPTION

Current Technical Specifications discuss an exemption to allow reactor startup with RCIC inoperable. The proposed change deletes the exemption since the period has expired and was a one-time exemption.

ATTACHMENT 4

EVALUATION OF SIGNIFICANT HAZARDS CONSIDERATION

As described in the Description of Proposed Amendment Request, the proposed changes involve updating the HPCI and the RCIC system requirements to reflect later operating BWR plants' requirements, administrative changes, changes in operability requirements to reflect HPCI design and to provide consistency in RCIC system requirements for operation and shutdown. These changes have been reviewed by Commonwealth Edison and we believe that they do not present a Significant Hazards Consideration. The basis for our determination is documented as follows:

BASIS FOR NO SIGNIFICANT HAZARDS CONSIDERATION

Commonwealth Edison has evaluated this proposed amendment and determined that it involves no significant hazards consideration. In accordance with the criteria of 10 CFR 50.92(c):

1. The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

   The proposed amendment requires HPCI to be operable at greater than 150 psig which is in conformance to design requirements and allows approximately a 175 psi overlap with the low pressure core cooling subsystems injection capabilities at approximately 325 psig. The deletion of the requirement for HPCI and RCIC to be operable prior to reactor startup from a cold shutdown provides clarification of intent until the reactor is producing steam at a pressure sufficient to provide water injection to the reactor. This clarification of intent does not reduce the availability of either the HPCI or the RCIC systems when needed to perform their design function. The proposed change for reduction of reactor pressure from 90 to 150 psig for RCIC inoperability requirement is made to provide consistency with the reactor pressure of 150 psig presently allowed in the RCIC operability requirements. The change for both HPCI and RCIC in the allowed out of service time from 7 to 14 days, reflects an adoption of later BWR operating plant requirements at Quad Cities for these systems. The 14 day out of service period reflects the low probability of the need for the systems and also reflects the availability of high and low pressure core cooling systems for post accident mitigation functions. The deletion of the term irradiated from the system operability requirements is conservative and does not reduce system availability.

Proposed changes in testing requirements for HPCI and RCIC include deletion of the testing of other core cooling systems when HPCI or RCIC is inoperable. The present testing methods represent requirements beyond those necessary to adequately assure that remaining core cooling systems are operable and capable of performing their design intent. The proposed deletion of this multiple system testing requirement will bring Quad Cities Units 1 and 2 in line with current BWR plant testing requirements. The remaining changes to HPCI and RCIC requirements involve inclusion of Inservice Testing Program requirements where applicable and Standard Plant testing guidelines. These changes include deletion of monthly pump and valve operability tests but also include addition of monthly valve lineup checks and a new pump flow test to be conducted under certain startup conditions. The changes to the testing requirements will enhance determination of system operability by providing both a low and high pressure demonstration of pump performance. The quarterly pump performance tests have been demonstrated at later plants to provide assurance of system operability and thus the present monthly pump operability test can be deleted. The proposed monthly valve lineup checks have also been shown through use at other facilities to provide assurance of system alignment and thus the monthly valve operability checks can be deleted. The Quad Cities Inservice Testing Program also provides assurance of valve operability and pump performance where applicable. Flow rate testing of HPCI and RCIC is performed prior to exceeding 325 psig following a refueling outage or an outage in which work was performed that directly affected system operability. Selection of the 325 psig limit for testing ensures stable reactor conditions during the test.

The deletion of the one time exemption in the RCIC LCO for Quad Cities Unit 1 is strictly an administrative change and does not affect any accident analysis.

The proposed changes do not affect any accident precursors and, therefore, do not increase the probability of an accident previously evaluated. The changes in HPCI and RCIC operability requirements reflect system design, assure system operability when required, and provide sufficient overlap with low pressure core cooling systems. The changes in testing requirements represent deletion of outdated requirements while implementing provisions that will provide assurance of system operability and, therefore the changes do not involve a significant increase in the consequences of an accident previously evaluated.

