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FACIL:50-244 Robert Emmet Ginna Nuclear Plant, Unit 1, Rochester G 05000244
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MECREDY,R.C. Rochester Gas & Electric Corp.
RECIP.NAME RECIPIENT AFFILIATION

VISSING,G.S.

SUBJECT: LER 99-010-00:on 990615,ventilation isolation of auxiliary bldg occurred when auxiliary bldg gas radiation monitor R-14 reached high alarm setpoint.CR operators rest auxiliary bldg ventilation isolation signal.With 990715 ltr.

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ROBERT C. MECREDY
Vice President
Nuclear Operations

July 15, 1999

U.S. Nuclear Regulatory Commission
Document Control Desk
Attn: Guy S. Vissing
Project Directorate I-1
Washington, D.C. 20555

Subject: LER 1999-010, Radiation Monitor Alarm, Due to Higher than Normal Radioactive Gas Concentration, Results in Auxiliary Building Ventilation Isolation
R.E. Ginna Nuclear Power Plant
Docket No. 50-244

Dear Mr. Vissing:

The attached Licensee Event Report LER 1999-010 is submitted 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)".

Very truly yours,

Robert C. Mecredy

xc: Mr. Guy S. Vissing (Mail Stop 8C2)
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Regional Administrator, Region I
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IE22

NRC FORM 366 (6-1998) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104 EXPIRES 06/30/2001
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LICENSEE EVENT REPORT (LER)

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TITLE (4)

Radiation Monitor Alarm, Due to Higher than Normal Radioactive Gas Concentration, Results in Auxiliary Building Ventilation Isolation

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 NAME	DOCKET NUMBER
06	15	1999	1999	-- 010 --	00	07	15	1999		05000
									FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	1
POWER LEVEL (10)	100

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)

	20.2201(b)		20.2203(a)(2)(v)		50.73(a)(2)(i)(B)		50.73(a)(2)(viii)
	20.2203(a)(1)		20.2203(a)(3)(i)		50.73(a)(2)(ii)		50.73(a)(2)(x)
	20.2203(a)(2)(i)		20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71
	20.2203(a)(2)(ii)		20.2203(a)(4)	X	50.73(a)(2)(iv)		OTHER
	20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 366A	
	20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
John T. St. Martin - Technical Assistant	(716) 771-3641

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE).	NO X.				

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

On June 15, 1999, at approximately 0356 EDST, the plant was in Mode 1 at approximately 100% steady state reactor power. Reactor coolant activity was higher than normal due to a suspected leaking fuel assembly. During activities associated with draining a CVCS holdup tank containing radioactive fluid, radioactive gas was released from the tank and radioactive gas concentration increased within the auxiliary building, where the tank is located. A ventilation isolation of the auxiliary building occurred when auxiliary building gas radiation monitor R-14 reached its high alarm setpoint.

Immediate operator action was to perform the applicable actions of alarm response procedures.

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

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

I. PRE-EVENT PLANT CONDITIONS:

On June 15, 1999, the plant was in Mode 1 at approximately 100% steady state reactor power. Activity of the reactor coolant system (RCS) was higher than normal (by a factor of approximately six) due to a suspected leaking fuel assembly. RCS fluid is routinely diverted to one of three CVCS holdup tanks in the auxiliary building. Planned draining of the "A" CVCS holdup tank to the auxiliary building sump had just been completed. Radioactive gas was released from the tank to the auxiliary building atmosphere during the final stages of draindown. Due to the increased RCS activity and consequent increased activity in the CVCS holdup tanks, airborne radioactive gas concentration increased within the auxiliary building to levels higher than normal for this evolution. Control Room operators noted increases in radiation monitors R-13 (auxiliary building particulate) and R-14 (auxiliary building gas).

II. DESCRIPTION OF EVENT:

A. DATES AND APPROXIMATE TIMES OF MAJOR OCCURRENCES:

- o June 15, 1999, 0356 EDST: Event date and time.
- o June 15, 1999, 0356 EDST: Discovery date and time.
- o June 15, 1999, 0357 EDST: Control Room operators verify all auxiliary building ventilation isolation functions have occurred.

B. EVENT:

When R-13 and R-14 increased above 100 counts per minute, the Control Room operators directed an auxiliary operator (AO) to close the drain valves from the "A" CVCS holdup tank in the auxiliary building. He closed these valves but the already released airborne radioactive gas continued to increase the readings on radiation monitors R-13 and R-14. At approximately 0356 EDST, the Control Room operators received annunciator alarm L-1 (AUX BLDG VENT SYSTEM CONTROL PANEL), indicating that an auxiliary building ventilation isolation had occurred. The Control Room operators verified that radiation monitor R-14 had reached its high alarm setpoint, causing the ventilation isolation.

