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ACCESSION NBR: 9403170001      DOC. DATE: 94/03/10      NOTARIZED: NO      DOCKET #  
 FACIL: 50-244 Robert Emmet Ginna Nuclear Plant, Unit 1, Rochester G      05000244  
 AUTH. NAME      AUTHOR AFFILIATION  
 ST. MARTIN, J.T.      Rochester Gas & Electric Corp.  
 MECREDY, R.C.      Rochester Gas & Electric Corp.  
 RECIP. NAME      RECIPIENT AFFILIATION

JOHNSON, A.R.      Project Directorate I-3

SUBJECT: LER 94-003-00: on 940208, open instrument tube resulted in  
 loss of containment integrity. Caused by personnel error.  
 Swagelok plug installed on open tube. W/940310 ltr.

DISTRIBUTION CODE: IE22T      COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 9  
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

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

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March 10, 1994

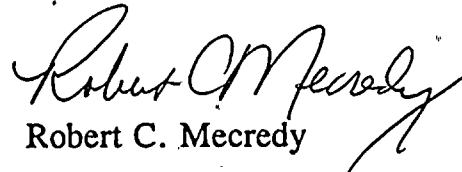
U.S. Nuclear Regulatory Commission  
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Project Directorate I-3  
Washington, D.C. 20555

Subject: LER 94-003, Uninstalled Swagelok Tubing Plug, Due to Personnel Error,  
Causes a Loss of Containment Integrity  
R.E. Ginna Nuclear Power Plant  
Docket No. 50-244

In accordance with 10 CFR 50.73, Licensee Event Report System, items (a) (2) (i) (B) and (a) (2) (v), which require a report of, "Any operation or condition prohibited by the plant's Technical Specifications", and "Any event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to control the release of radioactive material or mitigate the consequences of an accident", the attached Licensee Event Report LER 94-003 is hereby submitted.

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

Very truly yours,

  
Robert C. Mecredy

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

Ginna Senior Resident Inspector

9403170001 940310  
PDR ADDCK 05000244  
S PDR

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## LICENSEE EVENT REPORT (LER)

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

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) R.E. Ginna Nuclear Power Plant

DOCKET NUMBER (2)  
05000244PAGE (3)  
1 OF 8

TITLE (4) Uninstalled Swagelok Tubing Plug, Due to Personnel Error, Causes a Loss of Containment Integrity

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
2	8	94	94	--003--	00	03	10	94	FACILITY NAME	DOCKET NUMBER
OPERATING MODE (9)		N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
POWER LEVEL (10)		098	20.402(b)		20.405(c)		50.73(a)(2)(iv)		73.71(b)	
			20.405(a)(1)(i)		50.36(c)(1)		X 50.73(a)(2)(v)		73.71(c)	
			20.405(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vii)		OTHER	
			20.405(a)(1)(iii)		X 50.73(a)(2)(i)		50.73(a)(2)(viii)(A)		(Specify in Abstract below and in Text, NRC Form 366A)	
			20.405(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)			
			20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(x)			

## LICENSEE CONTACT FOR THIS LER (12)

NAME John T. St. Martin - Director, Operating Experience

TELEPHONE NUMBER (Include Area Code)  
(315) 524-4446

## 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)

YES  
(If yes, complete EXPECTED SUBMISSION DATE).

X NO

EXPECTED  
SUBMISSION  
DATE (15)

MONTH DAY YEAR

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

On February 8, 1994, at approximately 1020 EST, with the reactor at approximately 98% steady state power, an Instrument and Control technician observed an open instrument tube. Event reconstruction determined that this open tube had resulted in a loss of Containment integrity on November 18, 1993.

Immediate corrective action was to install a swagelok plug on the open tube.

The underlying cause of the open tube was a personnel error on the part of a plant technician. (This event is NUREG-1022 (A) cause code.)

Corrective action to preclude repetition is outlined in Section V (B).



LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (HNB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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

## I. PRE-EVENT PLANT CONDITIONS

The plant was at approximately 98% steady state reactor power. Instrument and Control (I&C) department personnel were performing calibration procedure CPI-PI-70.5, "Calibration of Plant Field Mounted Pressure Gauges", on pressure indicator PI-2281, "Containment Equipment Hatch Pressure". This work is performed outside of Containment, in the area of the Containment (CNMT) Equipment Hatch.

