



Public Service Electric and Gas Company P.O. Box 236 Hancocks Bridge, New Jersey 08038-0236

Nuclear Business Unit

DEC 20 1995

LR-N95241

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Dear Sir:

HOPE CREEK GENERATING STATION
DOCKET NO. 50-354
UNIT 1
LICENSEE EVENT REPORT 95-035-00

This Licensee Event Report entitled "Failure to Lock the Reactor Mode Switch in OPCON 5, Missed SRM Surveillance, Missed Suppression Chamber Level Verification Surveillance" is being submitted pursuant to the requirements of 10CFR50.73(a)(2)(i)(B).

Sincerely,

Mark E. Reddemann
General Manager -
Hope Creek Operations

SORC Mtg. 95-124
Attachment

LMK/tcp

C Distribution
LER File 3.7

200000

The power is in your hands

9512260169 951220
PDR ADDCK 05000354
S PDR

95-216E REV. 6/94

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 (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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TITLE (4)
Failure to Lock the Reactor Mode Switch in OPCON 5, Missed SRM Surveillance, Missed Suppression Chamber Level Surveillance

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	DOCKET NUMBER
11	20	95	95	-- 035	-- 00	12	20	95		05000
										05000

OPERATING MODE (9) 5

POWER LEVEL (10) 0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)

20.2201(b)	20.2203(a)(2)(v)	<input checked="" type="checkbox"/>	50.73(a)(2)(i)(B)	50.73(a)(2)(viii)
20.2203(a)(1)	20.2203(a)(3)(i)		50.73(a)(2)(ii)	50.73(a)(2)(x)
20.2203(a)(2)(i)	20.2203(a)(3)(ii)		50.73(a)(2)(iii)	73.71
20.2203(a)(2)(ii)	20.2203(a)(4)		50.73(a)(2)(iv)	OTHER
20.2203(a)(2)(iii)	50.36(c)(1)		50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 366A
20.2203(a)(2)(iv)	50.36(c)(2)		50.73(a)(2)(vii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME G. Daves	TELEPHONE NUMBER (Include Area Code) (609) 339-3071
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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)

YES (If yes, complete EXPECTED SUBMISSION DATE).	<input checked="" type="checkbox"/>	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
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ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

During Hope Creek's sixth refueling outage, it was identified that compliance with Technical Specification 3.9.1, "Reactor Mode Switch", was not being maintained. Specifically, the reactor mode switch was not locked in the Shutdown or Refuel position during Operation Condition 5 (Refueling) as required. The Operations Department initiated an internal review to ensure all operational condition requirements were properly listed in the surveillance log and associated implementing procedures. This review resulted in the self-identification of two additional missed surveillances. Surveillance requirement 4.9.2 for Refueling Operations - Instrumentation, specifically for the Source Range Monitors, had not been met. In addition, surveillance requirement 4.5.3.1.b for suppression chamber level had not been met. The root causes of these occurrences were inadequate procedures and the lack of verbatim compliance with the Technical Specifications. Corrective actions include procedure revisions and training enhancements. These occurrences are reportable under 10CFR50.73(a)(2)(i)(B), as operation or conditions prohibited by the plant's Technical Specifications.

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PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor (BWR/4)
 Reactor Power Control System, EIIS Identifier: JD
 Incore/Excore Monitoring System, EIIS Identifier: IG
 Drywell Environmental Control System, EIIS Identifier: VB

IDENTIFICATION OF OCCURRENCE

TITLE (4): a) Failure to Lock the Reactor Mode Switch in OPCON 5, b) Missed SRM Surveillance, c) Missed Suppression Chamber Level Verification Surveillance

Event Occurrence: a) 11/20/95, b) 11/21/95, c) 11/21/95
 Event Time: a) 1250 hours, b) 0050 hours, c) 0050 hours
 Discovery Date: a) 11/22/95, b) 11/23/95, c) 12/11/95

