NORTHEAST UTILITIES
The Connecticut Light And Power Company
Western Massachusetts Electric Company
Holyoke Water Power Company
Northeast Utilities Service Company
Northeast Nuclear Energy Company

General Offices · Selden Street, Berlin Connecticut

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February 26, 1990
MP-90-193

Re: 10CFR50.73(a)(2)(i)

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

Reference: Facility Operating License No. NPF-49
Docket No. 50-423
Licensee Event Report 90-007-00

Gentlemen:

This letter forwards Licensee Event Report 90-007-00 required to be submitted within thirty (30) days pursuant to 10CFR50.73(a)(2)(i), any operation or condition prohibited by the plant's Technical Specifications.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

Stephen E. Scace
Director, Millstone Station

SES/RNK:mo

Attachment: LER 90-007-00

cc: W. T. Russell, Region I Administrator
W. J. Raymond, Senior Resident Inspector, Millstone Unit Nos. 1, 2 and 3
D. H. Jaffe, NRC Project Manager, Millstone Unit No. 3

Cert No P-102503639

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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)
Millstone Nuclear Power Station Unit 3	0 5 0 0 0 4 2 3	1 OF 0 4

TITLE (4)
Inadequate Equipment Load Shed Verification Procedure 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 NAMES	
0 1	2 5	9 0	9 0	0 0 7	0 0	0 2	2 6	9 0		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS BEING SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	1 0 0	20.402(b)	20.402(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)	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)(iv)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Robert N. Keller, Engineer, Ext. 5507	AREA CODE 2 0 3 4 4 7 - 1 7 9 1

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 fifteen single-space typewritten lines) (16)

On January 25, 1990, at 1400 hours, with the plant in Mode 1 at 100% power, 587 degrees Fahrenheit and 2250 psia, it was discovered that the Technical Specification surveillance for verifying equipment responses to a Loss of Power coincident with an Engineered Safety Features (ESF/LOP) actuation, did not verify load shedding of five compressors. The cause of the event was procedural inadequacy, with the root cause being personnel error. The surveillance data sheets did not include the compressors for response verification. The discovery was made during a biennial review of the surveillance procedure. Operators opened the compressor feeder breakers until the compressors' load shed circuitry was satisfactorily tested at 1642 January 25, 1990.

The procedure has undergone a detailed review to verify all equipment that shed and/or sequence on in response to an ESF/LOP are included. This review found that the Control Building Chilled Water Pumps (3HVK*P1A & B) also were not included. A review of Computer Sequence of Events Reports from previous performed ESF/LOP tests prove these pumps did shed as designed, therefore no operator action was required. The surveillance procedure data sheets have been revised to include all of the missed components.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Millstone Nuclear Power Station Unit 3	0 5 0 0 0 4 2 3	9 0	0 0 7	0 0	0 2 OF 0 4

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

I. Description of Event

On January 25, 1990, at 1400 hours, with the plant in Mode 1 at 100% power, 587 degrees Fahrenheit and 2250 psia, it was discovered that the Technical Specification surveillance (4.8.1.1.2.F.6.a) for verifying equipment responses to a Loss of Power (LOP), coincident with an Engineered Safety Features (ESF) actuation, did not verify load shedding of five components from their safety related 480VAC power supplies as required. Four of the components are Emergency Diesel Generator (EDG) Starting Air Compressors (3EGA-C1A, -C1B, - C2A, -C2B). The other is a Plant Instrument Air Compressor (3IAS-C1B). All of these compressors are non-safety related. The compressors were not listed on the Technical Specification surveillance data sheets for response verification, and therefore were not being adequately surveilled since initial plant operation in April, 1986. The inadequate data sheets were discovered during a biennial review of the applicable Technical Specification surveillance procedure by Operations Department personnel.

In response to the discovery, Control Room Operators immediately logged into Technical Specification 3.0.3 until the compressor feeder breakers were manually tripped open. This action manually disconnected the components from their safety related power supplies, putting them in their accident position. Operations personnel satisfactorily performed a surveillance on the compressors and returned them to service at 1642 on January 25, 1990. No other immediate operator action was required.

In response to this event, further investigation revealed that the Control Building Chilled Water Pumps (3HVK*P1A and P1B) also were not included in the ESF/LOP Technical Specification surveillance procedures. No operator actions or additional surveillances were required as a result of this subsequent discovery, because the Plant Computer Sequence of Events (SOE) reports for the last performed ESF/LOP tests did prove that the pumps shed as designed.

II. Cause of Event

The cause of the event is procedural inadequacy. The data sheets associated with the applicable surveillance procedures did not accurately list all equipment responses needed to be verified to satisfy the requirements of the Plant Technical Specification.

The root cause of the event is personnel error. It was recognized during the initial draft review process for the original surveillance procedures that the EDG Starting Air Compressors were unique, in that they required a specialized test to verify shedding. Plant personnel failed to adequately track the requirement for this specialized test and the test was not written. The initial review also identified that 3HVK*P1A & B were not included in the test, but again they were not tracked for incorporation into the surveillance procedure.

