

AmerGen

An Exelon/British Energy Company

Clinton Power Station

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10CFR50.90

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8E.100a
March 1, 2001

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Clinton Power Station, Unit 1
Facility Operating License No. NPF-62
NRC Docket No. 50-461

Subject: Request for License Amendment Involving Reactor Core Isolation Cooling System Surveillance Testing Pressure Limit

In accordance with 10 CFR 50.90, "Application for amendment of license or construction permit," AmerGen Energy Company (AmerGen), LLC, is requesting a change to Appendix A, Technical Specifications (TS) of Facility Operating License No. NPF-62 for Clinton Power Station, (CPS). The proposed change is to TS Section 3.5.3, "RCIC System," Surveillance Requirement (SR) 3.5.3.3. This proposed change involves raising the upper bound RCIC steam supply pressure limit for the high pressure flow test from "less than or equal to 1020 psig" to "less than or equal to 1045 psig." Performance of this SR under the current TS pressure limits may require unnecessary power reductions during normal plant operation. We request NRC review and approval as soon as possible given that this is a quarterly test and next is due in May 2001, with an ultimate expiration date for the next quarterly test in June 2001.

This request is subdivided as follows.

1. Attachment A gives a description and safety analysis of the proposed change.
2. Attachment B includes the marked-up TS pages with the proposed change indicated.
3. Attachment C describes our evaluation performed using the criteria in 10 CFR 50.91 (a)(1) which provides information supporting a finding of no significant hazards consideration using the standards in 10 CFR 50.92(c).
4. Attachment D provides information supporting an Environmental Assessment.

This proposed change has been reviewed by the Plant Operations Review Committee and the Nuclear Safety Review Board.


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AmerGen is notifying the State of Illinois of this application request for changes to the TS by transmitting a copy of this letter and its attachments to the designated State Official.

Should you have any questions concerning this letter, please contact Mr. J. L. Peterson at 217-937-3418.

Respectfully,


J. M. Heffley
Vice President
Clinton Power Station

Attachments: Affidavit
Attachment A: Description and Safety Analysis for Proposed Change
Attachment B: Marked-Up Pages for Proposed Change
Attachment C: Information Supporting a Finding of No Significant Hazards Consideration
Attachment D: Information Supporting an Environmental Assessment

cc: Regional Administrator – NRC Region III
NRC Senior Resident Inspector – Clinton Power Station
Office of Nuclear Facility Safety – Illinois Department of Nuclear Safety

STATE OF ILLINOIS)
COUNTY OF DEWITT)
IN THE MATTER OF)
AMERGEN ENERGY COMPANY, LLC) Docket Number
CLINTON POWER STATION) 50-461

SUBJECT: Request for License Amendment Involving Reactor Core Isolation Cooling System Surveillance Testing Pressure Limit

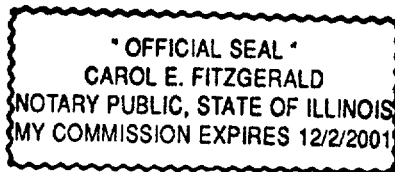
AFFIDAVIT

I affirm that the content of this transmittal is true and correct to the best of my knowledge, information and belief.



M. J. Pacilio
Plant Manager
Clinton Power Station

Subscribed and sworn to before me, a Notary Public in and for the State above named, this 1st day of March, 2001.


Notary Public

ATTACHMENT A
Proposed Technical Specification Change for
Clinton Power Station, Unit 1
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DESCRIPTION AND SAFETY ANALYSIS
FOR THE PROPOSED CHANGE

INTRODUCTION AND BACKGROUND

The Reactor Core Isolation Cooling (RCIC) System is designed to operate either automatically or manually following reactor pressure vessel (RPV) isolation accompanied by a loss of coolant flow from the feedwater system to provide adequate core cooling and control of RPV water level. Under these conditions, the High Pressure Core Spray (HPCS) and RCIC systems perform similar functions. The RCIC System design requirements in part ensure that the criteria of 10 CFR 50, "Domestic Licensing of Production and Utilization Facilities," Appendix A, "General Design Criteria," Criterion 33, "Reactor Coolant Makeup," are satisfied.

