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ACCESSION NBR:8910110146 DOC.DATE: 89/09/28 NOTARIZED: NO DOCKET #
 FACIL:STN-50-530 Palo Verde Nuclear Station, Unit 3, Arizona Publi 05000530
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 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 89-005-01:on 890628,plant vent low range effluent
 monitor alarm not properly investigated.

W/8. ltr.

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NOTES:Standardized plant.

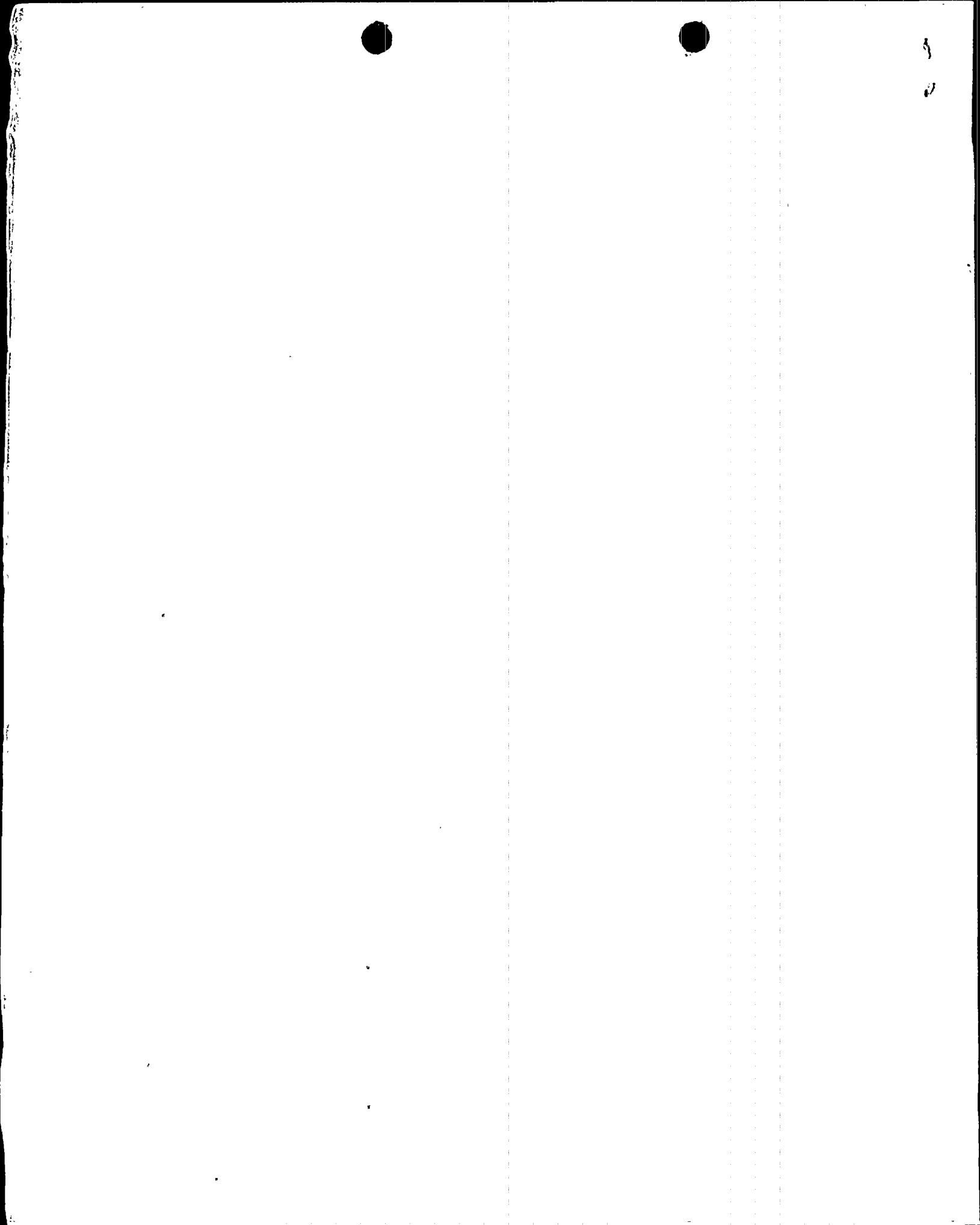
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INTERNAL: ACRS MICHELSON	1 1	ACRS MOELLER	2 2
ACRS WYLIE	1 1	AEOD/DOA	1 1
AEOD/DSP/TPAB	1 1	AEOD/ROAB/DSP	2 2
DEDRO	1 1	NRR/DEST/CEB 8H	1 1
NRR/DEST/ESB 8D	1 1	NRR/DEST/ICSB 7	1 1
NRR/DEST/MEB 9H	1 1	NRR/DEST/MTB 9H	1 1
NRR/DEST/PSB 8D	1 1	NRR/DEST/RSB 8E	1 1
NRR/DEST/SGB 8D	1 1	NRR/DLPQ/HFB 10	1 1
NRR/DLPQ/PEB 10	1 1	NRR/DOEA/EAB 11	1 1
NRR/DREP/RPB 10	2 2	NUDOCS-ABSTRACT	1 1
<u>REG FILE</u> 02	1 1	RES/DSIR/EIB	1 1
RGNS FILE 01	1 1		
EXTERNAL: EG&G WILLIAMS,S	4 4	L ST LOBBY WARD	1 1
LPDR	1 1	NRC PDR	1 1
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Arizona Public Service Company