The Control Room operators immediately referred to Alarm Response procedure AR-L-1 and procedure AR-RMS-14, and verified that auxiliary building ventilation isolation had occurred. They performed the applicable actions of the alarm response procedures.

After consulting with the Radiation Protection group, it was determined that the high alarm setpoints for R-13 and R-14 were set with excessive conservatism (approximately 1% of the release limits as defined by the Offsite Dose Calculation Manual), with leaking fuel causing elevated RCS activity. After the activity decreased in the auxiliary building, the ventilation isolation signal was reset.

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TEXT *(If more space is required, use additional copies of NRC Form 366A)* (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:

This event was anticipated due to the observed increase in airborne radioactivity in the auxiliary building during the draining evolution. The actuation of auxiliary building ventilation isolation was immediately apparent due to Main Control Board annunciator alarm and other indications of the auxiliary building ventilation system on the Main Control Board.

F. OPERATOR ACTION:

The Control Room operators discussed the higher than normal activity in the "A" CVCS holdup tank prior to starting the draindown evolution. They responded to the increase in counts on R-13 and R-14 by directing that the drain valves be closed. The Control Room operators responded to the event by performing the applicable actions of alarm response procedures, and other actions as deemed necessary. The Control Room operators notified higher supervision and the NRC resident inspector. The Shift Supervisor subsequently notified the NRC per 10 CFR 50.72 (b) (2) (ii), non-emergency four hour notification, at approximately 0745 EDST on June 15, 1999.

G. SAFETY SYSTEM RESPONSES:

None

III. CAUSE OF EVENT:

A. IMMEDIATE CAUSE:

The immediate cause of the auxiliary building ventilation isolation was R-14 reaching its high alarm setpoint due to increased radioactive gas concentration in the auxiliary building atmosphere.

B. INTERMEDIATE CAUSE:

The intermediate cause of the increased radioactive gas concentration was the draining evolution of the "A CVCS holdup tank, as a result of higher than normal RCS activity (due to a suspected leaking fuel assembly) and consequent higher than normal activity in the CVCS holdup tanks.

C. ROOT CAUSE:

The underlying cause of the alarm on R-14 was an excessively conservative high alarm setpoint with suspected leaking fuel, and the original planning package for the draining evolution did not account for the higher than normal activity in the CVCS holdup tank.

IV. ANALYSIS OF EVENT:

This event is reportable 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)". The auxiliary building ventilation isolation due to R-14 alarm was an automatic actuation of a system referred to in 10 CFR 50.73 (a) (2) (iv) (B) (v).

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

There were no operational or safety consequences or implications attributed to the auxiliary building ventilation isolation because:

- The auxiliary building ventilation system design basis is established by the consequences of the limiting Design Basis Accident (DBA), which is a fuel handling accident. The Ginna Station Updated Final Safety Analysis Report (UFSAR) addresses this accident. The radiological consequences of the fuel handling accident occurring in the auxiliary building are significantly less than the limits of 10 CFR 100.

- The postulated failure of a gas decay tank (GDT) is evaluated in the Ginna Station UFSAR. Even with the worst expected conditions, the offsite doses following release of this gaseous activity would be very low. The activity in the GDT analysis was assumed to be greater than the maximum amount that could accumulate from operation with cladding defects in 1% of the fuel elements. Ginna Station is currently operating with cladding defects that are significantly below this level. The amount of activity assumed in the analysis is 100,000 Ci equivalent Xenon-133. The actual amount of activity in the gas decay tanks on June 15, 1999 was significantly below this level.

- The auxiliary building ventilation system operated as designed to isolate when R-14 reached its high alarm setpoint. The auxiliary building ventilation isolation was in the conservative direction.

Based on the above, it can be concluded that the plant operated as designed, that there were no unreviewed safety questions, and that the public's health and safety was assured at all times.

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

V. CORRECTIVE ACTION:

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

The Control Room operators reset the auxiliary building ventilation isolation signal and restored the system to pre-event status.

B. ACTION TAKEN OR PLANNED TO PREVENT RECURRENCE:

- o New R-13 and R-14 alarm setpoints are being evaluated as appropriate for current plant conditions. Plant setpoint procedure P-9 (Radiation Monitoring System) will be revised to reflect these setpoints.
- o Ginna Station will develop a comprehensive response plan to address operation with suspected leaking fuel assemblies. This plan is intended to include provisions for reviewing the effects on normal plant operations from elevated RCS activity, the effect on gaseous releases to the environment, the effect on potential doses to workers, and instrumentation responses (including setpoint adjustments if warranted).

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: LER 97-04 was a similar event (containment ventilation isolation).

C. SPECIAL COMMENTS:

None