ATTACHMENT 3

PROPOSED TECHNICAL SPECIFICATIONS

Technical Specification 3/4.5

"EMERGENCY CORE COOLING SYSTEMS"

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3.5 - LIMITING CONDITIONS FOR OPERATION

A. Emergency Core Cooling System - Operating

The emergency core cooling systems (ECCS) shall be OPERABLE with:

1. The core spray (CS) system consisting of two subsystems with each subsystem comprised of:

   a. One OPERABLE CS pump, and

   b. An OPERABLE flow path capable of taking suction from the suppression chamber and transferring the water through the spray sparger to the reactor vessel.

2. The low pressure coolant injection (LPCI) subsystem comprised of:

   a. Four OPERABLE LPCI pumps, and

   b. An OPERABLE flow path capable of taking suction from the suppression chamber and transferring the water to the reactor vessel.

3. The high pressure cooling injection (HPCI) system consisting of:

   a. One OPERABLE HPCI pump, and

   b. An OPERABLE flow path capable of taking suction from the suppression chamber and transferring the water to the reactor vessel.

4. The automatic depressurization system (ADS) with at least 5 OPERABLE ADS valves.

4.5 - SURVEILLANCE REQUIREMENTS

A. Emergency Core Cooling System - Operating

The ECCS shall be demonstrated OPERABLE by:

1. At least once per 31 days:

   a. For the CS system, the LPCI subsystem and the HPCI system:

      1) Verifying by venting at the high point vents that the system piping from the pump discharge valve to the system isolation valve is filled with water.

      2) Verifying that each valve, manual, power operated or automatic, in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct[(a)] position.

   b. For the HPCI system, verifying that the HPCI pump flow controller is in the correct position.

2. Verifying that, when tested pursuant to Specification 4.0.E:

   a. The CS pump in each subsystem develop a flow of at least 4500 gpm against a test line pressure corresponding to a reactor vessel pressure of ≥90 psig.

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a Except that an automatic valve capable of automatic return to its ECCS position when an ECCS signal is present may be in position for another mode of operation.

3.5 - LIMITING CONDITIONS FOR OPERATION

APPLICABILITY:

OPERATIONAL MODE(s) 1, 2[b] and 3[b].

ACTION:

1. For the core spray system:

   a. With one CS subsystem inoperable, provided that the LPCI subsystem is OPERABLE, restore the inoperable CS subsystem to OPERABLE status within 7 days, or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

   b. With both CS subsystems inoperable, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

2. For the LPCI subsystem:

   a. With one LPCI pump inoperable, provided that both CS subsystems are OPERABLE, restore the inoperable LPCI pump to OPERABLE status within 30 days, or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

4.5 - SURVEILLANCE REQUIREMENTS

   b. Three LPCI pumps together develop a flow of at least 14,500 gpm against a test line pressure corresponding to a reactor vessel pressure of ≥20 psig.

   c. The HPCI pump develops a flow of at least 5000 gpm against a test line pressure corresponding to a reactor vessel pressure of ≥1150 psig when steam is being supplied to the turbine between 920 and 1005 psig[c].

3. At least once per 18 months:

   a. For the CS system, the LPCI subsystem, and the HPCI system, performing a system functional test which includes simulated automatic actuation of the system throughout its emergency operating sequence and verifying that each automatic valve in the flow path actuates to its correct position. Actual injection of coolant into the reactor vessel may be excluded from this test.

   b. For the HPCI system, verifying that:

      1) The system develops a flow of ≥5000 gpm against a test line pressure corresponding to a reactor vessel pressure of ≥300 psig, when steam is being supplied to the turbine between 200 and 350 psig[c].

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b The HPCI system and ADS are not required to be OPERABLE when reactor steam dome pressure is ≤150 psig.

c The provisions of Specification 4.0.D are not applicable provided the surveillance is performed within 12 hours after reactor steam pressure is adequate to perform the test.

3.5 - LIMITING CONDITIONS FOR OPERATION

b. With the LPCI subsystem otherwise inoperable, provided that both CS subsystems are OPERABLE, restore the LPCI subsystem to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

c. With the LPCI subsystem and one or both CS subsystems inoperable, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.

3. With the HPCI system inoperable, provided both CS subsystems, the LPCI subsystem, the ADS and the Isolation Condenser (IC) system are OPERABLE, restore the HPCI system to OPERABLE status within 14 days or be in at least HOT SHUTDOWN within the next 12 hours and reduce reactor steam dome pressure to ≤150 psig within the following 24 hours.

4. For the ADS:

a. With one of the above required ADS valves inoperable, provided the HPCI system, both CS subsystems and the LPCI subsystem are OPERABLE, restore the inoperable ADS valve to OPERABLE status within 14 days or be in at least HOT SHUTDOWN within the next 12 hours and reduce reactor steam dome pressure to ≤150 psig within the following 24 hours.