PALO VERDE NUCLEAR GENERATING STATION
P.O. BOX 52034 • PHOENIX, ARIZONA 85072-2034

192-00529-JML/TDS/DAJ

September 28, 1989

U. S. Nuclear Regulatory Commission
NRC Document Control Desk
Washington, D.C. 20555

Dear Sirs:

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Unit 3
Docket No. STN 50-530 (License NPF-41)
Licensee Event Report 89-005-01
File: 89-020-404

Attached please find Supplement Number 1 to Licensee Event Report (LER) No. 89-005-00 prepared and submitted pursuant to the requirements of 10CFR 50.73. In accordance with 10CFR 50.73(d), we are herewith forwarding a copy of this report to the Regional Administrator of the Region V Office.

If you have any questions, please contact T: D: Shriver, Compliance Manager at (602) 393-2521.

Very truly yours,

J. M. Levine
J. M. Levine
Vice President
Nuclear Production

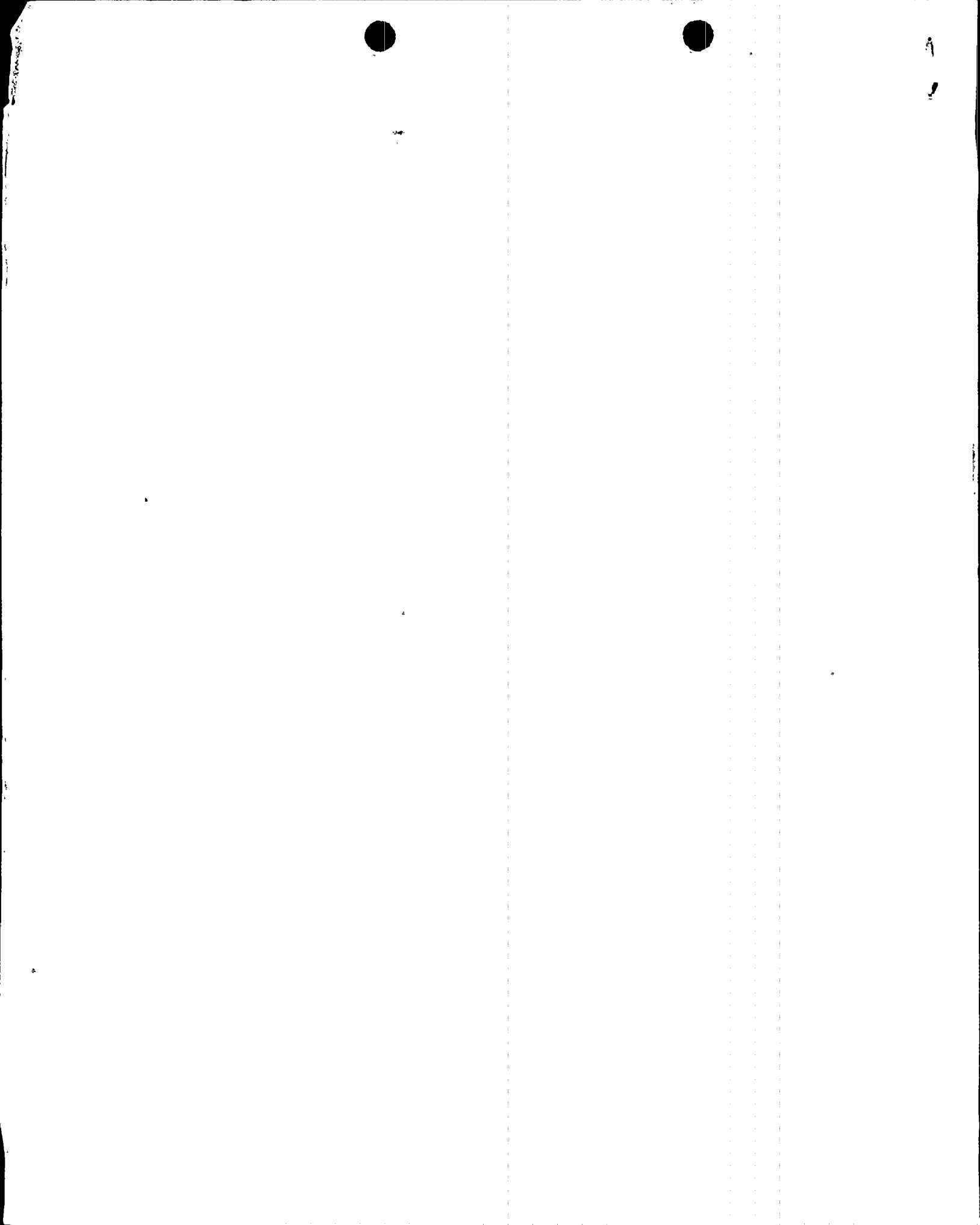
JGH/TDS/DAJ/kj

Attachment

cc: W. F. Conway (all w/a)
E. E. Van Brunt, Jr.
J. B. Martin
T. J. Polich
M. J. Davis
A. C. Gehr
INPO Records Center

