

ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:8902170192 DOC.DATE: 89/02/02 NOTARIZED: NO DOCKET #
 FACIL:STN-50-530 Palo Verde Nuclear Station, Unit 3, Arizona Publi 05000530
 AUTH.NAME AUTHOR AFFILIATION
 SHRIVER,T.D. Arizona Nuclear Power Project (formerly Arizona Public Serv
 HAYNES,J.G. Arizona Nuclear Power Project (formerly Arizona Public Serv
 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 88-005-01:on 880908,unauthorized entry into locked high
 radiation area.Caused by personnel error.W/890202 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 8
 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:Standardized plant.

05000530/

RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
PD5 LA	1 1	PD5 PD	1 1
DAVIS,M.J.	1 1	DAVIS,M	1 1
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
ARM/DCTS/DAB	1 1	DEDRO	1 1
NRR/DEST/ADE 8H	1 1	NRR/DEST/ADS 7E	1 0
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/QAB 10	1 1
NRR/DOEA/EAB 11	1 1	NRR/DREP/RAB 10	1 1
NRR/DREP/RPB 10	2 2	NRR/DRIS/SIB 9A	1 1
NUDOCS-ABSTRACT	1 1	<u>REG FILE</u> 02	1 1
RES/DSIR/EIB	1 1	RES/DSR/PRAB	1 1
RGN5 FILE 01	1 1		
EXTERNAL: EG&G WILLIAMS,S	4 4	FORD BLDG HOY,A	1 1
H ST LOBBY WARD	1 1	LPDR	1 1
NRC PDR	1 1	NSIC HARRIS,J	1 1
NSIC MAYS,G	1 1		
NOTES:	1 1		

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK,
 ROOM P1-37 (EXT. 20079) TO ELIMINATE YOUR NAME FROM DISTRIBUTION
 LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTTR 47 ENCL 46

A10-4

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Palo Verde Unit 3										DOCKET NUMBER (2) 0 5 0 0 0 5 3 0										PAGE (3) 1 OF 07	
--	--	--	--	--	--	--	--	--	--	--------------------------------------	--	--	--	--	--	--	--	--	--	---------------------	--

TITLE (4) Unauthorized Entry Into Locked High Radiation Area											
---	--	--	--	--	--	--	--	--	--	--	--

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)		
0	9	0	8	8	8	8	8	8	N/A			0 5 0 0 0		
0	9	0	8	8	8	8	8	8	N/A			0 5 0 0 0		

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)											
OPERATING MODE (9)		1		20.402(b)		20.405(c)		50.73(a)(2)(iv)		73.71(b)	
POWER LEVEL (10)		1, 0, 0		20.405(a)(1)(i)		50.38(c)(1)		50.73(a)(2)(v)		73.71(c)	
				20.405(a)(1)(ii)		50.38(c)(2)		50.73(a)(2)(vi)		OTHER (Specify in Abstract below and in Text, NRC Form 365A)	
				20.405(a)(1)(iii)		50.73(a)(2)(i)		50.73(a)(2)(vii)(A)			
				20.405(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(vii)(B)			
				20.405(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	

SUPPLEMENTAL REPORT EXPECTED (14)								EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)								<input checked="" type="checkbox"/> NO				

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

At approximately 1130 MST on September 12, 1988 Palo Verde Unit 3 was in Mode 1 (POWER OPERATION) at approximately 100 percent power when a Maintenance Department Technician reported that he had entered a Locked High Radiation Area (LHRA) on September 8, 1988. The technician had used a screwdriver to unlock a door and gain access into the area. The entry was contrary to the administrative requirements of Technical Specification 6.12.

The individual's thermoluminescent dosimeter (TLD) was analyzed and it was determined that he had received zero (0) radiation exposure as a result of the entry. The area was properly posted and locked; however, the technician did not realize that additional controls were necessary. The entry into the area has been determined to be a cognitive personnel error contrary to established postings and administrative controls.

Actions taken to prevent recurrence include, administration of appropriate disciplinary action for the individual involved, additional training for the individual and notification of plant personnel that entry into locked areas without a key is inappropriate.

A previous similar event was reported in Unit 1 LER 87-017-00.

