

January 9, 2004

Mr. Robert L. Clark  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555

Subject: LER 2003-006, Emergency Diesel Generator Start Resulting From Loss of Off-Site Power Circuit 751  
R.E. Ginna Nuclear Power Plant  
Docket No. 50-244

Dear Mr. Clark:

The attached Licensee Event Report (LER) 2003-006 is submitted in accordance with 10 CFR 50.73, Licensee Event Report System, item (a)(2)(iv)(A).

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

Very truly yours,

  
Robert C. Mecredy

xc: Mr. Robert L. Clark (Mail Stop O-8-C2)  
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(See reverse for required number of digits/characters for each block)

Estimated burden per response to comply with this mandatory information collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 BE), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to [bjs1@nrc.gov](mailto:bjs1@nrc.gov), and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose information collection does not display a currently valid OMB control number, the NRC

<b>1. FACILITY NAME</b> R. E. Ginna Nuclear Power Plant	<b>2. DOCKET NUMBER</b> 05000244	<b>3. PAGE</b> 1 OF 5
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#### 4. TITLE

## Emergency Diesel Generator Start Resulting From Loss of Off-Site Power Circuit 751

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
11	13	2003	2003 - 006 - 00			01	09	2004	FACILITY NAME	DOCKET NUMBER 05000

9. OPERATING MODE	1	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)			
		20.2201(b)	20.2203(a)(3)(ii)	50.73(a)(2)(ii)(B)	50.73(a)(2)(ix)(A)
10. POWER LEVEL	100	20.2201(d)	20.2203(a)(4)	50.73(a)(2)(iii)	50.73(a)(2)(x)
		20.2203(a)(1)	50.36(c)(1)(i)(A)	X 50.73(a)(2)(iv)(A)	73.71(a)(4)
		20.2203(a)(2)(i)	50.36(c)(1)(ii)(A)	50.73(a)(2)(v)(A)	73.71(a)(5)
		20.2203(a)(2)(ii)	50.36(c)(2)	50.73(a)(2)(v)(B)	OTHER Specify in Abstract below or in NRC Form 366A
		20.2203(a)(2)(iii)	50.46(a)(3)(ii)	50.73(a)(2)(v)(C)	
		20.2203(a)(2)(iv)	50.73(a)(2)(i)(A)	50.73(a)(2)(v)(D)	
		20.2203(a)(2)(v)	50.73(a)(2)(i)(B)	50.73(a)(2)(vii)	
		20.2203(a)(2)(vi)	50.73(a)(2)(i)(C)	50.73(a)(2)(viii)(A)	
		20.2203(a)(3)(i)	50.73(a)(2)(ii)(A)	50.73(a)(2)(viii)(B)	

**12. LICENSEE CONTACT FOR THIS LER**

NAME	TELEPHONE NUMBER (Include Area Code)
Mike Ruby, Senior Licensing Engineer	(585)771-3572

## 13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

#### 14. SUPPLEMENTAL REPORT EXPECTED

YES (If yes, complete EXPECTED SUBMISSION DATE)	X	NO	SUBMISSION DATE	MONTH	DAY	YEAR

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

On November 13, 2003, high wind conditions resulted in the loss of off-site Circuit 751. With the electrical system in the 50/50 alignment, the loss of Circuit 751 resulted in the loss of safeguards busses 16 and 17. The B Emergency Diesel Generator (EDG) started automatically and re-energized the safeguards busses as designed.

**Corrective action to prevent recurrence is outlined in Section V.B.**

## LICENSEE EVENT REPORT (LER)

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
R.E. Ginna Nuclear Power Plant	05000244	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 5
		2003	-- 006	-- 00	

## 17. NARRATIVE (If more space is required, use additional copies of NRC Form 366A)

## I. PRE-EVENT PLANT CONDITIONS:

On November 13, 2003 the plant was in Mode 1 at approximately 100% reactor power. The on-site electrical system was in the 50/50 lineup configuration, meaning that each off-site circuit was providing power to two (2) of the four (4) 480 Volt Safeguards Busses. The control room had entered procedure ER-SC.1, Adverse Weather Plan, at 0817 hours due to high winds (sustained greater than 55 mph) in the area.

## II. DESCRIPTION OF EVENT:

## A. EVENT:

At approximately 0954, off-site power Circuit 751 was lost due to the high winds being experienced in the area (peak winds of approximately 60 to 70 mph). This resulted in the temporary loss of safeguards Bus 16 and Bus 17. However, the B EDG automatically started and supplied power to these busses as designed.

Off-site power Circuit 767 remained operable during this event. The off-site power configuration was later switched to 100/0, with Circuit 767 supplying all off site power requirements. The plant remained at approximately 100% power throughout the event.

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

None

## C. DATES AND APPROXIMATE TIMES OF MAJOR OCCURRENCES:

- November 13, 2003, 0954 EST: Event Date and Time, Loss of off-site power Circuit 751 and B EDG start.
- November 13, 2003, 1009 EST: Electrical system placed in the 100/0 off-site power alignment on Circuit 767
- November 13, 2003, 1016 EST: Bus 16 and Bus 17 returned to off-site power (Circuit 767), B EDG Shutdown
- November 13, 2003, 1237 EST: Notification of B EDG start, event #40319, under 10CFR50.72(b)(3)(iv)(A).