CONDITIONS PRIOR TO OCCURRENCE

Plant in OPERATIONAL CONDITION 5 (REFUELING)
 Reactor Power 0% of rated power (Refueling Outage 6)

DESCRIPTION OF OCCURRENCE

On November 10, 1995, a plant shutdown was initiated to comply with the requirements of Technical Specification 3.6.1.1, Primary Containment Integrity, due to excessive Drywell to Torus leakage (see LER 95-031-00). On November 20, 1995, procedure HC.OP-IO.ZZ-0005(Q), Cold Shutdown to Refueling, was initiated. A prerequisite in this procedure requires that the reactor mode switch be locked in the Refuel or Shutdown position. This prerequisite was satisfied by removing the key from the mode switch and was initiated by the Senior Nuclear Shift Supervisor (SNSS) as being complete. At 1121 hours on November 20, 1995, the SNSS and the Shift Manager gave permission to initiate actions to enter OPCON 5.

During the afternoon of November 21, 1995, the resident NRC inspector observed that the key was inserted in the reactor mode switch and asked the Nuclear Shift Supervisor (NSS) how the reactor mode switch would be locked. The NSS's response was that locked meant that the key would be removed when required by the Technical Specifications (TS). The NSS then reviewed TS 3.9.1, 'Reactor Mode Switch', and concluded that compliance with the Limiting Condition for Operation (LCO) was satisfied, because he believed that the reactor mode switch was not required to be locked until core alterations were initiated. The key remained in the reactor mode switch.

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DESCRIPTION OF OCCURRENCE (cont'd)

During the evening of November 21, 1995, the NSS was tasked to further review TS 3.9.1 compliance with the SNSS and take any appropriate follow-up actions to ensure compliance.

Subsequent review by the NSS concluded that compliance with the action statement had been met and that the 'locked' requirement only applied during core alterations. The night shift SNSS believed that the conclusion was correct.

During day shift on November 22, 1995, the senior NRC resident inspector questioned the SNSS regarding compliance with TS 3.9.1. Following this discussion, the determination was made by the SNSS that compliance with TS 3.9.1 was not being met because the reactor mode switch is required to be locked in OPCON 5. The reactor mode switch was locked by removal of the key at 0802 hours on November 22, 1995.

The Operations Department initiated immediate corrective actions to determine if similar deficiencies existed. This review resulted in the discovery of additional procedural deficiencies relative to OPCON 5 surveillance requirements.

These conditions are reportable under 10CFR50.73(a)(2)(i)(B) as any operation or condition prohibited by the plant's TS.

ANALYSIS OF OCCURRENCE

TS 3.9.1 requires that the reactor mode switch be OPERABLE and locked in the Shutdown or Refuel position during OPCON 5 with the exception of Special Tests or selected surveillance testing activities. Surveillance requirement (SR) 4.9.1.1.b requires that the reactor mode switch be verified to be locked in the Shutdown or Refuel position at least once per 12 hours.

Procedure HC.OP-IO.ZZ-0005(Q), Cold Shutdown to Refueling, provides a sequence for placing the plant in a Refueling configuration (OPCON 5) from Cold Shutdown (OPCON 4). This procedure also triggers a review to ensure conformance with Technical Specification (TS) requirements. A prerequisite in the procedure requires that the reactor mode switch be locked in the Refuel or Shutdown position.

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ANALYSIS OF OCCURRENCE (cont'd)

This prerequisite was satisfied by removing the key from the mode switch. The step was initialed off by the SNSS as being complete. The reactor mode switch was locked in position as required.

There are many surveillances that require changing the position of the mode switch. There were no procedural controls in place at the time of this violation to ensure the reactor mode switch was relocked following any change in position of the reactor mode switch once OPCON 5 was entered.

Procedure, HC.OP-DL.ZZ-0026(Q), which controls performance of periodic surveillance requirements having a frequency of once per day or less, was in error. Revision 11 of HC.OP-DL.ZZ-0026(Q) reformatted the procedure. It was during this revision that the word 'locked' was unintentionally eliminated from the reactor mode switch surveillance, such that the procedure only required that the reactor mode switch be in the Shutdown or Refuel position and did not specify that it be locked.