8902170100 020000
FDR ADDOCK 03000530
S PDC

7722

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

FACILITY NAME (1) Palo Verde Unit 3	DOCKET NUMBER (2) 0 5 0 0 0 5 3 0 8 8 — 0 0 5 — 0 1	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 8	0 0 5	0 1	0 2	OF	0 7

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

I. DESCRIPTION OF WHAT OCCURRED:

A. Initial Conditions:

At the time of the event discovery on September 12, 1988 at approximately 1130 MST, Palo Verde Unit 3 was in Mode 1 (POWER OPERATION) at approximately 100 percent power.

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

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

At approximately 1130 MST on September 12, 1988 a Unit 3 Maintenance Department Technician (contractor, non-licensed) reported that he had entered a locked high radiation area on September 8, 1988 without prior approval of Unit 3 Radiation Protection (RP) personnel. The entry without prior approval was contrary to the administrative requirements of Technical Specification 6.12. The individual did not receive any abnormal levels of radiation exposure nor was there a threat to receive exposure in excess of 10CFR20.101 limits due to the scope of work being performed.

Technical Specification 6.12 requires that each high radiation area in which the intensity of radiation is greater than 100 but less than 1000 millirem/hour (mrem/hr) shall be barricaded and conspicuously posted as a high radiation area and entrance thereto be controlled by issuance of a Radiation Exposure Permit (REP). Any individual or group permitted to enter such areas shall be provided with or accompanied by one or more of the following:

- a. A radiation monitoring device (RI) which continuously indicates the radiation dose in the area.
- b. A radiation monitoring device which continuously integrates the radiation dose rate in the area and alarms when a preset integrated dose is received. Entry into such areas with this monitoring device may be made after the dose rate level in the area has been established and personnel have been made knowledgeable of them.
- c. A radiation protection qualified individual (i.e., qualified in radiation protection procedures) with a radiation dose rate monitoring device who is responsible for providing positive control over the activities within the area and shall perform periodic radiation surveillance at the frequency specified by the facility Radiation Protection Supervisor or his designated alternate in the REP.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO 3150-0104

EXPIRES: 8/31/88

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Palo Verde Unit 3	0 5 0 0 0 5 3 0	8 8	0 0 5	0 1	0 3	OF	0 7

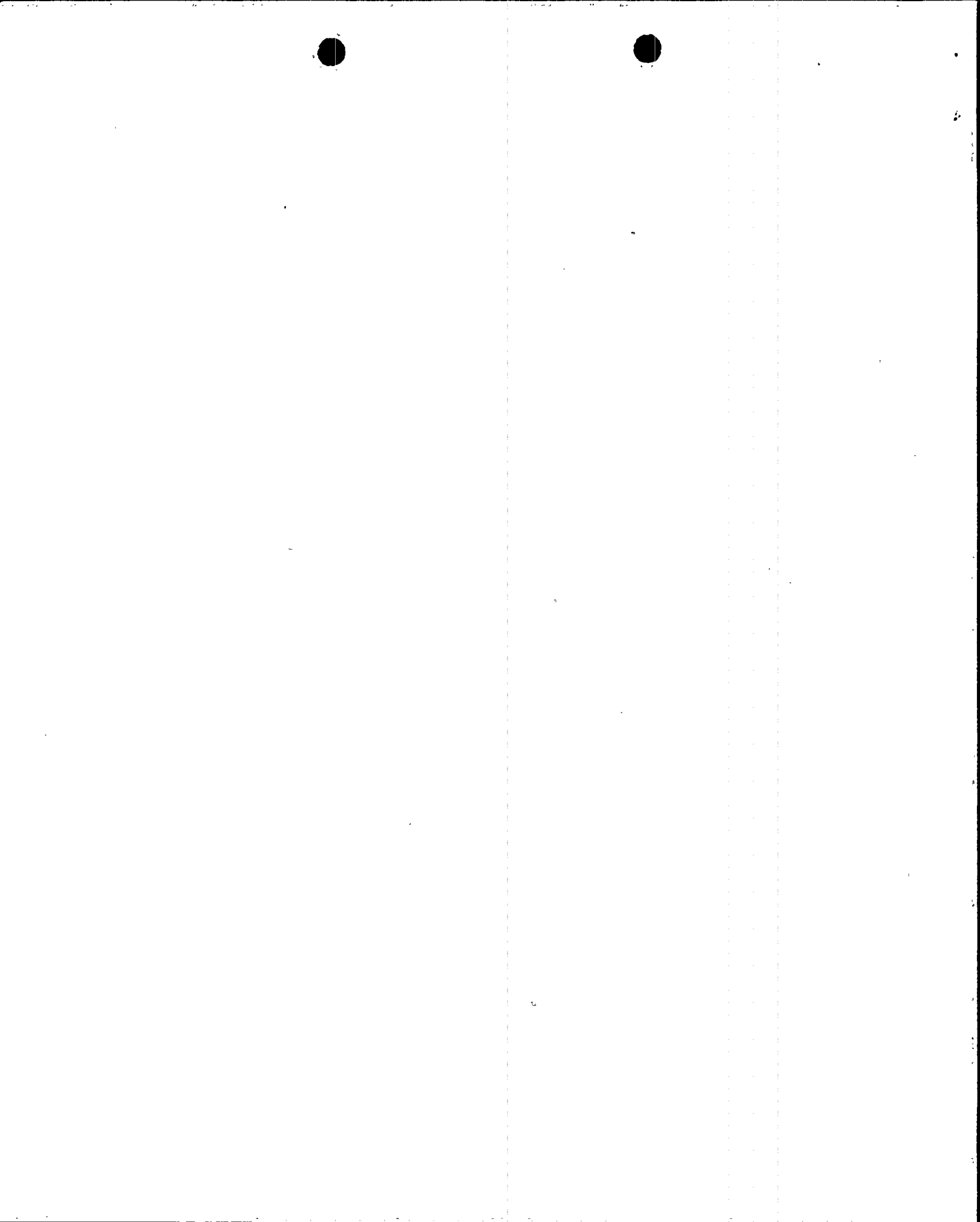
TEXT (If more space is required, use additional NRC Form 366A's) (17)

