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SUBJECT: LER 89-002-00:on 890506,safeguards bus undervoltage during
 relay testing due to inadequate procedure review.
 W/8 ltr.

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NOTES:License Exp date in accordance with 10CFR2,2.109(9/19/72). 05000244

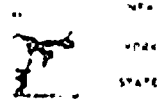
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June 5, 1989

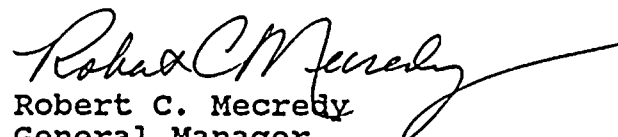
U.S. Nuclear Regulatory Commission
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Washington, DC 20555

Subject: LER-89-002, Safeguards Bus Undervoltage During Relay Testing Due To Inadequate Procedure Review Causes the "A" Emergency Diesel Generator To Automatically Start and Accept Load
R.E. Ginna Nuclear Power Plant
Docket No. 50-244

In accordance with 10 CFR 50.73, Licensee Event Report System, item (a)(2)(iv) which requires a report of, "any event or condition that resulted in manual or automatic actuation of any Engineered Safety Feature (ESF) including the Reactor Protection System (RPS)", the attached Licensee Event Report LER-89-002 is hereby submitted.

This event has in no way affected the public's health and safety.

Very truly yours,


Robert C. Mcreedy
General Manager
Nuclear Production


xc: U.S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406

Ginna USNRC Senior Resident Inspector

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) R.E. Ginna Nuclear Power Plant										DOCKET NUMBER (2) 0 5 0 0 0 2 4 4 1 OF 0 6										PAGE (3) 1																					
TITLE (4) Safeguards Bus Undervoltage During Relay Testing Due To Inadequate Procedure Review Causes The "A" Emergency Diesel Generator To Start and Accept Load																																									
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)								
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0 5			0 6			8 9			8 9			0 0			2 0			0 0			6 0			5 8			9									0 5 0 0 0					
OPERATING MODE (9)						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 						N						20.402(b)						20.406(e)						X						60.73(a)(2)(iv)						73.71(b)					
												20.406(e)(1)(i)						60.36(a)(1)												60.73(a)(2)(v)						73.71(a)					
												20.406(a)(1)(ii)						60.36(a)(2)												60.73(a)(2)(vi)						OTHER (Specify in Abstract below and in Test, NRC Form 366A)					
												20.406(a)(1)(iii)						60.73(a)(2)(i)												60.73(a)(2)(vii)(A)											
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LICENSEE CONTACT FOR THIS LER (12)																																									
NAME Wesley H. Backus Technical Assistant to the Operations Manager																				TELEPHONE NUMBER																					
																				AREA CODE																					
3 1 5					5 2 4 - 4 4 4 6																																				
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		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC							
SUPPLEMENTAL REPORT EXPECTED (14)																				EXPECTED SUBMISSION DATE (16)										MONTH											
YES (If yes, complete EXPECTED SUBMISSION DATE)										X NO																				DAY											
																														YEAR											

ABSTRACT (Limit to 1600 spaces, i.e., approximately fifteen single-space typewritten lines) (18)

On May 6, 1989 at 0946 EDST with the reactor in the Cold/Refueling Shutdown Condition, safeguards 480 volt Bus 14 tripped during offsite power modification relay testing. This caused the "A" Emergency Diesel Generator to automatically start and connect to safeguards 480 volt Bus 14.

The underlying cause of the event was due to a typographical error in the Modification Test Procedure that called for the wrong terminal block to be opened for blocking the above bus trip. This typographical error was due to inadequate proofreading of last minute changes to the procedure.

Corrective action taken was to identify and correct the procedure error and to restore safeguards 480 volt Bus 14 to its normal power supply.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO 3150-0104
EXPIRES 8/31/85

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R.E. Ginna Nuclear Power Plant	0 5 0 0 0 2 4 4	8 9	— 0 0 2	— 0 0	0 2	OF	0 6

TEXT (If more space is required, use additional NRC Form 368A's) (17)

I. PRE-EVENT PLANT CONDITIONS

The unit was in cold/refueling shutdown for the Annual Refueling Maintenance Outage. An offsite power reconfiguration modification was in progress per EWR-4525.

II. DESCRIPTION OF EVENT

A. DATES AND APPROXIMATE TIMES FOR MAJOR OCCURRENCES:

- o May 6, 1989, 0946 EDST: Event date and time.
- o May 6, 1989, 0946 EDST: Discovery date and time.
- o May 6, 1989, 0952 EDST: Safeguards Bus 14 Normal Power Supply Restored.
- o May 6, 1989, 0952 EDST: Safeguards Bus 14 "A" Emergency Diesel Generator Power Supply Terminated and "B" Emergency Diesel Generator Stopped and Lined Up for Auto Standby.