## II. DESCRIPTION OF EVENT

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

- November 12, 1993, 1600 EST: Based on records review, it was concluded that a swagelok plug was not reinstalled in accordance with a surveillance test procedure completed on this date and time.
- November 18, 1993, 0457 EST: Event date and time. .
- February 8, 1994, 1020 EST: Discovery date and time.
- February 8, 1994, 1030 EST: I&C technician installs swagelok plug on open tube, eliminating the potential for a loss of CNMT integrity.
- February 8, 1994, 1630 EST: Reportability date and time.

## B. EVENT:

On February 8, 1994, at approximately 1020 EST, with the reactor at approximately 98% steady state reactor power, I&C technicians were preparing to perform calibration procedure CPI-PI-70.5 on PI-2281. An I&C technician observed a nearby instrument tube that had an open end, and recognized that the tube normally has a swagelok plug installed. The plug was sitting on a ledge approximately six (6) inches from the open tubing. (The technician did not observe any other plugs missing in the area.) He notified his supervision (the I&C foreman) and was directed by the foreman to install the plug.

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The I&C technician then notified the Control Room of the event, and that he had installed the missing plug. The Control Room operators reaffirmed the I&C foreman's decision. The uninstalled plug was a 3/8 inch swagelok plug, normally installed on the instrument line for PI-2223, "Equipment Hatch Inner Volume "I" Manifold Air Pressure". This instrument line contains a manual valve (V-8060, "Instrument Root Valve to PI-2223"). V-8060 is depicted on the piping and instrumentation drawing as open, and was found open. With V-8060 open and the plug uninstalled, there was the potential for a direct path from CNMT to the outside any time the Equipment Hatch Inner access door was open.

The I&C foreman and the Control Room operators formally documented the event, and the operator notified higher supervision and the Nuclear Regulatory Commission (NRC) Resident Inspector.

The Shift Supervisor confirmed that the I&C technician had checked the CNMT Equipment Hatch area for additional missing plugs. As an additional precaution, the Shift Supervisor directed an Auxiliary Operator to check the CNMT Personnel Hatch area for any similar breaches of CNMT integrity. No similar or potential breaches were identified.

A review of plant records was immediately performed, to identify when the swagelok plug should have been installed, and when the CNMT Equipment Hatch Inner access door was open while the plug was not installed. This review concluded that the one swagelok plug that was found uninstalled in the Equipment Hatch area is addressed during the performance of surveillance procedure PT-22.4, "Equipment Hatch Between Door Volume Leak Rate Test". As part of PT-22.4, two plugs are removed and subsequently reinstalled.

The review of plant records concluded that on November 12, 1993, one of the plugs was properly installed and the other was not, following performance of PT-22.4. The review also concluded that the CNMT Equipment Hatch Inner access door was opened on November 18, 1993, with the plant not in Cold Shutdown. At approximately 1630 EST on February 8, 1994, it was determined that this event was reportable under 10CFR50.72 (b) (2) (iii) (C). The NRC was subsequently notified at approximately 1710 EST.

LICENSEE EVENT REPORT (LER)  
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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:

The combination of the uninstalled plug and the open valve (V-8060) created a direct path from the CNMT to the outside, resulting in a loss of CNMT integrity, whenever the Equipment Hatch Inner access door was open. This door was opened several times on November 18, 1993, during a period of work activities in the CNMT.

## D. OTHER SYSTEMS OR SECONDARY FUNCTIONS AFFECTED:

None

## E. METHOD OF DISCOVERY:

This event was identified by an I&C technician who was performing calibration of Equipment Hatch pressure gauges.

## F. OPERATOR ACTION:

The Control Room operators reaffirmed the I&C foreman's decision to install the missing plug. Subsequently, the Control Room operators notified higher supervision and the NRC Resident Inspector. The operators also directed that the CNMT Personnel Hatch area be inspected for the potential of other missing plugs that could affect CNMT integrity.

After reportability was determined, the Control Room operators notified the NRC per 10CFR50.72 (b) (2), 4 Hour Non-Emergency Notification.

## G. SAFETY SYSTEM RESPONSES:

None

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## III. CAUSE OF EVENT

## A. IMMEDIATE CAUSE:

The immediate cause of the loss of CNMT integrity was an undetected potential leak path from CNMT to the outside. This leak path existed because one swagelok plug was uninstalled on an instrument line containing an open manual valve. This leak path only existed when the CNMT Equipment Hatch Inner access door was simultaneously open.

