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September 12, 2006

U. S. Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: Document Control Desk

SUBJECT: R.E. Ginna Nuclear Power Plant
Docket No. 50-244

LER 2006-002, Off-site Power Systems Declared Inoperable

The attached Licensee Event Report (LER) 2006-002 is submitted in accordance with 10 CFR 50.73, Licensee Event Report System, item (a)(2)(v)(A). This report covers three separate events as provided for in NUREG 1022, Revision 2, Event Reporting Guidelines 10CFR 50.72 and 50.73, Section 2.3. These events in no way affected the public's health and safety. There are no new commitments contained in this submittal. Should you have questions regarding the information in this report, please contact Mr. Robert Randall at (585) 771-3734 or Robert.Randall@constellation.com.

Very truly yours,

A handwritten signature in black ink that reads "Mary G. Korsnick". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.
Mary G. Korsnick

IE22

1001629

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MK/MR

Attachments: (1) LER 2006-002

cc: S. J. Collins, NRC
P.D. Milano, NRC

Resident Inspector, NRC (Ginna)

1001629

ATTACHMENT (1)

LER 2006-002

LICENSEE EVENT REPORT (LER)

(See reverse for required number of
digits/characters for each block)

Estimated burden per response to comply with this mandatory 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 and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@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 an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

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4. TITLE
Off-site Power Systems Declared Inoperable

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
07	17	2006	2006	- 002 -	0	09	12	2006		05000
									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)									
10. POWER LEVEL 100	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)						
	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)						
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(vii)(B)						
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)						
	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)						
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)						
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)						
	<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> OTHER						
<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A							

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME Robert Randall, Director of Licensing	TELEPHONE NUMBER (include Area Code) (585) 771-3734
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13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

14. SUPPLEMENTAL REPORT EXPECTED

☐ YES (If yes, complete 15. EXPECTED SUBMISSION DATE) ☒ NO

15. EXPECTED SUBMISSION DATE

MONTH	DAY	YEAR

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

This LER covers three separate events per NUREG 1022, Revision 2, Section 2.3. On July 17, 2006, August 1, 2006 and August 2, 2006 the Rochester Gas and Electric (RG&E) Energy Control Center notified the R.E. Ginna Nuclear Power Plant (Ginna) control room that the post contingency low voltage alarm had been received for the off-site power system. Ginna Operations entered procedure O-6.9, Operating Limits for Ginna Station Transmission, and declared offsite power inoperable per Technical Specification (TS) 3.8.1 for each occurrence. Ginna declared the off-site power system operable for each occurrence when notified by RG&E that the alarm had cleared.

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

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

I. PRE-EVENT PLANT CONDITIONS:

On July 17, 2006, August 1, 2006 and August 2, 2006 the plant was in Mode 1 at approximately 100% power. The off-site electrical system was in a 100/0 lineup configuration, meaning that off-site circuit 767 was providing power to the four (4) 480 volt safeguards busses.

II. DESCRIPTION OF EVENT:

A. EVENT:

On three different occasions, the Rochester Gas and Electric (RG&E) Energy Control Center notified the R.E. Ginna Nuclear Power Plant (Ginna) control room that the post contingency low voltage alarm had been received for the off-site power system. Ginna Operations entered procedure O-6.9, Operating Limits for Ginna Station Transmission, and declared the off-site power inoperable per Technical Specifications (TS) 3.8.1. In each case RG&E subsequently notified Ginna that the alarm had cleared, and off-site power was declared operable. The dates and times for each event are detailed in section II.C below.

The post contingency low voltage alarm is a service provided by RG&E's state estimator, a computer model of the bulk power system, which uses real time data on system loads and generation to determine voltage and transmission loading conditions throughout its system, including Station 13A. The state estimator program is run every 15 minutes. Using the state estimator calculated conditions, a trip of Ginna with worst case accident loading is inserted, and the 115 kV voltage conditions at Station 13A are compared to the minimum required voltages for the Ginna off-site power lineup. Ginna was operating with all off-site power supplied from Station 13A, circuit 767. The minimum required 115 kV voltage in this mode of operation is 108.9 kV, per design basis documentation. If the calculated post trip station 13A 115 kV voltage drops below 108.9 kV the post contingency low voltage alarm is activated. Per the Substation Operating Agreement between RG&E and Ginna, RG&E validated the alarm and initiated actions to clear the alarm. The initial actions did not clear the alarm and Ginna was informed of the alarm condition.

The events of July 17, 2006 and August 1, 2006 were not immediately recognized as reportable, and were subsequently reported as an amendment to Event number 42751 on August 3, 2006 under 10CFR50.72 (b)(3)(v)(A). This was entered into Ginna's corrective action process.

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

None

C. DATES AND APPROXIMATE TIMES OF MAJOR OCCURRENCES:

July 17, 2006, 1427 EDST: Off-site power declared inoperable due to notification

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from RG&E of a post contingency low voltage alarm.

July 17, 2006, 1448 EDST: Off-site power declared operable due to notification from RG&E that the post contingency low voltage alarm was clear.

August 1, 2006, 1022 EDST: Off-site power declared inoperable due to notification from RG&E of a post contingency low voltage alarm.

