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Wilfred Connell
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U-602731
2C.220

WC-174-97
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Docket No. 50-461

10CFR50.73

Document Control Desk
Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Clinton Power Station - Unit 1
Licensee Event Report No. 97-009-00

Dear Madam or Sir:

Enclosed is Licensee Event Report (LER) No. 97-009-00: Surveillance Procedure Does Not Adequately Consider Accuracy Of Installed Instrumentation In Meeting Technical Specification Requirements For Reactor Core Isolation Cooling Pump. This report is being submitted in accordance with the requirements of 10CFR50.73.

Sincerely yours,

Wilfred Connell
Vice President

RSF/lrh

Enclosure

cc: NRC Clinton Licensing Project Manager
NRC Resident Office, V-690
Regional Administrator, Region III, USNRC
Illinois Department of Nuclear Safety
INPO Records Center

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(4-95)

EXPIRES 04/30/98

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3160-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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05000461

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TITLE (4)

Surveillance Procedure Does Not Adequately Consider Accuracy Of Installed Instrumentation In Meeting Technical Specification Requirements for Reactor Core Isolation Cooling Pump

EVENT DATE (5)			LER NUMBER (6)		REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME
03	26	97	97	009	00	04	22	97	None
									DOCKET NUMBER
									05000
									FACILITY NAME
									None
									DOCKET NUMBER
									05000

OPERATING MODE (9)	POWER LEVEL (10)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)			
4		20.2201(b)	20.2203(a)(2)(v)	<input checked="" type="checkbox"/>	50.73(a)(2)(i)
		20.2203(a)(1)	20.2203(a)(3)(i)		50.73(a)(2)(ii)
	000	20.2203(a)(2)(i)	20.2203(a)(3)(ii)		50.73(a)(2)(iii)
		20.2203(a)(2)(ii)	20.2203(a)(4)		50.73(a)(2)(iv)
		20.2203(a)(2)(iii)	50.36(c)(1)		50.73(a)(2)(v)
		20.2203(a)(2)(iv)	50.36(c)(2)		50.73(a)(2)(vii)
					OTHER
					Specify in Abstract below or in NRC Form 366A

LICENSEE CONTACT FOR THIS LER (12)

NAME

W. L. Shurlow, Engineering Projects

TELEPHONE NUMBER (Include Area Code)

(217) 935-8881, Extension 3223

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)

EXPECTED SUBMISSION DATE (15)

MONTH DAY YEAR

☒ YES
(If yes, complete EXPECTED SUBMISSION DATE).

NO

06 04 97

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

With the plant in COLD SHUTDOWN and the sixth refueling outage in progress, a generic concern was identified that values in surveillance procedures used to assure that Clinton Power Station meets Technical Specifications (TS) may not have adequate consideration for the tolerances of the installed instrumentation. A plan was developed to review all TS Surveillance Requirements (SR) to assure indications observed by the operators will accurately reflect that the parameter is within the TS limits. During implementation of the plan, engineers were unable to confirm that some of the previous surveillance test data met the acceptance criteria of TS SR 3.5.3.3 for the Reactor Core Isolation Cooling (RCIC) system pump when potential instrumentation inaccuracies were applied. The failure to meet TS SR 3.5.3.3 constitutes a failure to meet the Limiting Condition for Operation of TS 3.5.3, RCIC System. The cause of this event has not yet been determined, pending completion of the reviews for all TS SR parameters. The scope of the review for instrumentation inaccuracies includes approximately 146 TS SR parameters. The cause and corrective action will be determined and TS SR parameters will be met prior to startup from the current refueling outage.

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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

DESCRIPTION OF EVENT

On February 28, 1997, an engineer was investigating an instrumentation inaccuracy concern about the Standby Liquid Control (SLC) system [BR] tank [TK] low temperature indication [TI] that created the potential for SLC temperature to fall below Technical Specification (TS) Surveillance Requirements (SR). The concern that the surveillance acceptance criteria does not include provisions for instrument inaccuracies was identified in Condition Report (CR) 1-97-02-075 initiated by a nuclear assessor on February 10, 1997, during a review of industry information for applicability to Clinton Power Station (CPS).

Although the engineering investigation concluded that the TS SRs were met for the SLC tank temperature, the investigating engineer determined that the instrumentation inaccuracy issue was a generic concern for installed instrumentation used by operators to verify TS requirements are met. The engineer initiated CR 1-97-02-287 to track a determination of the scope, cause and corrective action for the generic concern that values in surveillance procedures used to assure that CPS meets TSs may not have adequate consideration for the tolerances of the instrumentation. In most cases, the acceptance criteria in surveillance procedures are the same values as the TS SR, and as-read surveillance test values have met the TS SRs. However, this condition is only acceptable if the analysis used to specify the TS value considered margin for instrument accuracy.