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PDR ADOCK 05000530
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LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Palo Verde Unit 3										DOCKET NUMBER (2) 0 5 0 0 0 5 3 0										PAGE (3) 1 OF 0 6									
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TITLE (4) Plant Vent Low Range Effluent Monitor Alarm Not Properly Investigated																													
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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 NAMES						DOCKET NUMBER(S)					
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0 6 2 8 8 9									8 9 - 0 0 5 - 0 1									0 9 2 8 8 9									N/A											

OPERATING MODE (9) N										THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)																																																	
POWER LEVEL (10) 0 0 0										20.402(b)										20.406(c)										50.73(a)(2)(iv)										73.71(b)																			
										20.406(a)(1)(i)										50.38(a)(1)										50.73(a)(2)(v)										73.71(c)																			
										20.406(a)(1)(ii)										50.38(c)(2)										50.73(a)(2)(vii)										OTHER (Specify in Abstract below and in Text, NRC Form 366A)																			
										20.406(a)(1)(iii)										50.73(a)(2)(i)										50.73(a)(2)(viii)(A)																													
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										20.406(a)(1)(v)										50.73(a)(2)(iii)										50.73(a)(2)(ix)																													

LICENSEE CONTACT FOR THIS LER (12)																													
NAME Timothy D. Shriver, Compliance Manager																				TELEPHONE NUMBER 6 0 2 3 9 3 - 2 5 2 1									

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		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	

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

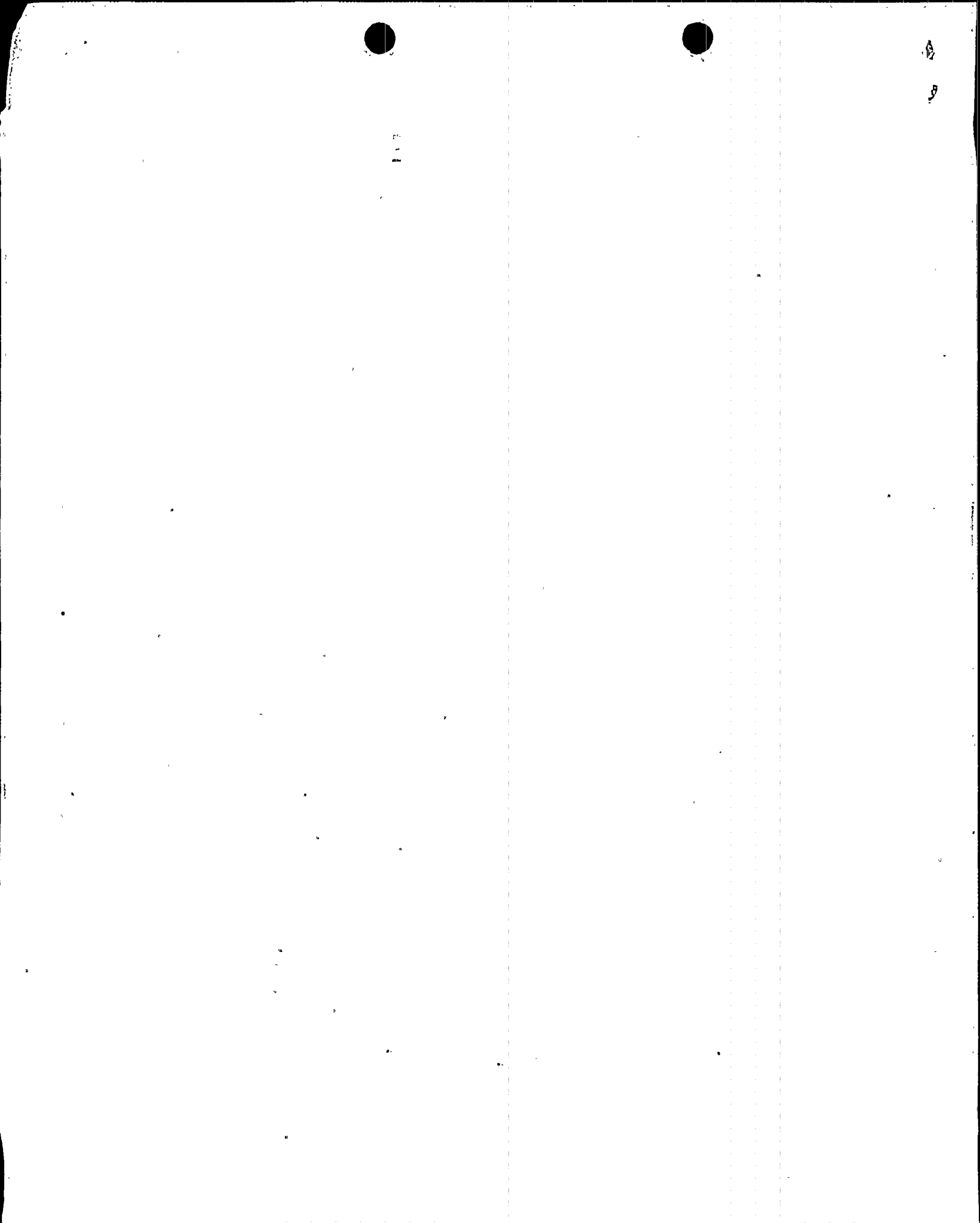
ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

At approximately 1115 MST on June 28, 1989, Palo Verde Unit 3 was in a refueling outage with the core off-loaded to the Spent Fuel Pool when a Unit 3 Technician discovered that the sample flow rate for the Plant Vent Low Range Radioactive Effluent Monitor (RU-143) was below the low flow alarm setpoint rendering the monitor inoperable. Investigation determined that the low flow alarm had occurred at approximately 0531 MST on June 28, 1989; however, the alarm was not properly investigated. This resulted in not meeting ACTION requirements 36 and 40 of Technical Specification (T.S.) 3.3.3.8.