The RCIC System (Reference Updated Safety Analysis Report (USAR) Section 5.4.6) consists of a steam driven turbine pump unit, piping, and valves to provide steam to the turbine, as well as piping and valves to transfer water from the suction source to the reactor core via the reactor head cooling spray nozzle. Suction piping is provided from the RCIC storage tank and the suppression pool. Pump suction is normally aligned to the RCIC storage tank to minimize injection of suppression pool water into the RPV. However, if the RCIC storage tank water supply is low, or the suppression pool level is high, an automatic transfer to the suppression pool water source ensures a water supply for continuous operation of the RCIC System. The steam supply to the turbine is piped from the "A" main steam line, upstream of the inboard main steam line isolation valve.

The RCIC System is designed to provide core cooling for a wide range of reactor pressures, 150 pounds per square inch gage (psig) to 1200 psig. Upon receipt of an initiation signal, the RCIC turbine accelerates to a specified speed. As the RCIC flow increases, the turbine control valve is automatically adjusted to maintain design flow. Exhaust steam from the RCIC turbine is discharged to the suppression pool. A full flow test line is provided to route water to the RCIC storage tank to allow testing of the RCIC System during normal operation without injecting water into the RPV.

The function of the RCIC System is to respond to transient events by providing makeup coolant to the reactor. Should a design basis control rod drop accident occur, the RCIC System can be used in conjunction with the HPCS System to meet the single failure criteria in mitigating the consequences of the event (Reference USAR Section 15.4.9). The RCIC System is an Engineered Safety Feature (ESF) for this event and satisfies 10 CFR 50.36, "Technical specifications," paragraph (c)(2)(ii)(C).

DESCRIPTION AND SAFETY ANALYSIS OF PROPOSED CHANGE

Technical Specifications (TS) Section 3.5.3, "RCIC System," Surveillance Requirement (SR) 3.5.3.3 consists of the requirement to verify the RCIC pump can develop a flow rate of greater than or equal to 600 gallons per minute against a system head corresponding to reactor pressure. This SR is required to be performed with RCIC steam supply pressure less than or equal to 1020 psig and greater than or equal to 920 psig. This SR is required to be performed every 92 days, consistent with the requirements of CPS TS Section 5.5.6, "Inservice Testing Program."

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In addition to this surveillance requirement, SR 3.5.3.4 consists of a similar requirement to verify the RCIC pump flow rate with RCIC steam supply pressure less than or equal to 150 psig and greater than or equal to 135 psig every 18 months.

SR 3.5.3.3, along with SR 3.5.3.4, are in place to demonstrate system operability at both normal reactor operating pressures (i.e., high pressure) and at low reactor pressure. Since reactor pressure varies as a function of reactor power, a pressure range was provided in SR 3.5.3.3. The specified pressure range was intended to be broad enough to prevent the requirement for RCIC testing from imposing restrictions or limitations on the power operation of the reactor. Thus, it was not intended to require that power reductions, to reduce reactor pressure at full power operations, be made to perform this test. Performance of this surveillance test under the current TS pressure limits may require unnecessary power reductions during normal plant operation.

Since normal reactor operating pressures may exceed 1020 psig, AmerGen Energy Company (AmerGen), LLC, is proposing to change the current TS value in SR 3.5.3.3 from ≤ 1020 psig to ≤ 1045 psig. This proposed change is consistent with the current TS Section 3.4.12, "Reactor Steam Dome Pressure," upper pressure limit of 1045 psig, the RCIC operating limit of 1200 psig, and well below the TS Section 2.1.2, "Reactor Coolant System Pressure Safety Limit," of 1325 psig. Therefore, SR 3.5.3.3 would be revised as follows.

"Verify, with RCIC steam supply pressure ≤ 1045 psig and ≥ 920 psig, the RCIC pump can develop a flow rate ≥ 600 gpm against a system head corresponding to reactor pressure."

It should be noted that the Note that accompanies this SR, which states that this test is not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform this test, is not affected by this proposed change.

ATTACHMENT B
Proposed Technical Specification Change for
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MARKED-UP PAGES FOR PROPOSED CHANGE

REVISED PAGES

3.5-11

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.5.3.1 Verify the RCIC System piping is filled with water from the pump discharge valve to the injection valve.	31 days
SR 3.5.3.2 Verify each RCIC System manual, power operated, and automatic valve in the flow path, that is not locked, sealed, or otherwise secured in position, is in the correct position.	31 days
SR 3.5.3.3 -----NOTE----- Not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform the test. ----- Verify, with RCIC steam supply pressure \leq 1020 1045 psig and \geq 920 psig, the RCIC pump can develop a flow rate \geq 600 gpm against a system head corresponding to reactor pressure.	92 days
SR 3.5.3.4 -----NOTE----- Not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform the test. ----- Verify, with RCIC steam supply pressure \leq 150 psig and \geq 135 psig, the RCIC pump can develop a flow rate \geq 600 gpm against a system head corresponding to reactor pressure.	18 months