In addition to the above, Technical Specification 6.12 requires that areas with radiation levels greater than 1000 mrem/hr accessible to a major portion of the whole body shall be provided with locked doors to prevent unauthorized entry. The doors are to remain locked except during periods of access by personnel under an approved REP.

On September 8, 1988 two Unit 3 Maintenance Department Technicians (contractor, non-licensed) were assigned performance of a routine lighting preventative maintenance task in the Radwaste Building (NE). The Technicians informed the Shift Supervisor (SS) (utility, licensed) and RP personnel of the inspection prior to the start of the job. No special requirements were specified, and the Technicians entered the Radiologically Controlled Area (RCA) under an approved REP.

The REP being utilized was specified on the work control document and covered minor work in contaminated and non-contaminated areas. Furthermore, an instruction on the REP stated, "NO ENTRY INTO HIGH CONTAMINATION, HIGH RADIATION, LOCKED HIGH RADIATION OR AREAS REQUIRING RESPIRATORY PROTECTION." ANPP procedures delineate that it is an individual's responsibility to adhere to all REP instructions. Personnel working under an active REP are required to read the REP and sign that they have read and understood the requirements stated on the REP. Also, personnel are required to review the appropriate REP prior to each entry into the RCA to determine if it has been revised. Current requirements are that personnel are required to sign in on an REP initially and each time it is revised. Both Maintenance Department Technicians had signed in on the REP approximately one month prior to the event described in this LER.

The routine lighting preventive maintenance task was being conducted in accordance with an approved work control document that required lighting in the Radwaste Building be inspected, replaced where necessary, and cleaned. The individuals assigned the work conducted the inspection portion of the task on September 8, 1988. The relamping and cleaning portions were to be completed on subsequent days. During the inspection portion of the task on September 8, 1988, the technicians encountered postings at the entrance to the Waste Gas Decay Tank (WE)(TK) rooms stating that the rooms were a High Radiation Area (HRA) under certain plant conditions, a dose rate meter was required for entry, and RP was to be contacted prior to entry. The technicians mistakenly assumed that their initial notification of RP prior to starting the job was sufficient for entry into the HRA and proceeded to the Radwaste Control Room in order to borrow a dose rate meter from Operations Support personnel. The technicians contacted an Operations Support Technician (utility, non-licensed), informed him that they were performing a routine lighting maintenance task, and requested the use of a dose rate meter pursuant to the posting in the Waste Gas Decay Tank room. The



LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO 3150-0104

EXPIRES: 8/31/88

FACILITY NAME (1) Palo Verde Unit 3	DOCKET NUMBER (2) 0500053088	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		88	005	01	04	OF	07

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

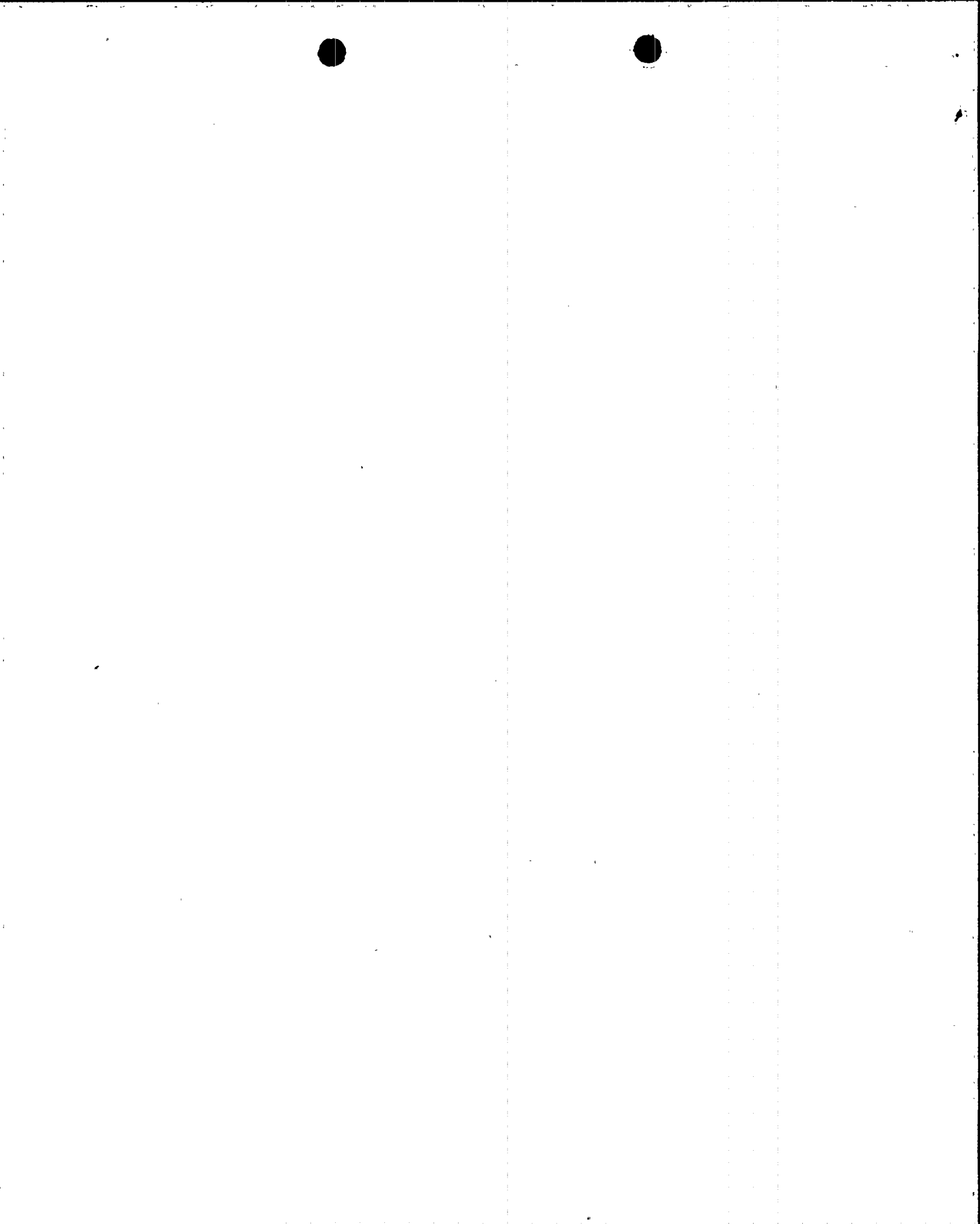
Operations Support Technician provided the Maintenance Department Technicians the dose rate meter requesting that they only use it on the 140 ft. level of the Radwaste Building. The technicians proceeded to complete their lighting inspection in the Waste Gas Decay Tank room on the 140 ft. level and returned the meter to the Radwaste Control Room. The technicians then continued with their lighting inspection on the 120 ft. and 100 ft. levels.