4.5 - SURVEILLANCE REQUIREMENTS

2) The pump suction is automatically transferred from the condensate storage tank to the suppression chamber on a condensate storage tank water level - low signal and on a suppression chamber water level - high signal.

c. Performing a CHANNEL CALIBRATION of the CS and LPCI system discharge line "keep filled" alarm instrumentation.

d. Performing a CHANNEL CALIBRATION of the CS header ΔP instrumentation and verifying the setpoint to be ≤0.5 psid.

4. At least once per 18 months for the ADS:

a. Performing a system functional test which includes simulated automatic actuation of the system throughout its emergency operating sequence, but excluding actual valve actuation.

b. Manually opening each ADS valve when the reactor steam dome pressure is ≥150 psig[c] and observing that either:

1) The turbine control valve or turbine bypass valve position responds accordingly, or

2) There is a corresponding change in the measured steam flow.

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c The provisions of Specification 4.0.D are not applicable provided the surveillance is performed within 12 hours after reactor steam pressure is adequate to perform the test.

3.5 - LIMITING CONDITIONS FOR OPERATION

b. With two or more of the above required ADS valves inoperable, be in at least HOT SHUTDOWN within 12 hours and reduce reactor steam dome pressure to ≤150 psig within the following 24 hours.

5. With an ECCS discharge line "keep filled" pressure alarm instrumentation CHANNEL inoperable, perform Surveillance Requirement 4.5.A.1.a.1) for CS and LPCI at least once per 24 hours.

6. With a CS subsystem header ΔP instrumentation CHANNEL inoperable, restore the inoperable CHANNEL to OPERABLE status within 72 hours or determine the CS header ΔP locally at least once per 12 hours; otherwise, declare the associated CS subsystem inoperable.

7. In the event an ECCS system is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.B within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date. The current value of the usage factor for each affected safety injection nozzle shall be provided in this Special Report whenever its value exceeds 0.70.

4.5 - SURVEILLANCE REQUIREMENTS

3.5 - LIMITING CONDITIONS FOR OPERATION

6. With a CS subsystem header ΔP instrumentation CHANNEL inoperable, restore the inoperable CHANNEL to OPERABLE status within 72 hours or determine the CS header ΔP locally at least once per 12 hours; otherwise, declare the associated CS subsystem inoperable.

7. In the event an ECCS system is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.6.B.4 within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date. The current value of the usage factor for each affected safety injection nozzle shall be provided in this Special Report whenever its value exceeds 0.70.

4.5 - SURVEILLANCE REQUIREMENTS

3.5 - LIMITING CONDITIONS FOR OPERATION

B. Emergency Core Cooling System - Shutdown

At least two of the following four subsystems/loops shall be OPERABLE[a]:

1. One or both core spray (CS) subsystems with:

   a. An OPERABLE flow path capable of taking suction from at least one of the following water sources and transferring the water through the spray sparger to the reactor vessel:

      1) From the suppression chamber, or

      2) When the suppression chamber water level is less than the limit or is drained, from the condensate storage tank containing at least 140,000 available gallons of water.

2. One or both low pressure coolant injection (LPCI) subsystem loops with a subsystem loop comprised of:

   a. At least one OPERABLE LPCI pump, and

   b. An OPERABLE flow path capable of taking suction from at least one of the following water sources and transferring the water to the reactor vessel:

      1) From the suppression chamber, or

4.5 - SURVEILLANCE REQUIREMENTS

B. Emergency Core Cooling System - Shutdown

The required ECCS shall be demonstrated OPERABLE per Surveillance Requirement 4.5.A, except:

1. The LPCI subsystems cross-tie valves may be closed.

2. Each LPCI pump develops the required flow when tested pursuant to Specification 4.0.E.

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a One LPCI subsystem may be aligned for decay heat removal and considered OPERABLE for the ECCS function, if it can be manually realigned (remote or local) to the LPCI mode and is not otherwise inoperable.

3.5 - LIMITING CONDITIONS FOR OPERATION

4.5 - SURVEILLANCE REQUIREMENTS

2) When the suppression chamber water level is less than the limit or is drained, from the condensate storage tank containing at least 140,000 available gallons of water.

APPLICABILITY:

OPERATIONAL MODE(s) 4 and 5[b].

ACTION:

1. With one of the above required subsystems/loops inoperable, restore at least two subsystems/loops to OPERABLE status within 4 hours or suspend all operations with a potential for draining the reactor vessel.
2. With both of the above required subsystems/loops inoperable, suspend CORE ALTERATION(s) and all operations with a potential for draining the reactor vessel. Restore at least one subsystem/loop to OPERABLE status within 4 hours or establish SECONDARY CONTAINMENT INTEGRITY within the next 8 hours.

b The ECCS is not required to be OPERABLE provided that the reactor vessel head is removed, the cavity is flooded, the spent fuel pool gates are removed, and water level is maintained within the limits of Specification 3.10.G and 3.10.H.

3.5 - LIMITING CONDITIONS FOR OPERATION

C. Suppression Chamber

The suppression chamber shall be OPERABLE:

1. In OPERATIONAL MODE(s) 1, 2, and 3 with a contained water volume equivalent to a water level of ≥14' 1" above the bottom of the suppression chamber.