In response to CR 1-97-02-287, Nuclear Station Engineering developed a plan to review all TS SRs prior to startup from the current refueling outage, RF-6, to assure that the indications observed by the operator will accurately reflect that the parameter is within the TS limits. Under the plan, all TS surveillance parameters are being evaluated except those in SR 3.3.1.1, "Reactor Protection System Instrumentation" and SR 3.3.1.2, "Source Range Monitor Instrumentation", since these areas were reviewed previously under a safety system set point methodology review.

The plan includes a review of documents containing information about the basis for the TS parameter to determine if margin is available for instrumentation accuracy. If margin to consider instrument accuracy is not available in the documents, previous surveillances are reviewed to determine if margin is available between the TS value and the values read during previous surveillance tests. If operability as required by the TS cannot be determined considering instrument tolerance, the condition is considered a failure to meet the SR and failure to meet the Limiting Condition for Operation (LCO). Condition Reports are initiated to track resolution of failures to meet the LCOs.

On March 26, 1997, the plant was in Mode 4 (COLD SHUTDOWN) with reactor coolant temperature being maintained between 100 and 120 degrees Fahrenheit and pressure at zero pounds per square inch. The sixth refueling outage (RF-6) and implementation of the engineering plan were in progress. At about 0945 hours, an engineer reviewing TS SRs for the Reactor Core Isolation Cooling (RCIC) system [BN] pump [P] was unable to confirm that some of the previous surveillance test data met the acceptance criteria of TS Surveillance Requirement 3.5.3.3 when potential instrumentation inaccuracies were applied.

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SR 3.5.3.3 requires verification on a 92-day frequency that the RCIC pump can develop a flow rate greater than or equal to 600 gallons per minute (gpm) against a system head corresponding to reactor pressure, with RCIC steam supply pressure less than or equal to 1020 pounds per square inch gage (psig) and greater than or equal to 920 psig. The engineer found that the acceptance criteria in surveillance procedure CPS 9054.01, "RCIC System Operability Check," was the same as the TS SR. Surveillance test data obtained on August 26, 1996, was reviewed and when potential instrument inaccuracy was applied to the data, compliance with the TS SR for RCIC pump discharge pressure equivalent to reactor pressure could not be confirmed. The review of surveillance data was limited to identifying at least one incident reportable under the provisions of 10CFR50.73; therefore, TS SR 3.5.3.3 may not have been met during other surveillance tests.

Failure to meet TS SR 3.5.3.3 constitutes a failure to meet the LCO of TS 3.5.3, "RCIC System." The engineer initiated CR 1-97-03-182 to track resolution of the instrumentation inaccuracies issue associated with TS SR 3.5.3.3. The Operations Shift Supervisor (SS) was notified about the instrumentation inaccuracies issue at about 1050 hours and he placed a restraint on entering Mode 2 (STARTUP) and Mode 3 (HOT SHUTDOWN) at greater than 150 psig, pending resolution of the issue.

No automatic or manually initiated safety responses were necessary to place the plant in a safe and stable condition. No other equipment or components were inoperable at the start of this event to the extent that their inoperable condition contributed to this event.

CAUSE OF EVENT/CORRECTIVE ACTION

A cause evaluation for this event has not yet been completed and corrective actions have not been determined. The cause evaluation will be performed following completion of the reviews for all TS SR parameters. The scope of the review for instrumentation inaccuracies includes approximately 146 TS SR parameters. Illinois Power (IP) will complete the reviews of the parameters prior to startup from the current refueling outage. IP will determine the cause and corrective action for this event and will ensure TS SR parameters are met prior to startup from the current refueling outage.

IP expects to submit a supplemental report to the NRC including any additional parameters that do not meet TS SR requirements and the cause, corrective action, and similar event information for this event by June 4, 1997.

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ANALYSIS OF EVENT

This event is reportable under the provisions of 10CFR50.73(a)(2)(i)(B) due to failure to meet TS Surveillance Requirement 3.5.3.3 and thus the LCO for TS 3.5.3.

An assessment of the safety consequences and implications associated with the inability to confirm compliance with TS SR 3.5.3.3 has concluded that this issue is not nuclear safety significant. This conclusion is based on review of Inservice Inspection (ISI) test data obtained during performance of the same surveillance test (CPS 9054.01) as the surveillance test performed to satisfy TS SR 3.5.3.3. ISI test data obtained during surveillance tests demonstrate that the RCIC pump is capable of producing the required flow under the required pressure conditions as specified by the TS SR even when potential instrument inaccuracy was applied to the data.

Compliance with TS SR 3.5.3.3 cannot be confirmed from at least August 26, 1996 to September 6, 1996.

ADDITIONAL INFORMATION

No equipment or components failed during this event.

Previous similar event information will be provided in a supplement to this report.

For further information regarding this event, contact W. L. Shurlow, Engineering Projects, at (217) 935-8881, extension 3223.