August 1, 2006, 1843 EDST: Off-site power declared operable due to notification from RG&E that the post contingency low voltage alarm was clear.

August 2, 2006, 1127 EDST: Off-site power declared inoperable due to notification from RG&E of a post contingency low voltage alarm.

August 2, 2006, 1655 EDST: Off-site power declared operable due to notification from RG&E that the post contingency low voltage alarm was clear.

August 2, 2006, 1655 EDST: Event notification number 42751 made to report the August 2, 2006 event under 10CFR50.72 (b)(3)(v)(A).

August 3, 2006, 1430 EDST: Event notification number 42751 amended to include notification of the July 17, 2006 and August 1, 2006 events..

D. OTHER SYSTEMS OR SECONDARY FUNCTIONS AFFECTED:

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

E. METHOD OF DISCOVERY:

Notification from RG&E of a post contingency low voltage alarm.

F. SAFETY SYSTEM RESPONSES:

There were no safety system responses required.

III. CAUSE OF EVENT:

The events are NUREG-1022 Cause Code (C), "External Cause"

IV. ASSESSMENT OF THE SAFETY CONSEQUENCES OF THE EVENT:

These events are reportable in accordance with 10 CFR 50.73, Licensee Event Report System, item (a)(2)(v)(A), which requires a report of, "Any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to shutdown the reactor and maintain it in a safe condition."

The Ginna UFSAR Section 8.1.3 states in part: "When the reactor trips concurrent with an outage of off-site power, the emergency diesel generators will automatically assume vital station auxiliary loads necessary for safe shutdown as described in Section 8.3.1.2.6. These loads will be transferred to the diesel generators when the last source of voltage decreases to a preset value and the diesel generators come up to speed and voltage."

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The Ginna UFSAR Section 8.3.1.2.6.1 states in part: "In the event of a loss-of-coolant accident (which is considered the worst-case condition) and with an outage of the station auxiliary (startup) transformers, it can be shown that the plant can be maintained in a safe shutdown condition by operating the diesel generators to supply vital loads. During other types of accidents, e.g., loss of flow or steam line break, cooldown can be accomplished by dumping steam in conjunction with flow coastdown and natural circulation."

During the time that the off-site power was considered inoperable, both Diesel Generators (DG) were operable. The Ginna accident analysis assumes that off-site power is not available for the design basis accidents. Further, it is assumed that an additional worst case single active failure occurs subsequent to the accident. This is assumed to be the failure of an operable Diesel Generator. Given that Ginna entered the applicable LCO for the off-site power unavailability, the plant remained within its design basis and within the assumptions of its accident analysis.

V. CORRECTIVE ACTIONS:

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

RG&E took steps to clear the alarm and ensure off-site power was available to Ginna in the event of a plant trip or outage.

B. ACTION TAKEN OR PLANNED TO PREVENT RECURRENCE:

Ginna has requested RG&E to perform a review of the state estimator and contingency models for conditions that would result in over conservative predictions of Station 13A post contingency voltages. It is anticipated RG&E will make appropriate changes to the model, such as placing generator voltage regulators in automatic (the normal configuration) and improving model parameter accuracies based on the results of the review.

After RG&E has exhausted their local options to clear the alarm they will request the New York Independent System Operator (NYISO) to provide additional voltage support (reactive power) on the 345 kV transmission system. They have discussed this with the NYISO and will include the action during future alarm situations.

The RG&E transmission operators have been instructed to maintain the station 13A voltages within the normal 118 to 123 kV operating range when attempting to clear a post contingency low voltage alarm. RG&E will initiate lowering of the station 13A voltage to clear the post contingency low voltage alarm during future alarm situations.

Long term actions being considered by RG&E / New York State Electric and Gas (NYSEG):

1) Addition of 425 MVAR of capacitors to the RG&E system, 75 of which will be added to Station 13A.

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2) Extension of circuit 909 to Station 122. This will add a third transmission tie of Station 13A to the 345 kV system.

These long term actions are scheduled for a 12/2007 completion as part of the Rochester Transmission Project. This project was not initiated by this event, but was a system upgrade project initiated by RG&E due to increased system loading and local generation retirements.

VI. ADDITIONAL INFORMATION:

A. FAILED COMPONENTS:

There were no failed components associated with this event.

B. PREVIOUS LERs ON SIMILAR EVENTS:

There are no previous LERs associated with the post contingency low voltage alarm.

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

<u>COMPONENT</u>	<u>IEEE 803 FUNCTION IDENTIFIER</u>	<u>IEEE 805 SYSTEM IDENTIFICATION</u>
Off-site Power	JX	EA
Emergency Diesel Generators	DG	EK

D. SPECIAL COMMENTS:

Off-site power was never lost to the site and the DGs were not required to operate. The post contingency alarm is a conservative estimate of the voltage following a trip of the unit with full safeguards loading on the vital busses (design basis accident). In all cases both DGs were operable and capable of performing their design function if the off-site voltage was not sufficient. Therefore, the undervoltage system would strip the vital busses from off-site power and load them on the DGs, assuring that adequate power is available to the required safeguards equipment.