2. In OPERATIONAL MODE(s) 4 and 5[a] with a contained volume equivalent to a water level of ≥7' above the bottom of the suppression chamber, except that the suppression chamber level may be less than the limit provided that:

   a. No operations are performed that have a potential for draining the reactor vessel,

   b. The reactor mode switch is locked in the Shutdown or Refuel position,

   c. The condensate storage tank contains ≥140,000 available gallons of water, and

   d. The ECCS systems are OPERABLE per Specification 3.5.B.

APPLICABILITY:

OPERATIONAL MODE(s) 1, 2, 3, 4 and 5[a].

4.5 - SURVEILLANCE REQUIREMENTS

C. Suppression Chamber

The suppression chamber shall be determined OPERABLE by verifying:

1. For OPERATIONAL MODE(s) 1, 2 and 3, at least once per 24 hours, the water level to be ≥14' 1".

2. For OPERATIONAL MODE(s) 4 or 5[a], at least once per 12 hours:

   a. The water level to be ≥7', or

   b. Verify the alternate conditions of Specification 3.5.C.2, or the conditions of footnote (a), to be satisfied.

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a The suppression chamber is not required to be OPERABLE provided that the reactor vessel head is removed, the cavity is flooded or being flooded from the suppression pool, the spent fuel pool gates are removed when the cavity is flooded, and the water level is maintained within the limits of Specification 3.10.G and 3.10.H.

3.5 - LIMITING CONDITIONS FOR OPERATION

ACTION:

1. In OPERATIONAL MODE(s) 1, 2, or 3 with the suppression chamber water level less than the above limit, restore the water level to within the limit within 1 hour or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

2. In OPERATIONAL MODE(s) 4 or 5[a] with the suppression chamber water level less than the above limit or drained and the above required conditions not satisfied, suspend CORE ALTERATION(s) and all operations that have a potential for draining the reactor vessel and lock the reactor mode switch in the Shutdown position. Establish SECONDARY CONTAINMENT INTEGRITY within 8 hours.

4.5 - SURVEILLANCE REQUIREMENTS

a The suppression chamber is not required to be OPERABLE provided that the reactor vessel head is removed, the cavity is flooded or being flooded from the suppression pool, the spent fuel pool gates are removed when the cavity is flooded, and the water level is maintained within the limits of Specification 3.10.G and 3.10.H.

3.5 - LIMITING CONDITIONS FOR OPERATION

D. Reactor Core Isolation Cooling System

The reactor core isolation cooling (RCIC) system shall be OPERABLE with an OPERABLE flow path capable of automatically taking suction from the suppression chamber and transferring the water to the reactor pressure vessel.

APPLICABILITY:

OPERATIONAL MODE(s) 1, 2 and 3 with reactor steam dome pressure > 150 psig.

ACTION:

With the RCIC system inoperable, operation may continue provided the HPCI system is OPERABLE; restore the RCIC system to OPERABLE status within 14 days or be in at least HOT SHUTDOWN within the next 12 hours and reduce reactor steam dome pressure to ≤ 150 psig within the following 24 hours.

4.5 - SURVEILLANCE REQUIREMENTS

D. Reactor Core Isolation Cooling System

The RCIC system shall be demonstrated OPERABLE:

1. At least once per 31 days by:

   a. Verifying by venting at the high point vents that the system piping from the pump discharge valve to the system isolation valve is filled with water.

   b. Verifying that each valve, manual, power operated or automatic in the flow path that is not locked, sealed or otherwise secured in position, is in its correct position.

   c. Verifying that the pump flow controller is in the correct position.

2. At least once per 92 days, when tested pursuant to 4.0.E, by verifying that the RCIC pump develops a flow of ≥400 gpm in the test flow path with a system head corresponding to reactor vessel operating pressure when steam is being supplied to the turbine between 920 and 1005 psig[a].

3. At least once per 18 months by:

   a. Performing a system functional test which includes simulated automatic actuation and restart and verifying that each automatic valve in the flow path actuates to its correct position. Actual injection of coolant into the reactor vessel may be excluded.

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a The provisions of Specification 4.0.D are not applicable provided the surveillance is performed within 12 hours after reactor steam pressure is adequate to perform the test.

3.5 - LIMITING CONDITIONS FOR OPERATION

4.5 - SURVEILLANCE REQUIREMENTS

b. Verifying that the system will develop a flow of ≥400 gpm in the test flow path when steam is supplied to the turbine at a pressure between 250 and 325 psig[a].

c. Verifying that the suction for the RCIC system is automatically transferred from the condensate storage tank to the suppression pool on a condensate storage tank water level - low signal and on a suppression pool water level - high signal.

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a The provisions of Specification 4.0.D are not applicable provided the surveillance is performed within 12 hours after reactor steam pressure is adequate to perform the test.

BASES

3/4.5.A ECCS - Operating

3/4.5.B ECCS - Shutdown

The Core Spray (CS) system, together with the Low Pressure Coolant Injection (LPCI) subsystem, is provided to assure that the core is adequately cooled following a loss-of-coolant accident (LOCA) and provides adequate core cooling capacity for all break sizes up to and including the double-ended reactor recirculation line break, and for smaller breaks following depressurization by the Automatic Depressurization System (ADS).