The cause of the low flow condition on RU-143 was a loose set screw on the coupling between the monitor's sample pump and its drive motor. The cause of the improper follow-up action for the low flow alarm was inadequate communication between control room personnel and personnel responsible for investigating the cause of the alarm condition.

As corrective action, the Pre-Planned Alternate Sampling Program was implemented by 1150 MST on June 28, 1989, fulfilling T.S. 3.3.3.8 ACTION requirements. The loose set screw was tightened and RU-143 was returned to service at approximately 1558 MST on June 24, 1989.

A previous similar event was reported in Unit 1 LER 528/85-067.



LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)				PAGE (3)		
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Palo Verde Unit 3	0 5 0 0 0 5 3 0	8 9	— 0 0 5	— 0 1	0 2	OF	0	6

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

I. DESCRIPTION OF WHAT OCCURRED:

A. Initial Conditions:

At approximately 0631 MST on June 28, 1989, Palo Verde Unit 3 was in a refueling outage with the core (AC) off-loaded to the Spent Fuel Pool (ND).

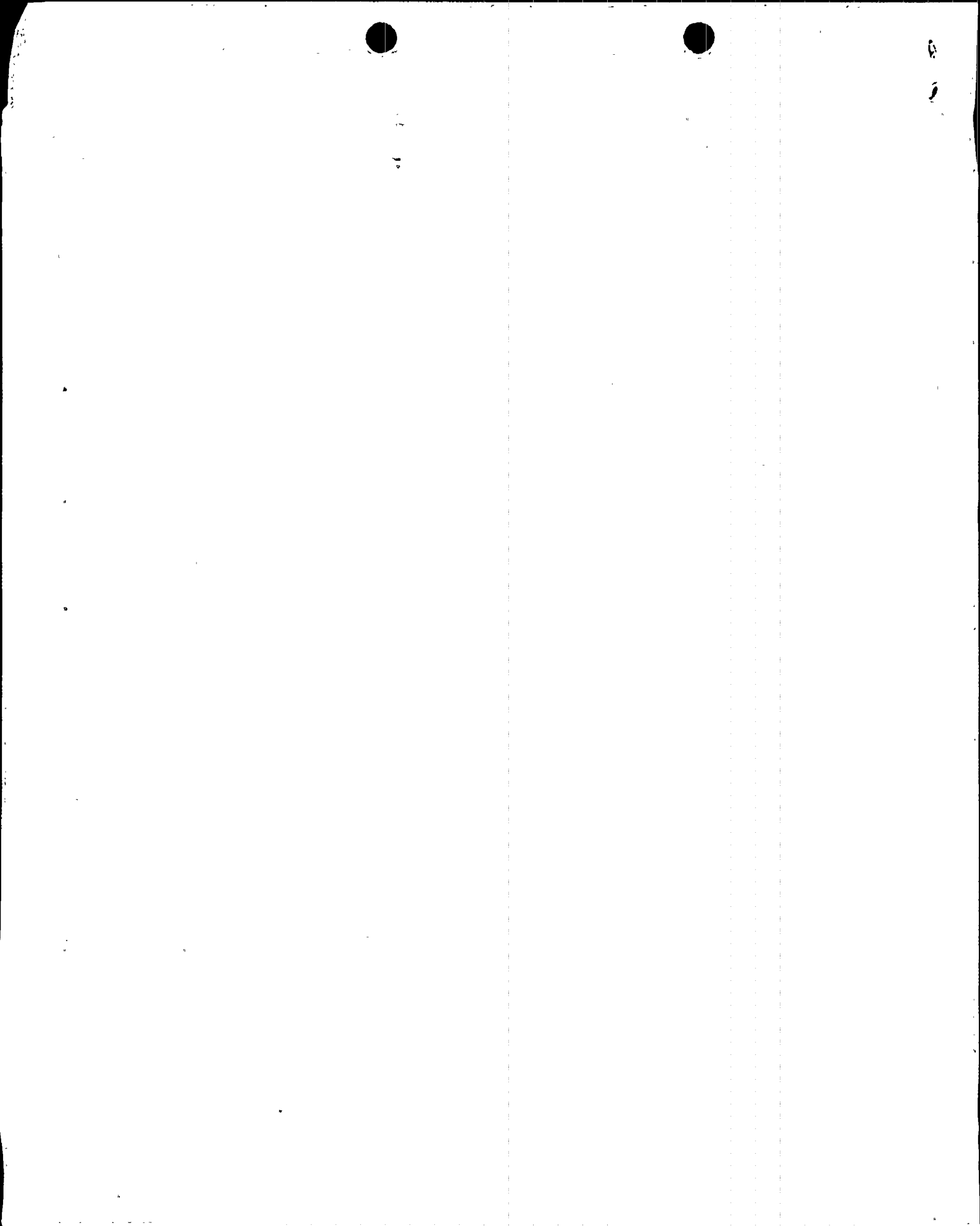
B. Reportable Event Description (Including Dates and Approximate Times of Major Occurrences):

Event Classification: Condition prohibited by the plant's Technical Specifications.

