

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9006140523 DOC.DATE: 90/06/04 NOTARIZED: NO DOCKET #  
 FACIL:50-244 Robert Emmet Ginna Nuclear Plant, Unit 1, Rochester G 05000244  
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 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 90-006-00:on 900505,isolation of wrong pressurizer  
 pressure transmitter due to personnel error.

W/9 ltr.

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

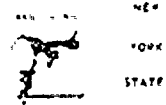
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June 4, 1990

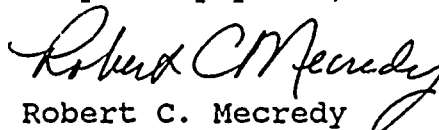
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Subject: LER 90-006, Isolation of Wrong Pressurizer Pressure  
Transmitter (Due to Personnel Error) During Maintenance,  
Causes an Inadvertent Safety Injection Actuation

In accordance with 10CFR50.73, License 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 License Event Report, LER 90-006, is hereby  
submitted.

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

Very truly yours,

  
Robert C. Mecredy  
Division Manager  
Nuclear Production

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

xc: Ginna USNRC Senior Resident Inspector

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## LICENSEE EVENT REPORT (LER)

APPROVED OMB NO. 3180-0104  
EXPIRES - 8/31/85

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R.E. Ginna Nuclear Power Plant										0 5 0 0 0 2 4 4										1 OF 0 9																																							
TITLE (4) Isolation of Wrong Pressurizer Pressure Transmitter (Due to Personnel Error), During Maintenance, Causes an Inadvertent Safety Injection Actuation																																																											
EVENT DATE (5)										LER NUMBER (6)										REPORT DATE (7)										OTHER FACILITIES INVOLVED (8)																													
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OPERATING MODE (9)										THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)																																																	
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POWER LEVEL (10)										20.402(b)										20.406(a)										X										60.734(12)(i)										73.71(a)									
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LICENSEE CONTACT FOR THIS LER (12)																																																											
NAME																				TELEPHONE NUMBER																																							
Wesley H. Backus																				AREA CODE																																							
Technical Assistant to the Operations Manager																				3 1 1 5 5 2 4 1 - 1 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																																
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)																																																											

On May 5, 1990, at 1523 EDST, with the reactor in the Hot Shutdown condition, during startup from the annual refueling and maintenance outage, an inadvertent Safety Injection (SI) Actuation occurred.

All safeguards equipment operated as designed, but no injection occurred because Reactor Coolant System pressure was being maintained above the SI pump shut off head.

The SI was due to 2 out of 3 low pressurizer pressure SI bistables in the trip mode.

The underlying causes of the 2 low pressurizer pressure SI bistables in the trip mode was maintenance on one transmitter and the inadvertent closing of the wrong root valve to the other transmitter.

Immediate corrective action was to stabilize the plant, terminate SI, and open the wrongly closed valve.

Subsequent action to prevent recurrence was to counsel personnel involved on strict adherence to procedure and understanding the consequences of mistakes.



## 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)

I. PRE-EVENT PLANT CONDITIONS

The unit was in the Hot Shutdown Condition following heat-up from the annual refueling and maintenance outage. Periodic Test procedure PT-34 (Startup Physics Test Program), was in progress.

Prior to the event, pressurizer level indication for Channels L-428 and L-433 drifted high off scale. The fact that the other two pressurizer level channels, L-426 and L-427, maintained their normal hot shutdown level indication, coupled with rate of rise of LI-428 and LI-433, was an indication that a small leak had developed in the common reference leg for these level transmitters. A small leak would void the reference leg of water and permit the non-condensable gases from the top of the pressurizer to enter the reference leg. Other transmitters sharing this reference leg are pressurizer pressure transmitters PT-431 and PT-449 and pressurizer level Appendix R transmitter LT-428A.

A containment entry by the Manager, Electrical and I&C Maintenance, I&C Foreman, and the I&C Planner confirmed that a small leak existed when the process connection to PT-431 was found to have approximately one drop per second leak. The needed corrective actions were mutually agreed upon, and the I&C Planner developed the work package which included procedures EM-731 (Replace Leaking/Defective "QA" Swagelok Fittings and Kerotest Valve Manifolds) for repairing the leaky fitting and M-72.2 (Pressurizer Level Condensate Pot Venting for LT-428 and LT-433) for filling the reference leg and venting it of all gases. The Planner and Foreman reviewed the work package together and concurred that the work should be performed in two stages due to the containment temperature limiting the worker stay time in containment to 45 minutes.

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TEXT (If more space is required, use additional NRC Form 364A's) (17)

The first phase of the work was to correct the leak and the second phase would be to fill and vent the reference leg. The Foreman reviewed the part of the work package for reworking the swagelok fitting with the I&C personnel performing phase one. Prior to this, the I&C Planner had performed the applicable steps of M-72.2 that placed protective channels L-428, P-431 and P-449 in the specified state in preparation for the containment work. In hindsight, having the Planner performing this portion of the job reduced personnel awareness of the status of safeguards systems. The I&C personnel for phase one entered containment with a working copy of EM-731 to correct the leak. It should be noted that, at this time, this team, although aware of the full scope of work, had not reviewed the venting procedure nor did they take a copy of the venting procedure with them. Rework of the fitting progressed faster than anticipated, and the work was completed in about 20 minutes.