The CS system is a primary source of emergency core cooling after the reactor vessel is depressurized and a source for flooding of the core in case of accidental draining.

The surveillance requirements provide adequate assurance that the CS system will be OPERABLE when required. Although all active components are testable and full flow can be demonstrated by recirculation through a test loop during reactor operation, a complete system functional test requires reactor shutdown. The pump discharge piping is maintained full to prevent water hammer damage to piping and to start cooling at the earliest moment.

The Low Pressure Coolant Injection (LPCI) subsystem is provided to assure that the core is adequately cooled following a loss-of-coolant accident. The LPCI subsystem with a minimum of three pumps will provide adequate core flooding for all break sizes up to and including the double-ended reactor recirculation line break, and for small breaks following depressurization by the ADS.

The surveillance requirements provide adequate assurance that the LPCI subsystem will be OPERABLE when required. Although all active components are testable and full flow can be demonstrated by recirculation through a test loop during reactor operation, a complete system functional test requires reactor shutdown. The pump discharge piping is maintained full to prevent water hammer damage to piping and to start cooling at the earliest moment.

The High Pressure Coolant Injection (HPCI) system is provided to assure that the reactor core is adequately cooled to limit fuel clad temperature in the event of a small break in the reactor coolant system and loss of coolant which does not result in rapid depressurization of the reactor vessel. The HPCI system permits the reactor to be shutdown while maintaining sufficient reactor vessel water level inventory until the vessel is depressurized. The HPCI system continues to operate until reactor vessel pressure is below the pressure at which CS operation or LPCI subsystem operation maintains adequate core cooling.

The capacity of the system is selected to provide the required core cooling. The HPCI pump is designed to deliver greater than or equal to 5000 gpm at steam supply pressures between 1150 and 150 psig. Suction piping for the system is provided from the condensate storage tank and the suppression pool. Pump suction for HPCI is normally aligned to the condensate storage tank source to minimize injection of suppression pool water into the reactor vessel. However, if the condensate storage tank water supply is low, an automatic transfer to the suppression pool water source ensures a water supply for continuous operation of the HPCI system.

BASES

With the HPCI system inoperable, adequate core cooling is assured by the OPERABILITY of the redundant and diversified Automatic Depressurization System and both the CS system and LPCI subsystem. In addition, the Reactor Core Isolation Cooling (RCIC) system, a system for which no credit is taken in the safety analysis, will automatically initiate on a reactor low water level condition. The HPCI out-of-service period of 14 days is based on the demonstrated OPERABILITY of redundant and diversified low pressure core cooling systems and the RCIC system.

The surveillance requirements provide adequate assurance that the HPCI system will be OPERABLE when required. Although all active components are testable and full flow can be demonstrated by recirculation through a test loop during reactor operation, a complete system functional test requires a reactor shutdown. The pump discharge piping is maintained full to prevent water hammer damage and to provide cooling at the earliest moment.

Upon failure of the HPCI system to function properly after a small break loss-of-coolant, the Automatic Depressurization System (ADS) automatically causes all OPERABLE main steamline relief valves to open, depressurizing the reactor so that flow from the low pressure core cooling systems can enter the core in time to limit fuel cladding temperature to less than 2200°F. ADS is conservatively required to be OPERABLE whenever reactor vessel pressure exceeds 150 psig. This pressure is substantially below that for which the low pressure core cooling systems can provide adequate core cooling for events requiring ADS.

ADS automatically controls the five main steamline relief valves although the safety analyses support a minimum of 4 OPERABLE valves. It is therefore appropriate to permit one valve to be out-of-service for up to 14 days without materially reducing system reliability.

To preserve single failure criteria, a minimum of two independent OPERABLE low-pressure ECCS subsystems/loops are required in OPERATIONAL MODE(s) 4 and 5 to ensure adequate vessel inventory makeup in the event of an inadvertent vessel draindown. Only a single LPCI pump is required per loop because of the large injection capacity. All of the ECCS may be inoperable provided the reactor head is removed, the reactor cavity is flooded, the spent fuel gates are removed, and the water level is maintained within the limits required by the Refueling Operations specifications.

3/4.5.C Suppression Chamber

The suppression chamber is required to be OPERABLE as part of the ECCS to ensure that a sufficient supply of water is available to the HPCI and CS systems and the LPCI subsystem in the event of a LOCA. This limit on suppression chamber minimum water volume ensures that sufficient water is available to permit recirculation cooling flow to the core. The OPERABILITY of the suppression chamber in OPERATIONAL MODE(s) 1, 2 or 3 is also required by Specification 3.7.G.

Repair work might require making the suppression chamber inoperable. This specification will permit those repairs to be made and concurrently provide assurance that the irradiated fuel has an

BASES

adequate cooling water supply when the suppression chamber must be made inoperable, including draining, in OPERATIONAL MODE(s) 4 or 5.