At approximately 1115 MST on June 28, 1989, during the performance of Radiation Monitoring System (IL) daily surveillance testing, a Unit 3 Chemistry Technician (utility, non-licensed) discovered that the indicated sample flow rate for the Plant Vent Low Range Radioactive Effluent Monitor (RU-143)(VL)(RI)(IL) was below the alarm setpoint. Investigation determined that a low flow alarm had occurred at approximately 0531 MST on June 28, 1989 and acknowledged in the Control Room; however, the alarm was not properly investigated. Since an actual low flow condition existed, the monitor had been inoperable since approximately 0531 MST and ACTION requirements 36 and 40 of Technical Specification 3.3.3.8 were not met within the allowable interval.

With RU-143 inoperable, Technical Specification 3.3.3.8 ACTIONS 36 and 40 require that effluent releases via the Plant Vent may continue provided the flow rate is estimated at least once per four (4) hours and auxiliary sampling equipment is installed within one hour after the monitor is declared inoperable (i.e., implement Pre-Planned Alternate Sampling Program).

Prior to event discovery, at approximately 0530 MST on June 28, 1989, Unit 3 Operations personnel (utility, licensed and non-licensed) were in the process of preparing for a planned maintenance outage on the Train "A" Class 1E electrical power system (EB). During the process, several alarms were received as components were de-energized. At approximately the same time (0531 MST per computer logs) the low flow alarm for RU-143 occurred. Control Room personnel (utility, licensed) acknowledged the low flow alarm and contacted Radiation Protection personnel (utility, non-licensed) per procedural requirements. No further followup action was taken. Pursuant to Technical Specification 3.3.3.8 ACTIONS 36, 37, and 40, the Pre-Planned Alternate Sampling Program should have been implemented by 0631 MST on June 28, 1989.



LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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

At approximately 1115 MST on June 28, 1989, Unit 3 Chemistry personnel were performing daily Radiation Monitoring System surveillance testing and noted the low flow condition for RU-143. Control Room personnel were contacted and the applicable ACTION requirements of Specification 3.3.3.8 were implemented by approximately 1150 MST on June 28, 1989 in accordance with the Pre-Planned Alternate Sampling Program.

- C. Status of structures, systems, or components that were inoperable at the start of the event that contributed to the event:

Except as described in Section I.B, no other structures, systems or components were inoperable at the start of the event which contributed to the event.

- D. Cause of each component or system failure, if known:

Not applicable - no component or system failures were involved.

- E. Failure mode, mechanism, and effect of each failed component, if known:

Not applicable - no component failures were involved.

- F. For failures of components with multiple functions, list of systems or secondary functions that were also affected:

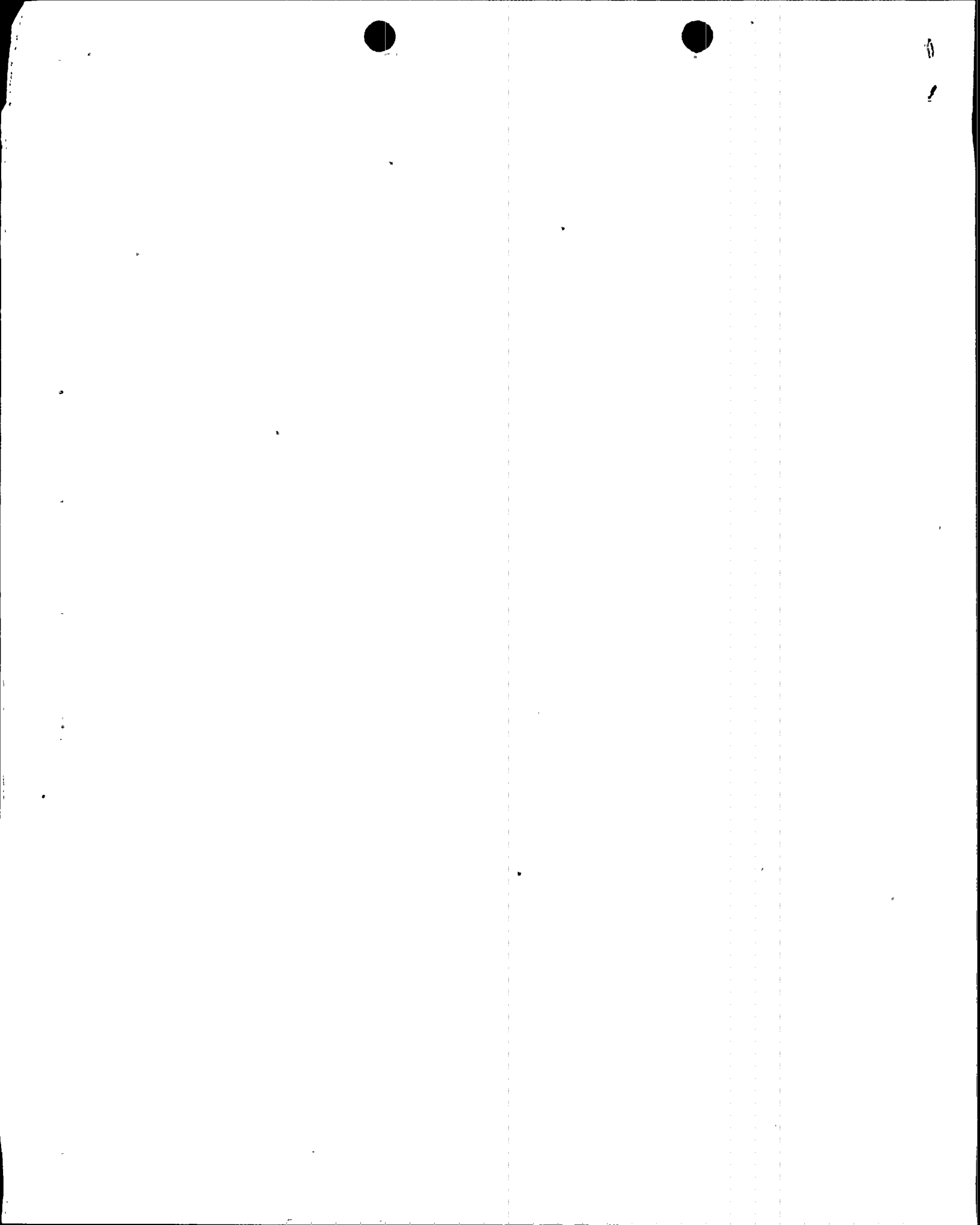
Not applicable - no component failures were involved.