HC.OP-DL.ZZ-0026(Q), Attachment 1, Surveillance Log, addresses all recurring surveillance requirements for OPCONs 1 through 5. Attachment 1 is completed daily, irrespective of plant condition. Attachment 2 entitled Refuel/Core Alterations, verifies that the reactor mode switch is in the Shutdown or Refuel position and verifies completion of other surveillances required for refueling and core alterations. HC.OP-IO.ZZ-0005(Q) requires verification that all surveillance requirements for OPCON 5 are current prior to entering OPCON 5. Prior to revision 8 of that procedure, step 5.1.7 included completion of Attachment 2 as part of the requirements to enter OPCON 5. The procedure revision excluded completion of Attachment 2 prior to entering OPCON 5.

After the discovery of the missed reactor mode switch surveillance, the Operations Department initiated a review of the refueling TSS to ensure compliance. During this review it was identified that surveillance requirement 4.9.2.a.2, which requires that each of the required Source Range Monitor (SRM) channels be demonstrated operable at least once per 12 hours by verifying the detectors are inserted to the normal operating level, was not performed during OPCON 5 as required. This surveillance was also listed on Attachment 2 of HC.OP-DL.ZZ-0026(Q) with the reactor mode switch position. This missed surveillance is a result of the same incorrect change to HC.OP-IO.ZZ-0005(Q) discussed above, which excluded completion of Attachment 2 prior to entering OPCON 5.

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ANALYSIS OF OCCURRENCE (cont'd)

A review of HC.OP-DL.ZZ-0026(Q) identified an additional missed surveillance requirement. An error was made during the implementation of Amendment 71. Amendment 71 removed certain action statements and surveillance requirements for the suppression chamber temperature and level instruments from TS 3.6.2.1, "Containment Systems - Suppression Chamber," in accordance with the Improved General Electric Boiling Water Reactor/4 Standard Technical Specifications. During implementation of Amendment 71, it was erroneously assumed that there was a change in the frequency of verification of suppression chamber level. As a result, HC.OP-DL.ZZ-0026(Q) was changed to indicate that suppression chamber level verification was only required once per 24 hours during OPGONs 4 and 5. However, TS 3.5.3, "Emergency Core Cooling Systems - Suppression Chamber," requires that suppression chamber level be verified at least once per 12 hours during OPGONs 4 and 5. As a result of the inadequate procedure, surveillance of the suppression chamber level as required in OPGONs 4 and 5 was missed.

Conclusion: In all three cases, the content of the Operations Procedures did not reflect TS requirements.

Regarding TS 3.9.1, several SROs believed, upon initially reading the TS, that Hope Creek was in compliance with TS 3.9.1 since the action statement, which states that "with the reactor mode switch not locked in the Shutdown or Refuel position as specified, suspend core alterations and lock the reactor mode switch in the Shutdown or Refuel position", was being satisfied. This response does not reflect an adequate understanding of this TS and, together with the above self-identified missed surveillances and other recently identified TS violations, a less than adequate working knowledge of the TS requirements exists. This lack of clear understanding also contributed to the delay in meeting the LCO.

CAUSE OF OCCURRENCE

The root causes of these occurrences were inadequate procedures and lack of verbatim compliance with the Technical Specifications. A contributing factor to these occurrences was a less than adequate understanding of the TS requirements.

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SAFETY SIGNIFICANCE

The safety significance of these occurrences is minimal. Regarding the reactor mode switch, a review of operator logs leading up to the entry into OPCON 5 through the date that full compliance was achieved (November 22, 1995), indicates that the reactor mode switch position was properly maintained in the Shutdown or Refuel position with the exception of periodic testing as permitted by TS 3.9.1. Regarding the SRMs, a review of the control room logs did not reveal any indication that the 3 operable SRMs were other than full in, as required. Regarding the suppression chamber level, a review of the readings taken every 24 hours indicated required levels were maintained.