In OPERATIONAL MODE(s) 4 and 5 the suppression chamber minimum required water volume is reduced because the reactor coolant is maintained at or below 212°F. Since pressure suppression is not required below 212°F, the minimum water volume is based on net positive suction head (NPSH), recirculation volume and vortex prevention plus a safety margin for conservatism. With the suppression chamber water level less than the required limit, all ECCS subsystems are inoperable unless they are aligned to an OPERABLE condensate storage tank. When the suppression chamber level is less than 7 feet, the CS system or the LPCI subsystem is considered OPERABLE only if it can take suction from the condensate storage tank, and the condensate storage tank water level is sufficient to provide the required NPSH for the CS or LPCI pumps. Therefore, a verification that either the suppression chamber water level is greater than or equal to 7 feet or that CS or LPCI is aligned to take suction from the condensate storage tank and the condensate storage tank contains greater than or equal to 140,000 gallons of water, ensures CS or LPCI can supply at least 50,000 gallons of make-up water to the reactor pressure vessel. The CS suction is uncovered at the 90,000 gallon level.

3/4.5.D Reactor Core Isolation Cooling

The Reactor Core Isolation Cooling (RCIC) system is provided to supply continuous makeup water to the reactor core when the feedwater system is isolated from the turbine and when the feedwater system is not available. Under these conditions, the pumping capacity of the RCIC system is sufficient to maintain the water level above the core without any other water system in operation. If the water level in the reactor vessel decreases to the RCIC initiation level, the system automatically starts. The system may also be manually initiated at any time. The RCIC system is conservatively required to be OPERABLE whenever reactor pressure exceeds 150 psig even though the LPCI mode of the residual heat removal (RHR) system provides adequate core cooling up to 350 psig.

The RCIC system specifications are applicable during OPERATIONAL MODE(s) 1, 2 and 3 when reactor vessel pressure exceeds 150 psig because RCIC is the primary non-ECCS source of core cooling when the reactor is pressurized.

The HPCI subsystem provides an alternate method of supplying makeup water to the reactor should the normal feedwater become unavailable. Therefore, the specification calls for an OPERABILITY check of the HPCI subsystem should the RCIC system be found to be inoperable.

The surveillance requirements provide adequate assurance that RCIC will be OPERABLE when required. Although all active components are testable and full flow can be demonstrated by recirculation during reactor operation, a complete functional test requires a reactor shutdown. The pump discharge piping is maintained full to prevent water hammer damage and to start cooling at the earliest possible moment.

ATTACHMENT 4

EXISTING TECHNICAL SPECIFICATIONS

Technical Specification 3/4.5

"EMERGENCY CORE COOLING SYSTEMS"

ATTACHMENT 4

DELETION OF CURRENT TECHNICAL SPECIFICATIONS

This technical specification amendment will replace the current section 3.5/4.5, Core and Containment Cooling Systems, for the Dresden Unit 2 and Unit 3 Technical Specifications. The specifications are replaced in its entirety with revised pages that combine the Unit 2 and Unit 3 specifications.

Delete the following pages:

DPR - 19	DPR - 25
3/4.5-1	3/4.5-1
3/4.5-2	3/4.5-2
3/4.5-3	3/4.5-3
3/4.5-4	3/4.5-4
3/4.5-4a	3/4.5-4a
3/4.5-5	3/4.5-5
3/4.5-6	3/4.5-6
3/4.5-7	3/4.5-7
3/4.5-7a	3/4.5-7a
3/4.5-8	3/4.5-8
3/4.5-9	3/4.5-9
3/4.5-10	3/4.5-10
3/4.5-11	3/4.5-11
3/4.5-12	3/4.5-12
3/4.5-12a	3/4.5-12a
3/4.5-13	3/4.5-13
3/4.5-14	3/4.5-14
3/4.5-15	3/4.5-15
3/4.5-16	3/4.5-16
3/4.5-17	3/4.5-17
3/4.5-18	3/4.5-18
3/4.5-19	3/4.5-19
3/4.5-20	3/4.5-20
3/4.5-21	3/4.5-21
3/4.5-22	3/4.5-22

DPR - 19	DPR - 25
3/4.5-23	3/4.5-23
3/4.5-24	3/4.5-24
3/4.5-25	3/4.5-25
3/4.5-26	3/4.5-26
3/4.5-27	3/4.5-27
3/4.5-28	3/4.5-28
3/4.5-29	3/4.5-29
B 3/4.5-29	B 3/4.5-30
B 3/4.5-30	B 3/4.5-31
B 3/4.5-31	B 3/4.5-32
B 3/4.5-32	B 3/4.5-33
B 3/4.5-33	B 3/4.5-34
B 3/4.5-34	B 3/4.5-35
B 3/4.5-35	B 3/4.5-36
B 3/4.5-36	B 3/4.5-37
B 3/4.5-37	B 3/4.5-38
B 3/4.5-38	B 3/4.5-39
B 3/4.5-39	B 3/4.5-40
B 3/4.5-40	B 3/4.5-41
B 3/4.5-41	B 3/4.5-42
B 3/4.5-42	B 3/4.5-43
B 3/4.5-43	B 3/4.5-44
B 3/4.5-44	--
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ATTACHMENT 4

DELETION OF CURRENT TECHNICAL SPECIFICATIONS

This technical specification amendment will replace the current section 3.5/4.5, Core and Containment Cooling Systems, for the Quad Cities Unit 1 and Unit 2 Technical Specifications. The specifications are replaced in its entirety with revised pages that combine the Unit 1 and Unit 2 specifications.

