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March 27, 1990
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U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Dear Sir:

Three Mile Island Nuclear Station Unit I, (TMI-1)
Operating License No. DPR-50
Docket No. 50-289
LER 90-003-00

This letter transmits Licensee Event Report (LER) No. 90-003-00 regarding an inadvertent isolation of the turbine bypass valves during plant heatup due to personnel error on February 27, 1990. Public health and safety were unaffected.

This LER is being submitted pursuant to 10 CFR 50.73, using the required NRC forms (attached). NRC Form 366 contains an abstract which provides a brief description of the event. For a complete understanding of the event, refer to the text of the report which appears on Form 366A.

Sincerely,

H. D. Hukill
Vice President & Director, TMI-1

HDH/RDW/spb

Attachment

cc: R. Hernan
T. Martin
J. Stolz
F. Young

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FDR ADOCK 05000289
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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) THREE MILE ISLAND, UNIT 1										DOCKET NUMBER (2) 0 5 0 0 0 2 8 9				PAGE (3) 1 OF 0 3		
TITLE (4) ISOLATION OF TURBINE BYPASS VALVES DURING PLANT HEATUP DUE TO PERSONNEL ERROR																
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 (5)			
0 2	2 7	9 0	9 0	0 0 3	0 0 0 3	2 7	9 0						0 5 0 0 0			
OPERATING MODE (9) N		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)														
POWER LEVEL (10) 0 0 0		20.402(b)				20.406(a)				50.73(a)(2)(iv)				73.71(b)		
		20.406(a)(1)(i)				50.36(a)(1)				50.73(a)(2)(v)				73.71(c)		
		20.406(a)(1)(ii)				50.36(a)(2)				50.73(a)(2)(vi)				OTHER (Specify in Abstract below and in Text, NRC Form 365A)		
		20.406(a)(1)(iii)				X 50.73(a)(2)(i)				50.73(a)(2)(vii)(A)						
		20.406(a)(1)(iv)				50.73(a)(2)(ii)				50.73(a)(2)(vii)(B)						
		20.406(a)(1)(v)				50.73(a)(2)(iii)				50.73(a)(2)(ix)						
LICENSEE CONTACT FOR THIS LER (12)																
NAME RUSSELL D. WELLS, TMI-1 LICENSING ENGINEER										TELEPHONE NUMBER 7 1 7 9 4 8 - 8 6 9 3						
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC						
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 fifteen single-space typewritten lines) (16)

TMI-1 was in a heatup mode on February 27, 1990 with the reactor in a shutdown condition. The Reactor Coolant System (RCS) temperature was greater than 250°F which, pursuant to Technical Specification (Tech. Spec.) 3.4.1.1.c, requires that four of the six turbine bypass valves be operable. At approximately 0400 hours, operators discovered that Main Steam Valves MS-V-8A/B were closed which isolated the turbine bypass valves. Thus, this event is reportable per 10CFR 50.73(a)(2)(i)(B) due to a condition prohibited by the plant's Tech. Specs. Valves MS-V-8A/B were subsequently opened.

The root cause of this event was personnel error. During the Main Steam System valve alignment being performed on February 17, 1990, operations personnel found MS-V-8A/B in the closed position contrary to the requirements of the valve alignment procedure (i.e., Procedure 1106-14). Due to the system configuration to support a maintenance activity, the MS-V-8A/B valves were not permitted to be opened at that time. However, personnel performing and reviewing this procedure (i.e. auxiliary operators and senior licensed operators, respectively) failed to identify this condition as a deficiency in accordance with administrative requirements.

This event and its root cause will be reviewed with auxiliary operators and licensed operators. Additionally, a procedural revision was effected to enhance the previous requirement that the turbine bypass valves are not isolated before increasing RCS temperature above 250°F.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/86

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
THREE MILE ISLAND, UNIT 1	05000289	90	003	0002	OF 03

TEXT (If more space is required, use additional NRC Form 306A's) (17)

LER 90-03

ISOLATION OF TURBINE BYPASS VALVES DURING PLANT HEATUP

I. Plant Operating Conditions Before the Event

TMI-1 was in a heatup mode following completion of the cycle 8 refueling (8R) outage. The reactor (A3/RCT)* was in a shutdown condition.