B. EVENT:

On May 6, 1989 at 0946 EDST, the reactor was in the cold/refueling shutdown condition. Relay testing was in progress on 4160 volt safeguards Bus 12A per step 6.2.5.1.1 of station modification procedure SM-4525.15. During the performance of relay testing on 12A, differential relay 87B/12A operated lockout bus relay 86B/12A, which tripped the station service transformer breaker (14SS-4160V) causing an undervoltage condition on 480 volt safeguards Bus 14.

The "A" Emergency Diesel Generator Automatically started, as required, due to the undervoltage condition on 480 volt safeguards Bus 14 and subsequently connected to Bus 14 as required.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104
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TEXT (If more space is required, use additional NRC Form 368A's) (17)

C. INOPERABLE STRUCTURES, COMPONENTS, OR SYSTEMS THAT CONTRIBUTED TO THE EVENT:

None.

D. OTHER SYSTEMS OR SECONDARY FUNCTIONS AFFECTED:

None.

E. METHOD OF DISCOVERY:

The event was immediately apparent due to alarms and indications in the Control Room.

F. OPERATOR ACTION:

Following the Bus 14 undervoltage and "A" Emergency Diesel Generator Automatic Start and the Tie Breaker Closure to Bus 14, the Control Room Operators immediately verified proper voltage on Bus 14 and that the "A" Emergency Diesel Generator displayed proper voltage and frequency.

G. SAFETY SYSTEM RESPONSES:

The "A" Emergency Diesel Generator automatically started and tied into 480 volt safeguards Bus 14 due to a valid undervoltage signal on Bus 14.

III. CAUSE OF EVENT

A. IMMEDIATE CAUSE:

The automatic actuation of the "A" Emergency Diesel Generator and subsequent tie into Bus 14 was due to a valid undervoltage signal from the Bus 14 undervoltage monitoring system.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO 3150-0104

EXPIRES 8/31/85

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		05000244	89-002-	000	4	OF	6

TEXT (If more space is required, use additional NRC Form 325A's) (17)

B. INTERMEDIATE CAUSE:

The valid undervoltage signal was due to an operation of 86B/12A lock-out relay during Bus 12A relay testing which inadvertently tripped the station service transformer breaker (14SS-4160V) to Bus 14.

The 86B/12A lock-out relay trip contacts for breaker (14SS-4160V) were not blocked from operating prior to testing because of a typographical error in the SM-4525.15 procedure which called for the wrong terminal block to be opened for blocking the trip (i.e. TFF-10 was opened and TFF-10 should have been opened).

C. ROOT CAUSE:

The root cause of the event was an inadequate technical proofreading review of a retyped version of SM-4525.15 subsequent to some last minute changes. This led to the typographical error that caused the event not being identified and corrected prior to the procedures use.

IV. ANALYSIS OF EVENT

The event is reportable in accordance with 10 CFR 50.73, Licensee Event Report System, item (a)(2)(iv), which requires reporting of, "any event or condition that resulted in manual or automatic actuation of any Engineered Safety Feature (ESF) including the Reactor Protection System (RPS)". The starting of the "A" Emergency Diesel Generator was an automatic actuation of an ESF system.

An assessment was performed considering both the safety consequences and implications of this event with the following results and conclusions:

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO 3150-0104
EXPIRES 8/31/85

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

There were no operational or safety consequences or implications attributed to the starting of the "A" Emergency Diesel Generator and subsequent tie breaker closure to Bus 14 because:

- o The "A" Emergency Diesel Generator and tie-breaker closure to Bus 14 operated as designed.
- o Bus 14 normal power was restored in approximately 6 minutes.
- o The other train of safeguards power was energized and available at all times.
- o Offsite power was available throughout the event.

V. CORRECTIVE ACTION

A. ACTION TAKEN TO RETURN AFFECTED SYSTEMS TO PRE-EVENT NORMAL STATUS:

- o The error in the procedure was identified and changed.
- o The terminal blocks were then changed to their required positions.
- o Normal power was restored to Bus 14 and the "A" Emergency Diesel Generator was stopped and realigned for automatic standby.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104
EXPIRES 8/31/85

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R.E. Ginna Nuclear Power Plant

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TEXT (If more space is required, use additional NRC Form 368A's) (17)

B. ACTION TAKEN OR PLANNED TO PREVENT RECURRENCE:

- o The existing station policy and guidance on procedure change proofreading and technical review was re-evaluated and is adequate.
- o The need for adherence to this policy was reinforced by issuance of a letter to the appropriate groups by the modification support coordinator.
- o The consequences of the inadequate technical review will be reviewed again with those responsible for preparing modification test procedures, prior to the 1990 Annual Refueling and Maintenance Outage.
- o Meaningful cut-off dates will be established for engineering design outputs for the 1990 outage, to ensure adequate review of all required tests, and prevent "last minute requirements from being inserted into test procedures without adequate technical review."

VI. ADDITIONAL INFORMATION:

A. FAILED COMPONENTS:

None.

B. PREVIOUS LERS ON SIMILAR EVENTS:

A similar LER event historical search was conducted with the following results: No documentation of similar LER events with the same root cause at Ginna Station could be identified.

C. SPECIAL COMMENTS:

None.