Delete the following pages:

DPR - 29	DPR - 30
3.5/4.5-1	3.5/4.5-1
3.5/4.5-2	3.5/4.5-2
3.5/4.5-3	3.5/4.5-2a
3.5/4.5-4	3.5/4.5-3
3.5/4.5-5	3.5/4.5-4
3.5/4.5-6	3.5/4.5-4a
3.5/4.5-7	3.5/4.5-5
3.5/4.5-8	3.5/4.5-6
3.5/4.5-9	3.5/4.5-6a
3.5/4.5-10	3.5/4.5-7
3.5/4.5-11	3.5/4.5-8
3.5/4.5-12	3.5/4.5-9
3.5/4.5-13	3.5/4.5-10
3.5/4.5-14	3.5/4.5-11
3.5/4.5-15	3.5/4.5-12
3.5/4.5-16	3.5/4.5-13
3.5/4.5-17	3.5/4.5-14
3.5/4.5-18	3.5/4.5-14a
3.5/4.5-19	3.5/4.5-14b
3.5/4.5-20	3.5/4.5-15
3.5/4.5-21	3.5/4.5-15a
3.5/4.5-22	3.5/4.5-16
3.5/4.5-23	3.5/4.5-17
3.5/4.5-24	3.5/4.5-18
3.5/4.5-25	--
3.5/4.5-26	--

ATTACHMENT 4

DPR - 29	DPR - 30
3.5/4.5-27	--

ATTACHMENT 5

DRESDEN 2/3 DIFFERENCES

Technical Specification 3/4.5

"EMERGENCY CORE COOLING SYSTEMS"

ATTACHMENT 5

COMPARISON OF DRESDEN UNIT 2 AND UNIT 3 TECHNICAL SPECIFICATIONS FOR THE IDENTIFICATION OF TECHNICAL DIFFERENCES

SECTION 3.5/4.5
"CORE AND CONTAINMENT COOLING"

Commonwealth Edison has conducted a comparison review of the Dresden Unit 2 and Unit 3 Technical Specifications to identify any technical differences in support of combining the Technical Specifications into one document. The intent of the review was not to identify any differences in presentation style (e.g. table formats, use of capital letters, etc.), punctuation or spelling errors, but rather to identify areas which the Technical Specifications are technically or administratively different.

The review of Section 3.5/4.5 "Core and Containment Cooling" did not reveal any technical differences.

ATTACHMENT 5

QUAD CITIES 1/2 DIFFERENCES

Technical Specification 3/4.5

"EMERGENCY CORE COOLING SYSTEMS"

ATTACHMENT 5

COMPARISON OF QUAD CITIES UNIT 1 AND UNIT 2 TECHNICAL SPECIFICATIONS FOR THE IDENTIFICATION OF TECHNICAL DIFFERENCES

SECTION 3.5/4.5
"CORE AND CONTAINMENT COOLING"

Commonwealth Edison has conducted a comparison review of the Quad Cities Unit 1 and Unit 2 Technical Specifications to identify any technical differences in support of combining the Technical Specifications into one document. The intent of the review was not to identify any differences in presentation style (e.g. table formats, use of capital letters, etc.), punctuation or spelling errors, but rather to identify areas which the Technical Specifications are technically or administratively different.

The review of Section 3.5/4.5 "Core and Containment Cooling Systems" revealed the following technical differences:

Page 3.5/4.5-15

The third, fourth and fifth paragraphs which are part of the Unit 1 Technical Specification Bases are not included in the Unit 2 Bases. The information is applicable to both Units, therefore, the information is incorporated into the proposed Technical Specification Bases.

Page 3.5/4.5-14a (Unit 2 Bases)

The Unit 1 Bases do not contain this information. The material is contained within training material and the Core Operating Limits Report and thus, will not be included in the proposed specifications.

ATTACHMENT 6

SIGNIFICANT HAZARDS CONSIDERATIONS AND ENVIRONMENTAL ASSESSMENT EVALUATION

Technical Specification 3/4.5

"EMERGENCY CORE COOLING SYSTEMS"

ATTACHMENT 6

EVALUATION OF SIGNIFICANT HAZARDS CONSIDERATION

Commonwealth Edison has evaluated this proposed amendment and determined that it involves no significant hazards consideration. According to 10 CFR 50.92(c), a proposed amendment to an operating license involves no significant hazards consideration if operation of the facility, in accordance with the proposed amendment, would not:

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

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

3) Involve a significant reduction in a margin of safety.

The proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated because:

In general, the proposed changes represent the conversion of current requirement to a more generic format, or the addition of requirements which are based on the current safety analysis. Implementation of these changes will provide increased reliability of equipment assumed to operate in the current safety analysis, or provide continued assurance that specified parameters remain within their acceptance limits, and as such, will not significantly increase the probability or consequences of a previously evaluated accident.

