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SUBJECT: LER 94-006-00:on 941024,TS violation resulting from missed action statement occurred.Caused by inadequate work practices.Individual involved counseled.W/941122 ltr.

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LOUIS F. STORZ
Vice President
Nuclear Generation

November 22, 1994
NMP2L 1511

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

RE: Docket No. 50-410
LER 94-06

Gentlemen:

In accordance with 10CFR50.73 (a)(2)(i) and 10CFR50.36 (c)(2), we are submitting LER 94-06, "Technical Specification Violation Resulting From a Missed Action Statement Caused by Inadequate Work Practices."

Very truly yours,

Louis F. Storz
Vice President - Nuclear Generation

LFS/RLM/kab
Attachment

xc: Mr. Thomas T. Martin, Regional Administrator, Region I
Mr. Barry S. Norris, Senior Resident Inspector

IE22
1/1

NRC FORM 366 (6-89) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104
EXPIRES: 4/30/92
ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, 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)
Nine Mile Point Unit 2	0 5 0 0 0 4 1 0	1 OF 0 6

TITLE (4) Technical Specification Violation Resulting From a Missed Action Statement Caused by Inadequate Work Practices

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 NAMES	DOCKET NUMBER(S)
									N/A	0 5 0 0 0
1 0	2 4	9 4	9 4	0 0 6	0 0	1 1		9 4	N/A	0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)					
POWER LEVEL (10)	0 9 0	20.402(b)	20.405(c)	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)	X 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)	X 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
	AREA CODE
John T. Conway, Operations Manager NMP2	3 1 5 3 4 9 - 2 6 9 8

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

CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	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 fifteen single-space typewritten lines) (16)

On October 24, 1994 at approximately 0950 hours, Control Room Operators at Nine Mile Point Unit 2 (NMP2) did not perform all Technical Specification Actions within the required timeframe. Specifically, two Control Rod Drive Hydraulic Control Unit accumulators were made inoperable for pre-planned maintenance without immediately verifying a Control Rod Drive (CRD) pump was running. Action Statement a.2.a of Technical Specification 3.1.3.5, requires that an operating CRD pump be verified immediately by inserting at least one withdrawn control rod at least one notch. This Action was not completed until 25 minutes after the Action Statement was entered. For the duration of this event, the reactor mode switch was in the "RUN" position (Operational Condition 1) with the plant operating at approximately 90 percent of rated thermal power.

The root cause of this event was inadequate work practices caused by the failure of the operating shift supervision to recognize and implement the requirement to immediately verify a CRD pump operating. Contributing to the event were poor work plan implementation along with inadequate verbal communications.

The immediate corrective actions included Control Room Operators completing the Technical Specification Actions and returning one of the CRD Hydraulic Control Units to an operable status. Additional corrective actions include: 1) counseling and discipline of the SSS/ASSS involved; 2) reinforcing management's expectation for utilization and implementation of the Technical Specifications; 3) improving Operator training; and 4) enhancing the Work Control and scheduling process.

I. DESCRIPTION OF EVENT

On October 24, 1994 at approximately 0950 hours, Control Room Operators at Nine Mile Point Unit 2 (NMP2) did not perform all Technical Specification Actions within the required timeframe. Specifically, two Control Rod Drive Hydraulic Control Unit accumulators were made inoperable for pre-planned maintenance without immediately verifying a Control Rod Drive (CRD) pump was running. Action statement a.2.a of Technical Specification 3.1.3.5 requires that an operating CRD pump be verified immediately by inserting at least one withdrawn control rod at least one notch. This Action was not completed until 25 minutes after the Action Statement was entered. For the duration of this event, the reactor mode switch was in the "RUN" position (Operational Condition 1) with the plant operating at approximately 90 percent of rated thermal power.

The Maintenance, Work Control and Operations Departments planned work on two CRD Hydraulic Control Unit (HCU) accumulators to be performed on the same day. Agreements were made during the planning process that the work would involve only one HCU at a time. This requirement was included in an attachment to the weekly work schedule, however, neither the Mechanical Maintenance Supervisor doing the work nor the Control Room Operators were aware of the plan to perform work on the two HCUs sequentially. The requirement to work only one HCU at a time was not referenced in the plant impact section of either HCU work package.