- G. For failures that rendered a train of a safety system inoperable, estimated time elapsed from the discovery of the failure until the train was returned to service:

Not applicable - no component failures were involved. However, the Plant Vent Low Range Radioactive Effluent Monitor (RU-143) became inoperable at approximately 0531 MST on June 28, 1989, due to the low flow conditions. Following appropriate repairs, RU-143 was returned to service at approximately 1558 MST on June 29, 1989. RU-143 was inoperable for approximately 34 hours and 27 minutes.

- H. Method of discovery of each component or system failure or procedural error:

There were no component or system failures. The procedural errors discussed in Section I.I were discovered during the post event investigation conducted in accordance with the PVNGS Incident Investigation Process.



LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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

I. Cause of Event:

The cause of the low flow on the Plant Vent Low Range Monitor (RU-143) was a loose set screw on the coupling between the monitor's air sample pump (P) and its drive motor (MO). The loose set screw resulted in a loose coupling and the motor would not adequately turn the sample pump.

The cause of the inadequate followup for the RU-143 low flow alarm was that the appropriate on-shift personnel (utility, non-licensed) responsible for investigating problems occurring with the gaseous effluent monitors were not contacted by control room personnel (utility, licensed) and instructed to investigate the cause of the alarm. Responsibility for investigating Radiation Monitoring System (RMS)(IL) problems is shared by unit Chemistry and Radiation Protection (RP) Departments, depending upon the type of monitor involved. Chemistry is responsible for the operation of gaseous effluent radiation monitors which includes RU-143. In response to the alarm on RU-143, which occurred in the control room, control room personnel contacted an individual in the RP area. However, this individual was not responsible for effluent monitors; therefore, proper investigation of the alarm condition was not performed.

Also contributing to this event, PVNGS alarm response procedures for RMS alarms provide instruction that control room personnel are to contact RP for all RMS alarms. Therefore, the procedures utilized by control room personnel in response to the RU-143 alarm were incorrect in that instruction should have been provided to contact Chemistry effluents personnel.

There were no unusual characteristics of the work location which contributed to this event.

