NRC FORM 366 (5-92) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104
EXPIRES: 5/31/95
ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB7714), 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.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Edwin I. Hatch Nuclear Plant - Unit 1	0 5 0 0 0 3 2 1	1 OF 4

TITLE (4)
Personnel Error and Inadequate Procedure Results in Group 1 Isolation on Low Condenser Vacuum

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(S)
1 1	1 8	9 7	9 7	0 0 8	0 0	1 2	0 8	9 7		0 5 0 0 0
									FACILITY NAME	0 5 0 0 0

OPERATING MODE (9)	3	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR ?: (Check one or more of the following) (11)					
POWER LEVEL (10)	0 0 0	20.402(b)	20.405(c)	X	50.73(a)(2)(iv)	73.71(b)	
		20.405(a)(1)(i)	50.36(c)(1)		50.73(a)(2)(v)	73.71(c)	
		20.405(a)(1)(ii)	50.36(c)(2)		50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)	
		20.405(a)(1)(iii)	50.73(a)(2)(i)		50.73(a)(2)(viii)(A)		
		20.405(a)(1)(iv)	50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)		
		20.405(a)(1)(v)	50.73(a)(2)(iii)		50.73(a)(2)(x)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (include area code)
Steven B. Tipps, Nuclear Safety and Compliance Manager, Hatch	AREA CODE 9 1 2 5 3 7 - 1 3 9 5

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)	X	NO				

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

On 11/18/97 at 1651 EST, Unit 1 was in the Hot Shutdown mode with reactor pressure at approximately 600 psig, the "A" main steam line isolated, and the inboard main steamline isolation valves closed. At that time, Operations personnel opened main condenser vacuum breakers 1N22-F058A and 1N22-F058B resulting in receipt of a full Group 1 primary containment isolation signal on low main condenser vacuum. Outboard main steamline isolation valves 1B21-F028B, C, and D, reactor water sample line isolation valves 1B31-F019 and 1B31-F020, and main steamline drain valves 1B21-F016 and 1B21-F019 closed per design. Operations personnel reset the Group 1 isolation signal at 1653 EST and re-opened main steamline isolation valves 1B21-F028B, C, and D and main steamline drain valves 1B21-F016 and 1B21-F019.

This event was caused by personnel error and a less than adequate procedure. Operations personnel neglected to place the condenser low vacuum trip bypass switches to the bypass position prior to opening the main condenser vacuum breakers. Plant procedure 34AB-C71-001-1S, "Scram Procedure," did not require the low vacuum isolation signal to be bypassed prior to opening the vacuum breakers.

Corrective actions for this event include counseling involved personnel and revising procedures 34AB-C71-001-1S and 34AB-C71-001-2S, "Scram Procedure."

PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor
Energy Industry Identification System codes appear in the text as (EIIS Code XX).

DESCRIPTION OF EVENT

On 11/18/97 at 1651 EST, Unit 1 was in the Hot Shutdown mode with reactor pressure at approximately 600 psig following a shutdown to repair leaking valves. The "A" main steamline isolation valves (EIIS Code JM), 1B21-F022A and 1B21-F028A, previously had been closed to isolate a leaking valve. Unit shutdown was accomplished by insertion of a manual scram per plant procedure 34GO-OPS-013-1S, "Normal Plant Shutdown." Operations personnel then closed the inboard main steamline isolation valves to reduce the reactor vessel cooldown rate as specified by procedure 34GO-OPS-013-1S. Operations personnel also entered abnormal operations procedure 34AB-C71-001-1S, "Scram Procedure," because the unit had been shut down by a manual scram.

At 1651 EST, Operations personnel opened main condenser vacuum breakers (EIIS Code SH) 1N22-F058A and 1N22-F058B as required by procedures 34GO-OPS-013-1S and 34AB-C71-001-1S. At that time, and as a result of opening the vacuum breakers, a full Group 1 primary containment isolation system (EIIS Code JM) signal on low main condenser vacuum was received. Outboard main steamline isolation valves 1B21-F028B, C, and D, reactor water sample line isolation valves (EIIS Code JM) 1B31-F019 and 1B31-F020, and main steamline drain valves (EIIS Code JM) 1B21-F016 and 1B21-F019 closed per design. The inboard main steamline isolation valves and outboard main steamline isolation valve 1B21-F028A did not close because they had been closed manually prior to the event. No other actuations occurred nor were any required to occur as a result of this Group 1 primary containment isolation signal.