II. Status of Structures, Components, or Systems that were inoperable at the start of the event and that contributed to the event

There were no components or systems out of service that contributed to this event.

III. Event Description

On February 17, 1990, while performing the Main Steam System valve alignment (Reference Procedure 1106-14, "Main Steam System") in preparation for plant heatup, Main Steam Valves MS-V8A and MS-V8B (SB/V) were found in the closed position and could not be opened due to other plant maintenance requirements. The position of these valves was contrary to the valve lineup specified in the referenced procedure and was not marked as a deficiency for follow-up resolution pursuant to Administrative Procedure 1101-G "Procedure Utilization". As a result, operations personnel who reviewed valve lineup deficiencies prior to plant heatup did not recognize that MS-V8A/B were in the closed position because a deficiency was not identified for follow-up.

MS-V-8A/B are motor operated valves, controlled from the TMI-1 Control Room, which isolate the turbine bypass valves MS-V-3A through F. Shortly before midnight on February 26, 1990, the RCS temperature was increased above 250°F in accordance with Procedure 1102-1, "Plant Heatup to 525°F." Technical Specification 3.4.1.1.c requires that four of the six turbine bypass valves be operable with the Reactor Coolant System (AB/-) temperature greater than 250°F. During plant heatup, the turbine bypass valves were opened in manual from the Control Room to control the heatup rate. The Control Room operators recognized that the turbine bypass valves were opened greater than their expected position for the existing plant condition. Thus, at approximately 0400 on February 27, 1990, operators determined that the MS-V8 valves were closed which isolated the MS-V3 valves from steam flow. Subsequently, MS-V8A/B were opened.

This event is reportable pursuant to 10 CFR 50.73(a)(2)(i)(B), due to a condition prohibited by the plant's Technical Specification, based on the determination that the turbine bypass valves were not operable since they were isolated from steam flow by the closure of MS-V8A/B. Although MS-V8A/B could have been opened quickly from the Control Room, the operators were not aware that the valves were closed, and thus could not be relied on to promptly open the valves.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 6/31/86

FACILITY NAME (1) THREE MILE ISLAND, UNIT 1	DOCKET NUMBER (2) 0 5 0 0 0 2 8 9	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		9 0	0 0 3	0 0	0 3	OF	0 3

TEXT (If more space is required, use additional NRC Form 360A's) (17)

III. Event Description (Cont'd.)

The root cause of the event was personnel error due to: a) the failure of auxiliary operators to document the incorrect valve alignment in accordance with administrative requirements and; b) the failure of senior licensed operators to also identify this discrepancy during their review of the valve alignment procedure (i.e., Procedure 1106-14).

IV. Component Failure Data

No component failure was associated with the event.

V. Automatic or Manually Initiated Safety System Responses

No safety systems were initiated.

VI. Assessment of the Safety Consequences and Implications of the Event

There were no safety consequences or implications as a result of this event. The MS-V8A and B valves were opened from the Control Room based on operator assessment. From a technical standpoint, the MS-V-8's did not require a rapid response to open, the core decay heat generation was low, and the MS-V-3's were not a limiting condition to reduce or control the RCS heatup rate. Thus, this event did not result in any technical or safety concerns.

If the turbine bypass valves had been isolated while at 100% power and a reactor trip occurred coincident with a tube leak or rupture, the steam release path would have occurred via the atmospheric dump valves and the Main Steam Safety Valves. The projected dose to the public would still have been well within the limits of 10 CFR 100. Thus, this event did not jeopardize the health and safety of the public.

VII. Previous Events of a Similar Nature

None.

VIII. Corrective Actions Planned

To minimize the potential for similar type events, auxiliary operators and licensed operators will review this event in order to emphasize the need to follow proper administrative requirements.

Procedure 1102-1 was revised on March 2, 1990 to require, before exceeding 250°F reactor coolant temperature, verification that the turbine bypass valves are not isolated.

- * The Energy Industry Identification System (EIIIS), System Identification (SI) and Component Function Identification (CFI) Codes are included in parentheses, "(SI/CFI)", where applicable, as required by 10 CFR 50.73 (b)(2)(ii)(F).