At approximately 0800 hours on October 24, 1994, the work package for the first HCU (control rod 30-19) was brought to the Control Room for Station Shift Supervisor (SSS) review and approval. Both the SSS and Assistant Station Shift Supervisor (ASSS) reviewed Technical Specification 3.1.3.5 Action a.1 and agreed that with one HCU accumulator inoperable, they were required to declare the associated control rod inoperable within eight hours.

At approximately 0830 hours on October 24, 1994, the work package for the second HCU (control rod 42-47) was brought to the Control Room for SSS review and approval. The SSS noted that Technical Specification 3.1.3.5 Action a.2 required inserting a withdrawn control rod at least one notch to verify CRD pump operation. The SSS did not communicate this requirement to the ASSS nor did he recognize the additional requirement to insert and disarm the affected control rods. The ASSS reviewed the work package separately but did not review the Technical Specification requirements. At this time, the Chief Shift Operator (CSO) questioned whether it was appropriate to take two HCUs out of service at the same time. The ASSS then reviewed (and misread) the Technical Specification requirements focusing on the actions to be taken for loss of a CRD pump. The SSS and ASSS then discussed the two HCU work packages focusing on these actions. They did not, however, discuss the Technical Specification requirement to insert a withdrawn control rod one notch or the requirement to insert and disarm the affected control rods. The SSS and ASSS agreed that taking two HCUs out of service at the same time was acceptable. At 0940 hours, HCU and control rod 30-19 was declared inoperable, followed by declaring HCU and control rod 42-47 inoperable at 0950 hours. During this time, the SSS exited the Control Room to attend a daily work planning meeting.

I. DESCRIPTION OF EVENT (cont.)

At 0956 hours, while making log entries for the two inoperable HCUs, the ASSS again reviewed the Technical Specification requirements to ensure all the requirements were met. During this review, the ASSS realized that the initial Technical Specification review was incomplete and that a withdrawn control rod must be immediately inserted at least one notch to verify a CRD pump was operating. An additional Licensed Senior Reactor Operator, who was in the Control Room preparing for shift turnover, was asked to confirm the Technical Specification Action requirement and he agreed that a control rod must be inserted. At this time, the ASSS discussed with the CSO the need to insert one control rod to comply with Technical Specifications. The CSO asked which procedure would be used since a Reactivity Maneuver Request had not been prepared as normally required by Operations Department procedures. The ASSS and the CSO searched for a procedure to use for performing the control rod insertion. There was no urgency to perform this action because the Control Room Operators knew that the CRD pump was running. This search delayed completion of the Technical Specification required action.

Because of the unplanned nature of the control rod insertion, the SSS was called back to the Control Room. When the SSS arrived, he and the ASSS evaluated the plant status and concurred that the course of action would be to drive a peripheral control rod in one notch followed by returning one of the two inoperable HCU accumulators to an operable status. The SSS then directed the CSO to insert a withdrawn control rod one notch. At 1015 hours, withdrawn control rod 42-03 was inserted one notch and returned to the fully withdrawn position bringing NMP2 into compliance with the requirements of Technical Specifications. Also, at 1022 hours, HCU 42-47 was returned to operable which allowed exiting Action Statement a.2 of Technical Specification 3.1.3.5. At 1038 hours, HCU 30-19 was returned to operable and Technical Specification 3.1.3.5 was exited.

II. CAUSE OF EVENT

The root cause of this event has been determined to be inadequate work practices. Specifically, the SSS and ASSS did not properly review or promptly implement the requirements of Technical Specification 3.1.3.5 Action Statement a.2. If two or more control rod accumulators are inoperable, the Technical Specification requires that at least one CRD pump be immediately verified operating by inserting at least one withdrawn control rod at least one notch. Because this requirement was not initially understood by the Control Room Operators and then delayed by the lack of preparation, this action was not immediately initiated and took 25 minutes to complete.

Two contributing causes were also identified. First, inadequate verbal communication occurred when the SSS, aware of the requirement to insert a withdrawn control rod, did not transmit this information to the ASSS before removing the second HCU from service. If discussed before the HCUs were removed from service, the event would have been prevented. Secondly, poor work plan implementation allowed Mechanical Maintenance to request both HCUs be worked at the same time which was inconsistent with the work plan. Had Mechanical Maintenance supervision

II. CAUSE OF EVENT (cont.)

been aware of the plan to work one HCU at a time, the packages may not have both been started simultaneously. Also, if the work package plant impact statements had contained a warning to work one HCU at a time, the Control Room Operators would have been alerted and the event would not have occurred.