2. The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed changes do not modify HPCI or RCIC design or reduce the capability of these systems to perform their design intent. The proposed changes in testing implement the provisions of the Inservice Testing Program where applicable in the Technical Specifications and follow proven implementation at other operating BWR plants. Even though the testing intervals are relaxed in some places, this relaxation has been demonstrated at other facilities, with similar systems to those at Quad Cities Units 1 and 2, to provide adequate demonstration of component and system operability.

Since HPCI and RCIC system design basis are not changed by the proposed changes, there is no possibility of a new or different kind of accident from any previously evaluated.

3. The proposed change does not involve a significant reduction in the margin of safety.

The proposed amendment will not significantly reduce the availability of HPCI or RCIC when required to mitigate accident conditions. Excessive testing of systems and components can reduce rather than increase reliability. An acceptable level of testing to demonstrate operability currently being used at later BWR plants does not include multiple testing of other systems when HPCI or RCIC is inoperable. The testing that will remain in the Technical Specifications provides adequate assurance of system performance. Changes to HPCI and RCIC system testing requirements include adoption of proven testing methods at other plants, inclusion of applicable IST program requirements, and inclusion of plant specific testing requirements.

Changes to the operability requirements for HPCI and RCIC are made to recognize design parameters and to provide consistency in operability and shutdown provisions. Actual system operating overlap with the low pressure core cooling systems has not changed since actual system design flow and pressure ability has not been modified. Adoption of the 14 day allowed out of service period does not significantly affect the accident mitigation function of the overall core cooling network.

The proposed changes follow similar provisions that are implemented at BWR plants with systems like those at Quad Cities Units 1 and 2. Since the proposed changes will help to assure availability of the HPCI and RCIC systems when required by accident analysis, these changes do not involve a significant reduction in the margin of safety.

ATTACHMENT 5

REQUEST FOR ADDITIONAL INFORMATION

Quad Cities Units 1 and 2 have submitted Technical Specification changes to the HPCI and RCIC systems. Part of these changes concern an increase in the allowed out-of-service time from the present 7 days to an Standard Technical Specification (STS) based time frame of 14 days. Conversations with the Quad Cities NRC Project Manager concerning this amendment request generated the following question and request for a formal response.

1) Question: Since Quad Cities is proposing to adopt the STS 14 days allowed out-of-service time for the HPCI and RCIC systems, why not also adopt the STS shutdown requirement for these systems, i.e., Hot Shutdown in 12 hours and in Cold Shutdown within the following 24 hours?

   Response: The present Quad Cities Technical Specifications allow the HPCI or RCIC systems to be out-of-service for 7 days if certain other sytems remain operable. If at the end of this 7 day period the system is not returned to service, an orderly plant shutdown is initiated and the reactor pressure shall be reduced to less than 90 psig within 24 hours. The proposed change to the Technical Specifications adopts the STS requirement from less than 90 psig to less than 150 psig, and retains the present shutdown requirement of 24 hours.

   The STS allows either the HPCI or RCIC system to be operable for 14 days and if not returned to operable status, requires the plant to be in at least Hot Shutdown within the next 12 hours and in Cold Shutdown within the following 24 hours. Quad Cities has not chosen to adopt the STS shutdown provision for the following reasons:

   (a) The HPCI and RCIC systems are required to be operable when the reactor is pressurized at greater than 90 psig (proposed change to 150 psig). The present Quad Cities shutdown requirement of 24 hours for the HPCI and RCIC systems will ensure that the plant is placed in a low pressure condition in a shorter overall timeframe than the STS provision of 12 hours to Hot Shutdown and then an additional 24 hours to Cold Shutdown. The difference between the STS and Quad Cities Technical Specifications does not infer a problem with either the STS or Quad Cities shutdown provisions, but does not provide a comparison that will allow acceptance of the present Quad Cities shutdown timeframe of 24 hours to be in a condition where the HPCI and RCIC systems are not required to function.

(b) Current Quad Cities procedures and operating philosophy are based on the shutdown provisions presently contained in the Technical Specifications for HPCI and RCIC. Since these provisions have been effective in assuring past safe operation and would not provide any enhancements to continued safe operation, Commonwealth Edison has determined that no change to the present shutdown provision of 24 hours for the HPCI and RCIC systems is required.