The I&C personnel in the work area were aware of the additional work scope, the process that would be used, and the potential of not being able to complete it in the 45 minutes stay time constraint, and called the I&C Foreman to see if they could assist in the second phase of the job. The I&C Foreman requested that they close the low side isolation valves and open the bypass valves for LT-428, LT-428A, and LT-433, and then proceed to the top of the pressurizer to close the root valve for these transmitters reference leg. The Foreman did not refer to procedure M-72.2 when providing these directions, but was relying on what he had previously read and knew. The Foreman did not state the root valve number, but did give specific instructions on the physical location of the valve. The Foreman thought his personnel had taken a copy of the M-72.2 procedure with them and that they would refer to it for specific valve numbers. The I&C personnel assumed the Foreman knew they didn't have the procedure and that he was providing them with accurate directions.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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## II.

DESCRIPTION OF EVENT

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

- o May 5, 1990, 1523 EDST: Event date and time
- o May 5, 1990, 1523 EDST: Discovery date and time
- o May 5, 1990, 1527 EDST: Pressurizer pressure transmitter PT-430 common root valve, valve 510 reopened and returned to normal.
- o May 5, 1990, 1554 EDST: Safety Injection terminated and plant stabilized in hot shutdown.

## B. EVENT:

On May 5, 1990, at 1523 EDST, with the reactor in the hot shutdown condition, an inadvertent Safety Injection Actuation occurred during planned maintenance of pressurizer level channel LT-428 by I&C personnel. During the isolation of LT-428 for reference leg venting, the I&C personnel proceeded to isolate the low side of pressurizer level transmitters LT-428, LT-428A, and LT-433 and opened their bypass valves. They then accessed the top of the pressurizer and proceeded to close what they thought was the root valve for the above mentioned level transmitters reference leg when, in fact, they were closing the root valve for pressurizer level channel LT-427 and pressurizer pressure channel PT-430. As a result of this error, pressurizer level channel LT-427 drifted high off scale and pressurizer pressure channel PT-430 went low. The resulting effect was safety injection logic being satisfied due to PT-431 channel being placed in the tripped state for the maintenance activity and PT-430 obtaining the low pressurizer pressure safety injection setpoint of 1750 psig.



## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

The Control Room Operators performed the applicable actions of Emergency Operating Procedures, E-0 (Reactor Trip Or Safety Injection) and ES-1.1 (SI Termination), and stabilized the plant. All safeguards equipment operated as designed.

The Control Room Operators instructed the I&C personnel to immediately open the valve they had closed and to exit containment.

The Control Room Operators notified higher supervision and the Nuclear Regulatory Commission (NRC) of the inadvertent safety injection actuation due to the closing of the wrong valve.

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:

Subsequent to the inadvertent safety injection actuation, the Control Room Operators performed the applicable actions of Emergency Operating Procedures, E-0 (Reactor Trip Or Safety Injection) and ES-1.1 (SI Termination), and stabilized the plant.

Subsequently, the Control Room Operators instructed the I&C personnel to immediately open the valve they had closed and notified higher supervision and the NRC of the event.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

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

## G. SAFETY SYSTEM RESPONSES:

All safeguards equipment operated as designed during the inadvertent safety injection actuation.

III. CAUSE OF EVENT

## A. IMMEDIATE CAUSE:

The inadvertent safety injection actuation was due to two out of three pressurizer pressure channels low pressure SI bistables in the trip mode.

## B. INTERMEDIATE CAUSE:

The two pressurizer pressure channels low pressure SI bistables in the trip mode was due to a maintenance activity on one channel and to an inadvertent closed root valve on the other channel.

## C. ROOT CAUSE:

The underlying cause of the inadvertent closed root valve was due to deviation from a planned sequence of activities and inadequate procedure adherence.

In review of this incident, it was found that the work package and its procedures were satisfactory for doing the job and, had the work been performed as planned, the event would not have occurred. The problem arose when the personnel involved deviated from the planned sequence of activities and acted in haste in an attempt to reduce the time in containment for their fellow workers.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

IV. ANALYSIS OF EVENT

This event is reportable in accordance with 10CFR50.73, License 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)," in that the inadvertent safety injection actuation 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:

There were no operational or safety consequences or implications attributed to the inadvertent safety injection actuation because:

- o The safety injection system actuated per design from the low pressurizer pressure tripped bistables.
- o All safeguards equipment operated as designed.
- o Considering the worst case scenario (i.e., the safety injection signal was valid), all system functions would have been fulfilled.
- o No injection occurred as Reactor Coolant System pressure was above the shutoff head of the safety injection pumps.
- o The safety injection signal was reset and all systems were returned to normal in a minimal amount of time.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

## V.

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

The inadvertent closed valve was reopened immediately, safety injection was reset, and all systems affected were returned to their normal status.

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

To prevent similar events from recurring in the future, the following corrective actions have been or will be taken:

- o Involved personnel have been counseled on the importance of strict adherence to the work package and work plan.
- o Through shop meetings, reinforce with all I&C personnel the importance of awareness of the task at hand and the understanding of what the consequences may be if a mistake is made. Review with the I&C personnel what Management's expectations are for attention to detail and for performing self-verification.
- o Work with the Maintenance Training Department to develop a self-verification lesson plan that can be taught to all Ginna Station personnel.

## VI.

ADDITIONAL INFORMATION

## A. FAILED COMPONENTS:

None.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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## B. PREVIOUS LER'S 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. However, LERs 84-006, 85-004, and 89-003 were similar events with a different root cause.

## C. SPECIAL COMMENTS:

None.