III. ANALYSIS OF EVENT

This event is reportable in accordance with 10CFR50.73(a)(2)(i)(B), which requires licensees to report "any operation or condition prohibited by the plant's Technical Specifications," and 10CFR50.36(c)(2) which requires licensees to report when Limiting Conditions for Operation are not met. Technical Specification Action Statement 3.1.3.5.a.2 was not immediately complied with, causing the event. When reactor vessel pressure is greater than or equal to 900 pounds per square inch gauge (psig), there are redundant hydraulic pressure sources to insert control rods on a scram signal. The first source is reactor vessel pressure. By venting the area above the drive piston, a differential pressure of at least 900 psig is established and the control rods scram. The second pressure source uses the stored hydraulic pressure in the HCUs to insert the control rods (when reactor pressure is less than 900 psig). The pressure in the HCUs is established and maintained by the CRD pump. If the operating pump fails and check valves in the HCU charging lines were to leak, HCU inoperable alarms would result from the drop in the stored pressure.

The Action Statements for Technical Specification 3.1.3.5 are symptom based. Under normal conditions, two inoperable scram accumulators could be indicative of some generic problem requiring immediate Operator action to ensure continued scram capability. In the case of this event, the two scram accumulators were taken out of service for maintenance with no indication of a generic problem. The operating CRD pump was never in question throughout the event, and Control Room Operators discussed the required actions if the operating CRD pump were to fail. The redundant source of hydraulic pressure for control rod insertion (reactor pressure greater than 900 psig) existed throughout this event.

With reactor vessel pressure greater than 900 psig throughout this event, the scram function was fully available for all control rods. Therefore, there was no adverse impact on the health and safety of the general public or plant personnel. At no time was the ability of the Operators to achieve or maintain plant shutdown jeopardized. The event duration was 25 minutes from removing the second HCU from service until a control rod was inserted one notch.

IV. CORRECTIVE ACTIONS

The immediate corrective actions included Control Room Operators inserting one control rod one notch to assure CRD pump operation and returning one of the two inoperable HCUs to service.

Additional corrective actions include:

1. The SSS and ASSS involved have been counseled by the Operations Manager regarding their failure to implement license requirements and the need to fully read and comprehend all Technical Specification requirements prior to allowing work to commence. Appropriate discipline has been applied.

2. Operations Department management will hold discussions with all Licensed Senior Reactor Operators (SROs) reinforcing management's expectations for the correct utilization and implementation of Technical Specifications.

3. Operator Requalification Simulator training will be enhanced regarding the usage and implementation of the Technical Specifications.

4. A "Table Top" training approach where the SSS facilitates discussions on Technical Specification implementation case studies with shift SROs and Licensed Reactor Operators (ROs) will be implemented on a trial basis.

5. Several enhancements to the Work Control process will be implemented including:

   - The plant impact statement for future HCU accumulator work will state the requirement to work only one HCU at a time.
   - Specific start times will be incorporated for scheduled work.
   - Notes and precautions will be added to the body of the work schedule to emphasize unique requirements.
   - Special requirements will be added to the plant impact statements of future Work Orders.
   - A work week manager has been added to the Work Control process. This individual is responsible for evaluating all work activities during a given week for plant impact and logic sequencing.

V. ADDITIONAL INFORMATION

A. Failed components: None.

B. Previous similar events:

LER 90-012, "Violation of Technical Specifications Due to Personnel Error," described a similar event. Control Room Operators did not carry out the required Action for an inoperable control rod position indicator. However, in this case, the SSS/ASSS were not informed by the Operator performing control rod movement. Hence, the corrective actions specifically addressed controls and verifications for control rod movements. The corrective actions for LER 90-012 would not have prevented the event described in this LER.

C. Identification of components referred to in this LER:

COMPONENT	IEEE 803A EIIS FUNCTION	IEEE 805 SYSTEM ID
Control Rod Hydraulic Control System	N/A	AA
Hydraulic Control Unit	HCU	AA
Pump	P	AA
Control Rod	ROD	AA
Accumulator	ACC	AA
Control Rod Drive Piston	DRIV	AA
Check Valve	V	AA