(continued)

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Proposed Technical Specification Change for
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INFORMATION SUPPORTING A FINDING OF
NO SIGNIFICANT HAZARDS CONSIDERATION

In accordance with 10 CFR 50.92, "Issuance of Amendment," a proposed change to the operating license involves no significant hazards consideration if operation of the facility in accordance with the proposed change would not: (1) involve a significant increase in the probability or consequences of any accident previously evaluated, (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 change has been evaluated against each of the three criteria and it has been determined that the change does not involve a significant hazard as presented below.

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

The Reactor Core Isolation Cooling (RCIC) System is designed to operate either automatically or manually following reactor pressure vessel (RPV) isolation accompanied by a loss of coolant flow from the feedwater system to provide adequate core cooling and control of RPV water level. The RCIC System is also designed to provide core cooling for a wide range of reactor pressures, from 150 pounds per square inch gage (psig) to 1200 psig. The proposed change to the Technical Specifications (TS) Section 3.5.3, "RCIC System," Surveillance Requirement (SR) 3.5.3.3 to allow the RCIC system high pressure test to be performed at a higher reactor pressure (i.e., less than or equal to 1045 psig) is consistent with the current design and licensing basis for the RCIC system. The change to the upper pressure limit for the conduct of this SR will not adversely impact the performance characteristics of any structure, system, or component that is assumed to initiate a previously evaluated accident. Therefore, the proposed change will not result in an increase in the probability of an accident previously evaluated.

The proposed change to the TS SR will not result in reduced performance or effectiveness of the reactor coolant pressure boundary and therefore will not have an adverse impact on any barriers. As such, the RCIC System will still be capable of performing its transient and accident mitigation function as assumed in the accident analysis. On this basis, the consequences of any accident previously evaluated are not affected by the proposed change.

Based on the above, the proposed change does not involve a significant increase in the probability or consequences on any accident previously evaluated.

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

The proposed change to the TS SR to allow the RCIC System high pressure test to be performed at a higher reactor pressure (i.e., less than or equal to 1045 psig) is consistent with the current design and licensing basis for the RCIC system. The proposed change will not change the method for performing the test and the revised test pressure is within the current operating design basis of the

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plant. Since the proposed test pressure is within the design basis for the reactor and the RCIC System, performing the SR at the new pressure will not prevent the RCIC System from performing its required function or result in a failure of the reactor coolant pressure boundary. As such, the proposed change will not create the possibility of a new or different kind of accident from any accident previously evaluated.

- (3) The proposed change will not involve a significant reduction in the margin of safety.

The RCIC System is designed to operate either automatically or manually following RPV isolation accompanied by a loss of coolant flow from the feedwater system to provide adequate core cooling and control of RPV water level. The RCIC System is also designed to provide core cooling for a wide range of reactor pressures, from 150 psig to 1200 psig. The proposed change to TS SR 3.5.3.3 to allow the RCIC System high pressure test to be performed at a higher pressure (i.e., less than or equal to 1045 psig) is consistent with the current design and licensing basis for the RCIC system. Since the test at the higher reactor pressure will continue to provide reasonable assurance that the RCIC System will perform its intended safety function when called upon during an accident or transient, the proposed change will not involve a significant reduction in the margin of safety.

Based upon the above analysis, the proposed change will not increase the probability or consequences of any accident previously evaluated, create the possibility of a new or different kind of accident from any accident previously evaluated, or involve a significant reduction in the margin of safety. Therefore, the proposed change meets the requirements of 10 CFR 50.92, paragraph (c), and involves no significant hazards consideration.

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INFORMATION SUPPORTING AN ENVIRONMENTAL ASSESSMENT

The proposed change was evaluated against the criterion of 10 CFR 51.22, "Criterion for Categorical Exclusion," for environmental considerations. Since the proposed change will ensure consistency with plant design or licensing basis documents, the proposed change (1) does not significantly increase individual or cumulative occupational radiation exposures, (2) does not significantly change the types or significantly increase the amount of effluents that may be released offsite, and (3) as discussed in this attachment, does not involve a significant hazards consideration. Based on the foregoing, it has been concluded that the proposed Technical Specification change meets the criterion of 10 CFR 51.22, paragraph (c)(9), for categorical exclusion from the requirement for an Environmental Impact Statement.