J. Safety System Response:

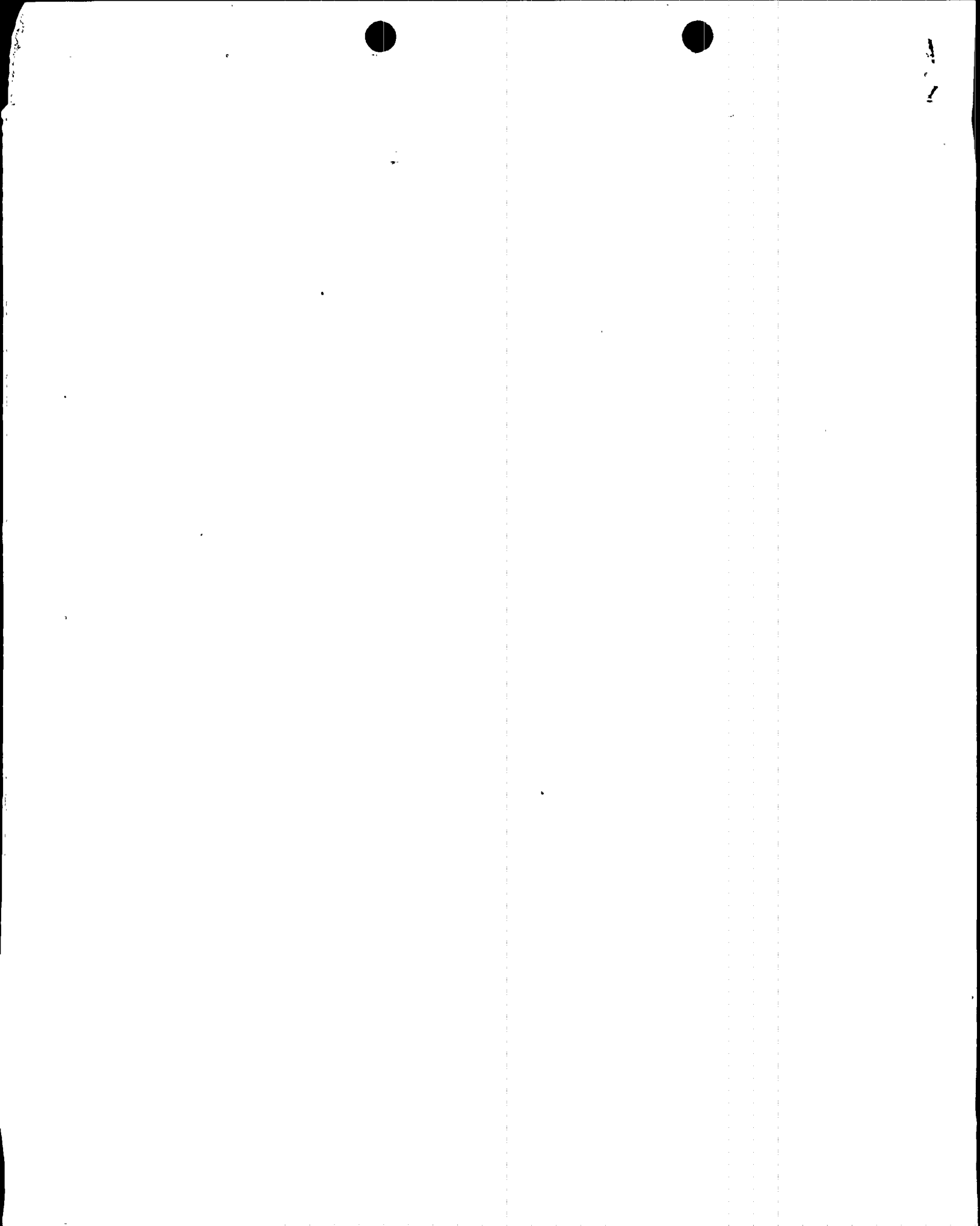
There were no automatic or manual safety system responses and none were necessary.

K. Failed Component Information:

Not applicable - no component failures were involved.

II. ASSESSMENT OF THE SAFETY CONSEQUENCES AND IMPLICATIONS OF THIS EVENT:

Plant Vent gaseous effluent instrumentation is provided to monitor for radioactive materials released during normal plant operations or



LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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

postulated accident conditions. There are two separate radioactive gaseous effluent monitoring channels for the Plant Vent: the low range effluent monitor (RU-143) for normal plant radioactive gaseous effluents and the high range effluent monitor (RU-144) for post-accident plant radioactive gaseous effluents. The low range monitor continuously operates until the concentration of radioactivity in the effluent is above a pre-determined setpoint. At this setpoint, sample flow is re-directed to the high range monitor and the low range monitor is secured.

The Plant Vent low and high range monitors measure particulate and gaseous gross beta activity as well as volatile I-131. The particulate beta channel uses a beta scintillator to count deposited activity on a fixed filter paper. A second beta scintillator counts the filtered gas for gaseous beta activity. The I-131 channel uses a single channel analyzer to discriminate and count volatile I-131 decay photon-generated electrical pulses. The monitors sample isokinetically per ANSI 13.1-1969. This is done through receiving either a manual or automatic input of Plant Vent flow rate to a microcomputer (CPU) which in turn sets the correct radiation monitor sample flow rate. With the incorrect sample flow rate described in Section I.B, the Plant Vent effluent was not being sampled isokinetically by the low range monitor (RU-143).

At the time of the event, Unit 3 was shut down during a refueling outage with the core off-loaded to the spent fuel pool. No fuel movement was in progress. Radioactive effluent levels before and after the period of monitor inoperability were normal. There were no accidents or plant activities in progress which would have resulted in abnormal effluent radioactivity levels during the period of monitor inoperability. Therefore, there were no safety consequences or implications resulting from this event.