Concerning the plant instrument air compressor (3IAS-C1B), the surveillance procedure prerequisites require starting of the redundant compressor 3IAS-C1A, noting that 3IAS-C1B will shed during the test. This indicates the author was aware that the compressor should shed, but failed to list it on the associated surveillance data sheets for verification.

III. Analysis of Event

This event is being reported pursuant to 10CFR50.73(a)(2)(i), as a condition prohibited by the plant's Technical Specifications.

The EDG sequencer automatically trips the five compressors in the event of a LOP or ESF actuation. This design is in compliance with position 1 of Regulatory Guide 1.75, "Physical Independence of Electric Systems." The intent is to prevent any fault that could occur at the compressors (which are nonsafety related) during an accident, from affecting their safety related power supplies. 3HVK*P1A & B are shed to minimize loading on the EDGs.

A review of the plant computer SOE report for previously performed ESF/LOP and LOP tests show that 3IAS-C1B and 3HVK*P1A & B did shed as designed. The EDG Starting Air Compressors are not monitored by the plant computer and therefore can not be positively proven to have shed. However, video recordings made of the EDG sequencer panels during the last tests do show the compressor status lights changing state, indicating the signal to shed was transmitted to the compressor control circuits. The surveillance performed on January 25, 1990 for the EDG Starting Air Compressors was satisfactory. Based on this, it is concluded that this event posed no significant safety consequences.

IV. Corrective Action

Immediate corrective action included opening of the feeder breakers for the subject compressors, followed by satisfactory performance of the surveillance. The compressors were then declared operable and returned to service. No immediate action was required in response to the 3HVK*P1A/B test deficiency, other than to verify that they did shed as designed during the last ESF/LOP tests.

To prevent recurrence, the applicable Technical Specification surveillance procedures have been revised to include shedding verification for the subject components. A special section was added to address the unique testing requirements for the EDG Starting Air Compressors. In addition, a comprehensive review of the subject surveillance procedures has been completed. This review, which found that 3HVK*P1A & B were not included in the applicable surveillance, verified that all equipment required to shed and/or sequence on in response to an ESF/LOP, were enveloped by the applicable procedures.

V. Additional Information

The following Licensee Event Reports (LERs) document similar incidents in that they are Technical Specification violations due to procedural inadequacy:

LER Number	Subject
86-034	Rad Monitor Sampler Flow
86-047	OTdT Setpoint
86-053	Intermediate Range Detector Setpoints
86-058	Radiation Monitor Surveillance
87-035	Containment Air Lock
87-042	Missed Intermediate Range/Power Range Surveillance
87-045	Failure to Sample Diesel Fuel Oil for Kinematic Viscosity
88-020	Improper Bypass Breaker Surveillance
89-006	Missed Fire Detecto· Surveillance on Six Fire Detectors
89-021	Miscalculation of ESF Response Time

Corrective action for LER 87-042 was to perform a comprehensive review of all Technical Specifications against their applicable surveillance procedures. This was completed by the end of 1988.

Comprehensive reviews of the ESF/LOP tests had been completed in support of ESF/LOP testing conducted in March, 1987. These reviews had identified that it would not be practical to test load shedding of the EDG Starting Air Compressors because the normal control circuitry may also cause the compressors to remain off (i.e., the load shed circuit would not be properly challenged). The reviewer failed to perform a comprehensive review of this procedure in 1988, which would have found that the procedures did not include the compressors or 3HVK*P1A & B. As the basis for the 1988 review, the individual incorrectly used the 1987 procedure review, which he had performed. This procedure was the only case where the individual reviewer used a previously performed procedure review as a basis for the 1988 review. In light of the underlying concerns, the incident was reviewed by Department Managers and it was concluded that the method of review that this individual applied, was not representative of the overall Technical Specification review methods.

LER 88-020 was submitted to document an inadequate surveillance interval for the Reactor Trip Bypass Breakers. This inadequacy was identified during the comprehensive review discussed above. LER 89-006 reported a deficient Fire Detector Surveillance for six Fire Detectors, identified after the comprehensive review. As corrective action, a complete review of the Fire Detection and Control System surveillances verifying Technical Specification requirements was performed. The comprehensive review did not discover this deficiency because the reviewer did not account for the number of detectors within each fire zone detector group. LER 89-021 reported inadequate procedures were used to calculate ESF response time. The procedures did not take into account the slave relay actuation time, therefore was not calculating ESF response time in accordance with the Technical Specification definition. This discrepancy was identified during the surveillance review, but was not correctly identified as a Technical Specification violation, therefore it was not initially reported.

EIIS Codes

Systems	Components
Engineered Safety Features Actuation System - JE	Circuit Breaker, AC - 52
Low Voltage Power System - Class 1E - ED	Compressor - CMP
Deisel Generator Starting Air System - LC	
Instrument Air Supply System - LD	