PREVIOUS OCCURRENCES

Failure to follow TS requirements has recently been documented in LERs 95-003-00, LER 95-003-01, LER 95-017-00, and LER 95-034-00.

LERs 95-003-00 and 95-003-01 documented events where operators performed 18 month surveillances in an operational condition other than that specified by the Technical Specifications. The corrective actions as a result of these LERs focused on procedural inadequacies associated with operational condition limitations and frequency and not surveillances required to change operational conditions. Therefore, these corrective actions would not have corrected procedural deficiencies or less than adequate working knowledge that resulted in these most recent missed surveillances.

LER 95-017-00 documented a missed surveillance due to inadequate testing of the circuits associated with vital bus load shedding initiated in response to a Loss of Offsite Power. A corrective action taken was the initiation of the Technical Specification Surveillance Improvement Program (TSSIP). The charter of the TSSIP project is to compare the TS requirements of section 4.0 (with the exception of section 4.0.5 requirements) to the surveillance procedures to verify that all requirements are met. The TSSIP would have identified and corrected the procedural deficiencies that resulted in missed surveillances for the reactor mode switch, the SRM position, and the suppression chamber level verification.

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PREVIOUS OCCURRENCES (cont'd)

LER 95-034-00 documented a failure to perform a surveillance requirement based on an incorrect assumption regarding TS 4.0.1. The cause of this event was attributed to incorrect assumptions made by the operator concerning the time at which the surveillances are required to be performed. Corrective actions include procedural revisions and enhancements to operator training emphasizing the applicability of Technical Specification 4.0.1. These enhancements to operator training, also documented as a corrective action in this LER, will address the less than adequate working knowledge of the Technical Specifications.

There have been no previous LERs for failure to comply with the reactor mode switch TS 3.9.1 requirements, the Refueling Operation - Instrumentation TS 3.9.2 requirements, or the Emergency Core Cooling Systems - Suppression Chamber TS 3.5.3 requirements.

CORRECTIVE ACTIONS

The Operations Department completed an internal review to ensure all mode requirements are properly listed in HC.OP-DL.ZZ-0026(Q), Attachment 2 for other TS 3.9 requirements.

Procedure HC.OP-DL.ZZ-0026(Q) has been revised to ensure the locked reactor mode switch requirement is completed in accordance with Technical Specification requirements.

Procedure HC.OP-IO.ZZ-0005(Q) will be revised to ensure the locked reactor mode switch requirement and the SRM 'normal position' verifications are completed in accordance with Technical Specification requirements. This procedure change will be completed by February 1, 1996. Interim measures have been put in place until the procedure revision is completed.

Procedure HC.OP-DL.ZZ-0026(Q) will be revised to correct the frequency of verifying Torus level. This procedure change will be completed by February 1, 1996. A temporary change has been established in the interim.

A method to ensure that the reactor mode switch is returned to the locked position following the reactor mode switch being unlocked and repositioned to support surveillance activities will be identified by February 1, 1996. An interim method has been implemented to ensure that the reactor mode switch is maintained locked.

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CORRECTIVE ACTIONS (cont'd)

The Operations Department has identified weaknesses in the existing training lesson plan for the Technical Specifications for the Training Department to address, including Technical Specifications 3.9.1, 3.9.2, and 3.5.3.

The training department will make the appropriate changes to the lesson plan and train the licensed operators. These actions will be completed prior to startup following the current refueling outage.

These occurrences will be evaluated by the Training department to determine required enhancements to the Cold Shutdown and Refueling Operational Condition lesson plans. The lesson plan revisions will be completed by June 30, 1996.

The scope of a corrective action that was previously initiated, the Technical Specification Surveillance Improvement Program (TSSIP), is already addressing the generic issues of procedures implementing surveillance requirements. The charter of the TSSIP project is to compare the TS requirements of section 4.0 (with the exception of section 4.0.5 requirements) to the surveillance procedures to verify that all requirements are met.

Personnel performance issues will be addressed as appropriate.