# LICENSEE EVENT REPORT (LER)

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
R.E. Ginna Nuclear Power Plant	05000244	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 OF 5
		2003	-- 006	-- 00	

17. NARRATIVE (If more space is required, use additional copies of NRC Form 366A)

- November 15, 2003, 0026 EST: Electrical system returned to the 50/50 alignment.

D. OTHER SYSTEMS OR SECONDARY FUNCTIONS AFFECTED:

None, since there were no failures of any components with multiple functions.

E. METHOD OF DISCOVERY:

The condition was immediately apparent from plant indications and response in the Control Room.

F. SAFETY SYSTEM RESPONSES:

All safety systems functioned as designed.

III. CAUSE OF EVENT:

The cause of the event was high wind conditions which caused the overhead lines of off-site power Circuit 751 to make contact with a tree branch, resulting in electrical arcing and the subsequent loss of Circuit 751. The branch apparently dislodged from a tree that is outside the distance requiring normal tree trimming, landing across the phases of the circuit.

This event is NUREG-1022 Cause Code (C), "External Cause"

IV. ASSESSMENT OF THE SAFETY CONSEQUENCES OF THE EVENT:

This event is reportable in accordance with 10 CFR 50.73, Licensee Event Report System, item (a)(2)(iv)(A), which requires a report of, "Any event or condition that resulted in manual or automatic actuation of any of the systems listed in paragraph (a)(2)(iv)(B) of this section, except when:

- (1) The actuation resulted from and was part of a pre-planned sequence during testing or reactor operation; or
- (2) The actuation was invalid and;
  - (i) Occurred while the system was properly removed from service; or
  - (ii) Occurred after the safety function had been already completed."

The Ginna UFSAR section 8.1.4.4 states in part, "Although severe weather increases the probability of a loss of offsite power, it has only a slight effect on the risk of a station blackout. The emergency power systems at Ginna Station were thoroughly reviewed for operability in the instances of severe and extreme natural phenomena such as floods, tornadoes, and snowstorms as

## LICENSEE EVENT REPORT (LER)

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
R.E. Ginna Nuclear Power Plant	05000244	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	4 OF 5
		2003	-- 006	-- 00	

## 17. NARRATIVE (If more space is required, use additional copies of NRC Form 366A)

part of the Systematic Evaluation Program (SEP). The Ginna Station design basis, therefore, already includes the system design features and procedures to ensure that no unacceptable loss of emergency onsite power will occur during severe weather events."

The B EDG operated as designed throughout the event, ensuring a reliable source of power to the AC emergency busses at all times. The A EDG was operable, but was not challenged.

One off-site power circuit (767) was not affected by the weather conditions and remained in service. It was subsequently aligned to carry all off-site loads until Circuit 751 could be restored. This is consistent with Ginna Technical Specifications Section 3.8.

Therefore, it was determined that the plant responded within its design and licensing basis, that there were no unreviewed safety questions, and that the public's health and safety was assured at all times.

## V. CORRECTIVE ACTIONS:

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

- Off-site power was restored to Bus 16 and Bus 17.
- Circuit 751 restored to service.

## B. ACTION TAKEN OR PLANNED TO PREVENT RECURRENCE:

Circuit 751 was subsequently patrolled by electrical engineering and RG&E line personnel. No threatening hanging branches or growth into the lines was identified. However, several trees which may have impacted the performance of the circuit are being scheduled for removal.

RG&E has initiated a self assessment and risk analysis of Circuit 751 reliability which will provide recommendations to station management regarding the following:

- Procedure changes to provide better direction on off-site power alignments during various plant modes and weather conditions.
- Possible modifications to the off-site power system.

## LICENSEE EVENT REPORT (LER)

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
R.E. Ginna Nuclear Power Plant	05000244	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	5 OF 5
		2003	-- 006	-- 00	

17. NARRATIVE (If more space is required, use additional copies of NRC Form 366A)

## VI. ADDITIONAL INFORMATION:

## A. FAILED COMPONENTS:

None

## B. PREVIOUS LERs ON SIMILAR EVENTS:

An historical search of LERs was conducted with the following results:

The following LERs were the result of the loss of Circuit 751. Although these events resulted in the auto start of an Emergency Diesel Generator, only one (2003-005) resulted in a plant trip because of the operating mode and electrical configuration at the time of the event.

- 2003-005
- 1998-005
- 1997-002
- 1995-006
- 1995-007
- 1994-012
- 1994-005
- 1992-007
- 1991-002

## C. THE ENERGY INDUSTRY IDENTIFICATION SYSTEM (EIS) COMPONENT FUNCTION IDENTIFIER AND SYSTEM NAME OF EACH COMPONENT OR SYSTEM REFERRED TO IN THIS LER:

COMPONENT	IEEE 803 FUNCTION IDENTIFIER	IEEE 805 SYSTEM IDENTIFICATION
Off-Site Power Circuit 751	JX	EB
Emergency Diesel Generators	DG	EK

## D. SPECIAL COMMENTS:

None