As the technicians approached the High Level Spent Resin Tank (WB)(TK) room, they noted that it was also posted as a HRA and required that RP be contacted prior to entry. They observed that the door to the room was locked, but that it did not specify that a dose rate meter was required for entry. One of the technicians then utilized a screwdriver to slide the lock bolt on the door clear of the strike plate and open the door. The other technician questioned entry into the area in this manner, but was assured that it was "okay" and did not question his co-worker further. Both technicians were under the mistaken impression that their initial RP contact was sufficient for all the posted radiological areas they encountered during the performance of the PM. Also, since they had been requested by Operations Support personnel to only use the dose rate meter on the 140 ft. elevation and since the warning sign did not specify that a dose rate meter was required, the technicians determined that it was satisfactory to proceed. After making a quick visual inspection of the room (approximately five seconds), the technician exited the area, re-locked the door, and checked his self-indicating dosimeter for any exposure (none was indicated). The technicians continued with their inspection activities.

On September 9, 1988 the same technicians re-entered the Radwaste Building to begin the relamping effort following their inspection from the previous day. The SS and RP were informed of the work, and the dose rate meter was again obtained from the Radwaste Control Room for use in the Waste Gas Decay Tank room. The relamping effort was completed on the 140 ft. and the technicians exited the RCA.

The relamping was resumed on September 12, 1988 on the 100 ft. and 120 ft. elevations. As the technicians were about to enter the High Level Spent Resin Tank room, their Supervisor (utility, non-licensed) came by on a routine inspection of work in progress and inquired if they had checked with RP for permission to enter the HRA. The technicians informed him that they had notified RP that they were relamping the whole Radwaste Building. The Supervisor directed the technicians to obtain permission for that particular room.

One of the technicians contacted RP and inquired about entering the tank room. The technician was informed by RP that entry into the room for lamp changeout was prohibited due to existence of a radiation field in the room in excess of 1000 mrem per hour. Both technicians discussed this information and decided that they should inform RP of the entry into the room on September 8, 1988. The individuals promptly



LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO 3150-0104

EXPIRES: 8/31/83

FACILITY NAME (1) Palo Verde Unit 3	DOCKET NUMBER (2) 0 5 0 0 0 5 3 0 8 8	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		88	005	01	05	OF	07

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

notified RP. RP then notified the SS of the occurrence. The subsequent investigation by ANPP determined that Technical Specification 6.12 had been violated.

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

Not applicable - no structures, systems or components were inoperable which contributed to this 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 failure 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:

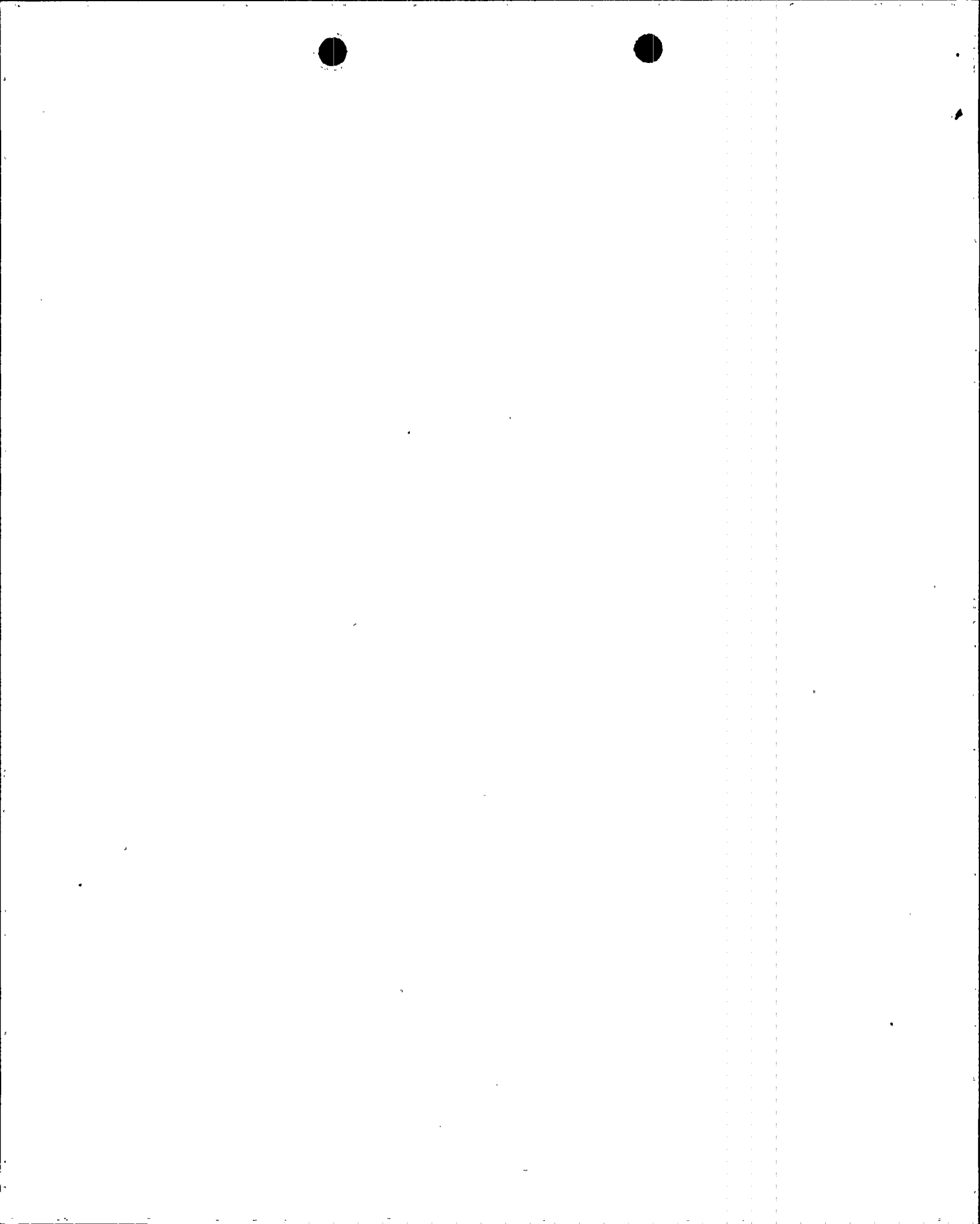
Not applicable - no failures were involved.

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

Not applicable - there were no component or system failures or procedural errors.

- I. Cause of Event:

The root cause of this event was a cognitive personnel error on the part of the Maintenance Department technician (contractor, non-licensed) in that he did not follow established radiological requirements when he improperly entered the Waste Gas Decay Tank room on September 8 and 9, 1988 and the High Level Spent Resin Tank room on September 8, 1988. Furthermore, the individual defeated a door locking mechanism in an unapproved manner. The personnel error was a result of not following the procedural controls discussed in Section I.B. This event was not a direct result of an error in an approved procedure or a result of an activity or task not covered by approved procedural controls. There were no unusual characteristics of the work location which contributed to the event.



LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

FACILITY NAME (1) Palo Verde Unit 3	DOCKET NUMBER (2) 0 5 0 0 0 5 3 0 8 8	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 8	0 0 5	0 1	0 6	OF	0 7

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

ANPP has also determined that a contributory factor in this event concerns inadequate communications between Radiological Protection (RP) personnel and the maintenance personnel involved. The RP personnel did not determine the scope and the location of the work being performed prior to allowing the maintenance personnel to proceed. Other contributory factors are being evaluated as part of an independent investigation. The results of the investigation are described in a Special Plant Event Evaluation Report.

J. Safety System Response:

There were no 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:

There were no safety consequences or implications resulting from this event as this event had no impact on the safe operation of the plant or the health and safety of the public.

Futhermore, this event was evaluated for reportability pursuant to 10CFR20. As discussed in Section I.B., the technician intended to be in the area for a short period of time. The general area radiation levels in the High Level Spent Resin Tank Room varied from 250 to 400 mrem per hour (the highest radiation level in the room was 3500 mrem per hour on contact with the spent resin tank bottom). Based upon a review of the work activities being performed and the radiological conditions present in the work area, ANPP has determined that there was no threat of exposure in excess of regulatory limits. Futhermore, the technicians thermoluminescent dosimeter (TLD) indicated that he did not receive any measurable exposure as a result of the actions described in this LER.