## B. INTERMEDIATE CAUSE:

A records review concluded that the intermediate cause of the uninstalled plug in the Equipment Hatch area was related to surveillance test procedure PT-22.4, last performed on November 12, 1993. A Human Performance Enhancement System (HPES) evaluation was conducted, and confirmed that one of the plugs was not properly reinstalled when PT-22.4 was completed, at approximately 1600 EST on November 12, 1993.

## C. ROOT CAUSE:

The underlying cause of the failure to properly reinstall the swagelok tube plug in the Equipment Hatch area was a personnel error. (This event is NUREG-1022 (A) cause code, Personnel Error.) This was a cognitive personnel error on the part of a Results and Test (R&T) technician, in that the actions of the R&T technician were not in accordance with the direction of procedure PT-22.4. There were no unusual characteristics of the work location.



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

## IV. ANALYSIS OF EVENT

This event is reportable in accordance with 10 CFR 50.73, Licensee Event Report System, items (a) (2) (i) (B) and (a) (2) (v), which require a report of, "Any operation or condition prohibited by the plant's Technical Specifications", and "Any event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to control the release of radioactive material or mitigate the consequences of an accident". The potential for a leak path was created on November 12, 1993, and a loss of CNMT integrity existed for short periods of time on November 18, 1993. Loss of CNMT integrity, prior to the plant being in the cold shutdown condition, is a violation of Technical Specification (TS) 3.6.1.a.

The tubing for PI-2223 connects to the Equipment Hatch assembly between the Inner and Outer access doors. PI-2223 is used during performance of a pressurization test between the two doors, as required by TS 4.4.2.4.c. Procedure PT-22.4 accomplishes this test. Each access door is supplied with two separate seals, such that either door can provide the necessary CNMT boundary. Both doors are normally locked closed when CNMT integrity is required, and only one door can be opened at a time. Therefore, the CNMT leak path can only exist when the Equipment Hatch Inner access door is open. The conditions to create this leak path existed since November 12, 1993, but the actual leak path condition only existed on November 18, 1993, during times when the Equipment Hatch Inner access door was open.

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An assessment was performed considering both the safety consequences and implications of this event. The results of this assessment are that there were no operational or safety consequences or implications attributed to the loss of CNMT integrity because:

- The condition only existed for short periods of time on November 18, 1993. At this time, the plant was at the Hot Shutdown condition and borated to the Cold Shutdown Boron concentration, in preparation for repairing a non-radioactive steam leak inside CNMT.
- Under these conditions, the consequences of any radiological accident are less severe.
- The Equipment Hatch Inner access door, by itself, provides a sufficient CNMT boundary when closed. This door is maintained closed during normal plant operation.

With the plant at Hot Shutdown on November 18, 1993, the Inner access door was opened at approximately 0457 EST, and was subsequently opened several times on that date. Security personnel maintained a manual log of the use of this CNMT access point, as there is no automatic indication of Inner access door position. Available logs and other records were used to attempt to quantify the length of time the Inner access door was open, as workers were moving materials in and out of CNMT. No accurate estimate could be made.

The plant was brought to the Cold Shutdown condition at approximately 2200 EST on November 18, 1993. In Cold Shutdown, TS 3.6.1.a does not apply. Therefore, even with the plug missing, the valve open, and the Inner access door open, no further violations of TS 3.6.1.a could occur. The plant left Cold Shutdown on November 20, 1993, at approximately 1235 EST. The Equipment Hatch Inner access door was not opened after that time. Thus, no leak path which would result in a loss of CNMT integrity existed after that date. Also, no event occurred during the time that the Equipment Hatch Inner access door was open which would result in a radioactive release.

Based on the above, it can be concluded that the public's health and safety was assured at all times.

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## V. CORRECTIVE ACTION

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

- The I&C technician, under the direction of his foreman, installed the swagelok plug on the open tube end in the Equipment Hatch area.

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

- Management took appropriate disciplinary action for the individual involved.
- Procedures and drawings will be changed to maintain valve 8060 normally closed.
- Surveillance test procedures for the Equipment Hatch between door volume and Personnel Hatch between door volume will be enhanced to clearly control removal and reinstallation of the swagelok plugs.
- Administrative controls will be applied to the tubing/instrumentation configuration, for both the CNMT Equipment Hatch area and the CNMT Personnel Hatch area, as a CNMT penetration/boundary.

## 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 Nuclear Power Plant could be identified.

## C. SPECIAL COMMENTS:

None