Some of the proposed changes represent minor curtailments of the current requirements which are based on generic guidance or previously approved provisions for other stations. These proposed changes are consistent with the current safety analyses and have been previously determined to represent sufficient requirements for the assurance and reliability of equipment assumed to operate in the safety analysis, or provide continued assurance that specified parameters remain within their acceptance limits. As such, these changes will not significantly increase the probability or consequences of a previously accident.

ECCS systems and subsystems are not assumed in any safety analysis to initiate any accident sequence for both Dresden and Quad Cities Stations; therefore, the probability of any accident previously evaluated is not increased by the proposed changes. In addition, the proposed surveillance requirements for ECCS are more prescriptive than the current requirements specified within the Technical Specifications. The additional surveillance requirements improve the reliability and availability of ECCS and therefore, reduce the consequences of any accident previously evaluated as the probability of ECCS performing its intended function is increased by the additional surveillance.

For Quad Cities, the proposed amendment follows industry standards and eliminates redundant ECCS testing when a single train or subsystem of ECCS is made or found to be inoperable. The proposed amendment for Quad Cities does not involve a significant increase in the consequences of an accident previously evaluated because testing other than multiple system testing ensures that the present level of operability for the ECCS system is maintained. Other changes to Quad Cities specifications add additional requirements for the Suppression Chamber that provide compensatory actions to ensure an adequate cooling water supply is available in the event the suppression chamber is unavailable. These changes are consistent to STS and industry standards (Dresden's current specifications contain these requirements) and decrease the consequences of any accident previously evaluated for Quad Cities Station.

The proposed changes for HPCI and ADS increase the AOTs from 7 days to 14 days. These outage times are consistent to STS and industry standards.

ECCS action statements have been shortened to require the plant to be in Hot Shutdown conditions within 12 hours and Cold Shutdown conditions within 24 hours when ECCS vulnerabilities are identified. The current requirements limit the plant to be in Cold Shutdown within 24 hours. By bringing the plant to a safe configuration in a shorter period of time, the proposed changes decrease the consequences of an accident previously evaluated.

The proposed changes for requiring specific additional components as compensatory measures to be operable when an ECCS system or subsystem are inoperable have been changed to be consistent to both STS and industry standards. For example, requirements for the emergency diesel or other off-site power sources are being moved to the more appropriate location within Section 3/4.9, "Auxiliary Electric Systems." The proposed changes do not significantly affect nor do they involve a significant increase in the consequences of an accident previously evaluated.

The proposed changes for RCIC at Quad Cities and the Isolation Condenser at Dresden Station adopt STS format and content where applicable; therefore, the changes proposed for these sections of the specifications will not significantly increase the consequences of an accident previously evaluated.

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

In general, the proposed changes represent the conversion of current requirements to a more generic format, or the addition of requirements which are based on the current safety analysis. Others represent minor curtailments of the current requirements which are based on generic guidance or previously approved provisions for other stations. These changes do not involve revisions to the design of the station. Some of the changes may involve revision in the operation of the station; however, these provide additional restrictions which are in accordance with the current safety analysis, or are

to provide for additional testing or surveillances which will not introduce new failure mechanisms beyond those already considered in the current safety analyses. The retention of the current AOTs for ECCS maintain the existing assumptions from the current accident analyses; therefore, these changes will not create the possibility of a new or different kind from any accident previously evaluated.

The proposed changes for Dresden and Quad Cities Station's Technical Specification Section 3/4.5 are based on STS guidelines or later operating BWR plants' NRC accepted changes. These proposed changes have been reviewed for acceptability at the Dresden and Quad Cities Nuclear Power Stations considering similarity of system or component design versus the STS or later operating BWRs. No new modes of operation are introduced by the proposed changes, considering the acceptable operational modes in present specifications, the STS, or later operating BWRs. Surveillance requirements are changed to reflect improvements in technique, frequency of performance or operating experience at later plants. Proposed changes to action statements in many places add requirements that are not in the present technical specifications or adopt requirements that have been used successfully at other operating BWRs with designs similar to Dresden and Quad Cities. The proposed changes maintain at least the present level of operability. Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any previously evaluated.

The proposed changes for Quad Cities delete excessive testing requirements for ECCS. These changes do not introduce any new modes of operation which could initiate a new or different kind of accident. The proposed amendment will not introduce any new types of equipment failures that could cause a new or different kind of accident.

ECCS systems and subsystems are not assumed in any safety analysis to initiate any accident sequence for both Dresden and Quad Cities Stations. In addition, the proposed surveillance requirements for ECCS are more prescriptive than the current requirements specified within the Technical Specifications; therefore, the proposed changes do not create the possibility of a new or different kind of accident from any previously evaluated.