III. CORRECTIVE ACTIONS:

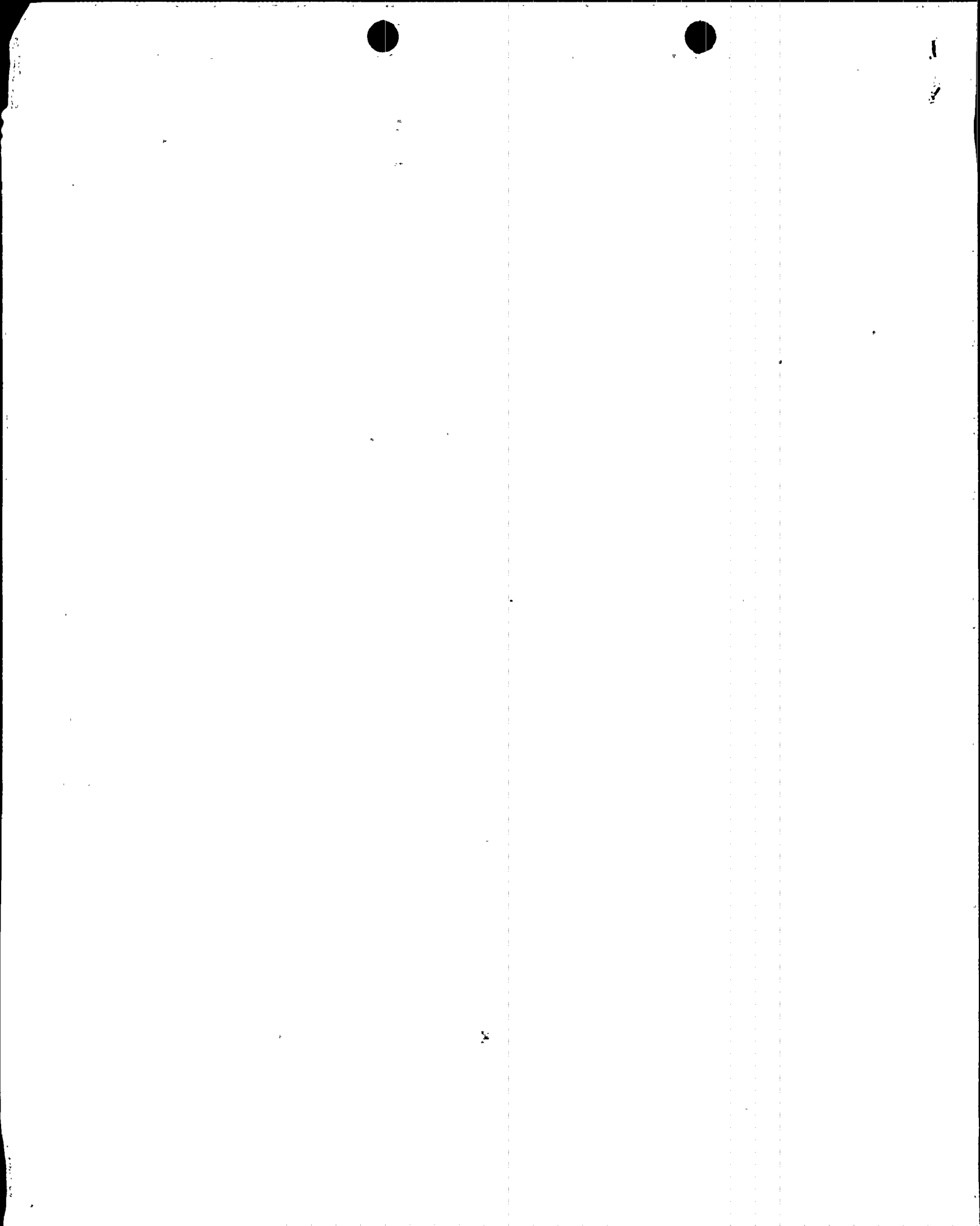
A. Immediate:

The Pre-Planned Alternate Sampling Program was implemented to comply with the ACTION requirements of Technical Specification 3.3.3.8.

The set screw on RU-143's sample pump was tightened and the monitor was returned to service as described in Section I.C.

B. Action to Prevent Recurrence:

The Unit 1, 2, and 3 Radiation Monitoring System (RMS) alarm response procedures will be revised to require that the proper



LICENSEE EVENT REPORT (LER)
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TEXT: (If more space is required, use additional NRC Form 366A's) (17)

personnel be contacted for investigating problems occurring with the monitors. The procedure revisions are expected to be completed by November 1, 1989. Also, this event has been reviewed and discussed with Unit 1, 2, and 3 Chemistry personnel to ensure that they are aware of the importance of prompt RMS alarm response.

The loose set screw has not been identified as a recurring problem at PVNGS. In accordance with an APS program, Engineering reviews work order trends. If the loose set screw were identified as a recurring occurrence, additional corrective action would be developed. Additionally, the low flow alarm provides indication that a problem has occurred and enables prompt corrective action and/or compensatory measures.

IV. PREVIOUS SIMILAR EVENTS:

A previous similar event was reported in Unit 1 LER 528/85-067. A low flow alarm for the Plant Vent low range monitor (RU-143) was received in the Control Room and acknowledged by Control Room personnel (utility, licensed). However, Radiation Protection personnel were not notified contrary to procedural requirements. Previous corrective actions consisted of counseling control room personnel about the necessity to properly acknowledge and respond to alarms.

As discussed in Section I.I of this LER (530/89-005), control room personnel acknowledged the alarm and contacted an individual in the RP area. Furthermore, the current procedures were not correct in providing instruction for contacting the proper department to have the alarm investigated. Since the corrective actions taken for the previous event (530/85-067) addressed the problem of not contacting an individual to investigate the alarm, the corrective actions would not have prevented recurrence of this event. Additionally, this is the first recurrence of this type of event in approximately three (3) years and the first occurrence of this problem in Unit 3.