Operations personnel reset the Group 1 isolation signal at 1653 EST on 11/18/97. They re-opened main steamline isolation valves 1B21-F028B, C, and D and main steamline drain valves 1B21-F016 and 1B21-F019 by 1657 EST.

CAUSE OF EVENT

This event was caused by personnel error and a less than adequate procedure. Prior to the insertion of the manual scram, Operations personnel had discussed the evolution, including the need to place the condenser low vacuum trip bypass switches to the bypass position prior to opening the main condenser vacuum breakers. However, actual unit shut down was delayed by about one hour. This delay, plus complications experienced following closure of the inboard main steamline isolation

valves, resulted in Operations personnel overlooking the need to place the condenser low vacuum trip bypass switches in the bypass position prior to opening the main condenser vacuum breakers.

Procedure 34AB-C71-001-1S was less than adequate in that it did not require the low vacuum isolation signal to be bypassed prior to opening the vacuum breakers. Although this requirement was contained in procedure 34GO-OPS-013-1S, it was not in procedure 34AB-C71-001-1S which also was being used at the time of the event. When Operations personnel reached the step in procedure 34AB-C71-001-1S requiring the main condenser vacuum breakers to be opened, the procedure did not require them to first bypass the condenser low vacuum isolation signal.

REPORTABILITY ANALYSIS AND SAFETY ASSESSMENT

This report is required by 10 CFR 50.73(a)(2)(iv) because of the unplanned actuation of the Group 1 primary containment isolation system on low main condenser vacuum. Group 1 primary containment isolation valves 1B21-F028B, 1B21-F028C, 1B21-F028D, 1B31-F019, 1B31-F020, 1B21-F016, and 1B21-F019 automatically closed per design when low condenser vacuum resulted from the opening of the main condenser vacuum breakers. The Group 1 primary containment isolation system is an engineered safety feature system.

The low condenser vacuum isolation signal is intended to prevent overpressurization of the main condenser (EIIS Code SQ) in the event of a loss of main condenser vacuum. The integrity of the main condenser is an assumption in offsite dose calculations; therefore, the low condenser vacuum isolation signal initiates closure of Group 1 primary containment isolation valves: main steamline isolation valves, main steamline drain valves, and reactor water sample line isolation valves. The closure of these valves is initiated to prevent the addition of steam that would lead to additional condenser pressurization and possible rupture of the diaphragm installed to protect the turbine exhaust hood, thereby preventing a potential radiation leakage path following an accident.

In this event, personnel broke main condenser vacuum by opening main condenser vacuum breakers 1N22-F058A and 1N22-F058B as required by procedures 34GO-OPS-013-1S and 34AB-C71-001-1S. This resulted in an actual low condenser vacuum condition and, because the isolation signal was not bypassed, isolation of the open Group 1 primary containment isolation valves per design. This isolation was not needed to protect the main condenser from overpressurization as the main condenser is sized to accept directly up to 30% rated steam flow without overpressurization concerns and the unit was shutdown. However, had the isolation been needed to protect the condenser from damage due to overpressurization, the Group 1 primary containment isolation system responded per design.

Based upon the preceding discussion, it is concluded that this event had no adverse impact on nuclear safety. This analysis is applicable to all power levels.

CORRECTIVE ACTIONS

Involved personnel were counseled regarding their oversight.

Procedures 34AB-C71-001-1S and 34AB-C71-001-2S, "Scram Procedure," will be revised to include steps to bypass the low main condenser vacuum isolation signal prior to opening the main condenser vacuum breakers.

ADDITIONAL INFORMATION

No systems other than those already mentioned in this report were affected by this event.

No failed components caused or resulted from this event.

Previous similar events in the last two years in which an unplanned engineered safety feature system actuation occurred as a result of personnel error or inadequate procedures were reported in the following Licensee Event Reports:

50-321/1996-004, dated 4/15/96,
50-321/1996-005, dated 5/10/96,
50-321/1996-008, dated 5/29/96,
50-366/1996-003, dated 8/30/96,
50-366/1997-001, dated 2/24/97,
50-366/1997-005, dated 4/25/97.

Corrective actions for these previous events would not have prevented this event because they were caused by different personnel performing different activities or by inadequacies in different procedures.