For Quad Cities, the proposed amendment follows industry standards and eliminates redundant ECCS testing when a single train or subsystem of ECCS is made or found to be inoperable. The proposed amendment for Quad Cities does not involve a significant increase in the consequences of an accident previously evaluated because testing other than multiple system testing ensures that the present level of operability for the ECCS system is maintained. Other changes to Quad Cities specifications add additional requirements for the Suppression Chamber that provide compensatory actions to ensure an adequate cooling water supply is available in the event the suppression chamber is unavailable. These changes are consistent to STS and industry standards (Dresden's current specifications contain these requirements) and do not increase the possibility of a new or different kind of accident for Quad Cities Station.

The proposed changes for HPCI and ADS increase the AOTs from 7 days to 14 days. The proposed changes increase system availability and conservatively limit reductions to single failure vulnerabilities; therefore, the possibility of a new or different kind of accident from any previously evaluated is not increased by the proposed changes. These outage times are consistent to STS and industry standards.

The proposed changes for RCIC at Quad Cities and the Isolation Condenser at Dresden Station adopt STS format and content where applicable; therefore, the changes proposed for these sections of the specifications will not significantly increase the possibility of a new or different kind of accident previously evaluated.

Involve a significant reduction in the margin of safety because:

In general, the proposed changes represent the conversion of current requirements to a more generic format, or the addition of requirements which are based on the current safety analysis. Others represent minor curtailments of the current requirements which are based on generic guidance or previously approved provisions for other stations. Some of the later individual items may introduce minor reductions in the margin of safety when compared to the current requirements. However, other individual changes are the adoption of new requirements which will provide significant enhancement of the reliability of the equipment assumed to operate in the safety analysis, or provide enhanced assurance that specified parameters remain with their acceptance limits. These enhancements compensate for the individual minor reductions, such that taken together, the proposed changes will not significantly reduce the margin of safety.

The proposed changes to Technical Specification Section 3/4.5 implement present requirements, or the intent of present requirements in accordance with the guidelines set forth in the STS. The proposed changes are intended to improve readability, usability, and the understanding of technical specification requirements while maintaining acceptable levels of safe operation. The proposed changes have been evaluated and found to be acceptable for use at Dresden and Quad Cities based on system design, safety analysis requirements and operational performance. Since the proposed changes are based on NRC accepted provisions at other operating plants that are applicable at Dresden and Quad Cities and maintain necessary levels of system, component or parameter readability, the proposed changes do not involve a significant reduction in the margin of safety.

The proposed amendment for Quad Cities Station will not reduce the availability of ECCS systems 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 ECCS systems when one or more systems is inoperable. The testing that will remain in the Technical Specifications is consistent to

industry standards and provides assurance of system performance; therefore, the proposed changes do not involve a significant reduction in the margin of safety.

ATTACHMENT 6

ENVIRONMENTAL ASSESSMENT STATEMENT APPLICABILITY REVIEW

Commonwealth Edison has evaluated the proposed amendment against the criteria for the identification of licensing and regulatory actions requiring environmental assessment in accordance with 10 CFR 51.20. 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 effluent that may be released offsite. Additionally, this request does not involve a significant increase in individual or cumulative occupational radiation exposure. Therefore, the Environmental Assessment Statement is not applicable for these changes.

ATTACHMENT 7

GENERIC LETTER 87-09 IMPLEMENTATION

Technical Specification 3/4.5

"EMERGENCY CORE COOLING SYSTEMS"

ATTACHMENT 7

APPLICATION OF GENERIC LETTER 87-09
REVISION TO SPECIFICATION 3.0.D

The Dresden/Quad Cities Technical Specification Upgrade Program has implemented the recommendations of Generic Letter 87-09. Included in these recommendations was a revision to Standard Technical Specification 3.0.4 for which these stations had no corresponding restriction. Under the proposed Specification, entry into an operational mode or other specified condition is permitted under compliance with the Action requirements. Indicated below is the method of implementation for this recommendation for each Action requirement in this package.

PROPOSED TECH SPEC	ACTION	APPL. MODEs	CONT. OPS IN APP. COND?	CAT	CLARIFICATION
3.5.A	1.a	1-3	7 days	No	
	1.b	1-3	12 hours	No	
	2.a	1-3	30 days	No	
	2.b	1-3	7 days	No	
	2.c	1-3	12 hours	No	
	3	1-3	14 days	No	
	4.a	1-3	14 days	No	
	4.b	1-3	12 hours	No	
	5	1-3	Unlimited	Yes	Perform SR 4.5.A.1.a.1
	6	1-3	Unlimited	Yes	
	7	1-3	Unlimited	Yes	Submit report in 90 days
3.5.B	1	4-5	Unlimited	Yes	Suspend potential draining activities.
	2	4-5	Unlimited	Yes	Establish secondary containment integrity
3.5.C	1	1-3	1 hour	No	
	2	4-5	Unlimited	Yes	Suspend draining activities
3.5.D	1 Quad	1-3	14 days	No	
	2 Quad	1-3	Unlimited	Yes	Perform SR 4.5.D.1.a

PROPOSED TECH SPEC	ACTION	APPL. MODEs	CONT. OPS IN APP. COND?	CAT	CLARIFICATION
	Action Dresden	1-3	14 days	No	