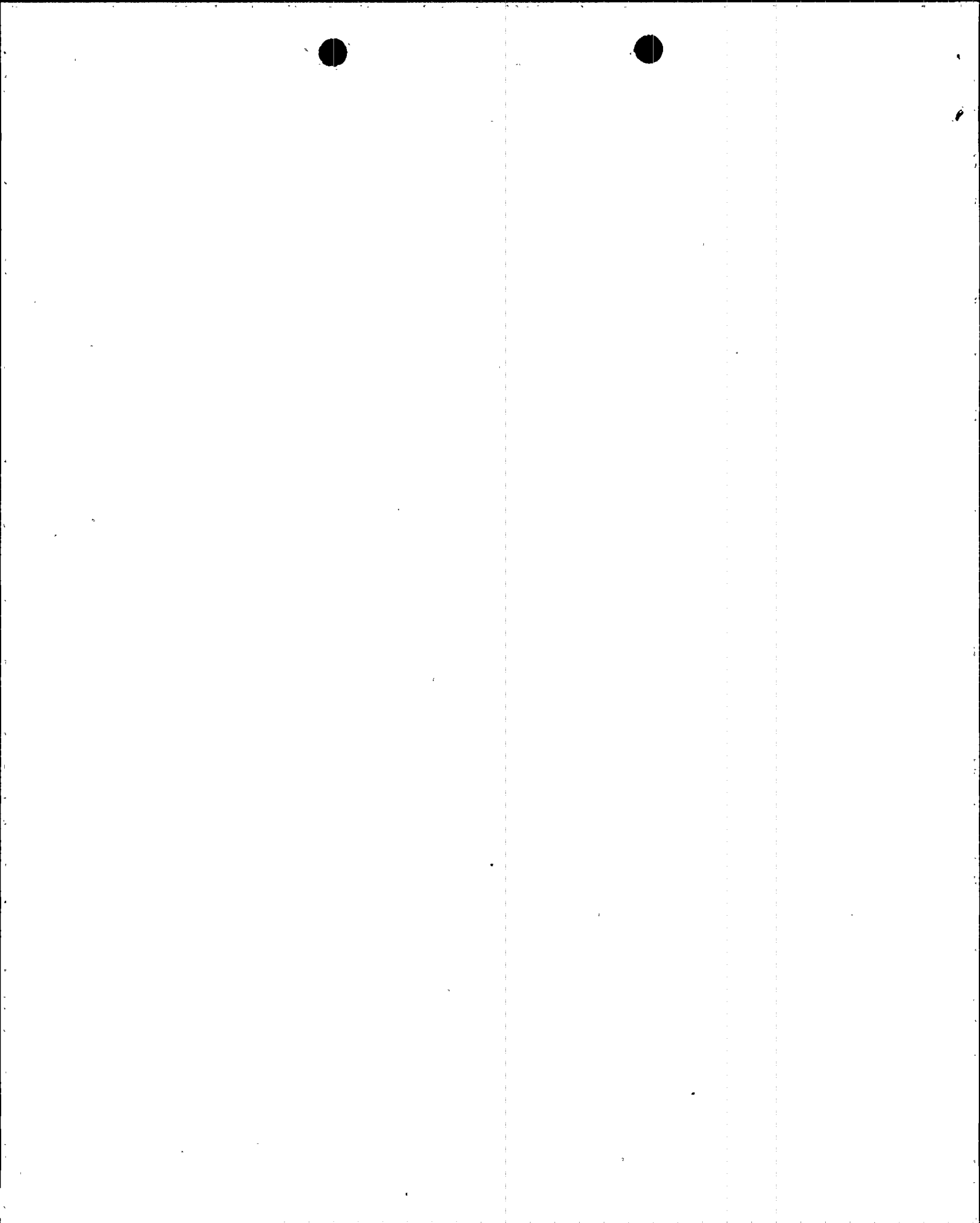
III. CORRECTIVE ACTIONS:

A. Immediate:

As immediate corrective action, the involved technician was denied access to the RCA pending further training. Additionally, his TLD was analyzed to determine the amount of radiation exposure. The analysis indicated that he received zero (0) mrem.

B. Action to Prevent Recurrence:

As action to prevent recurrence, the involved technicians have received appropriate disciplinary action. The technician has received additional training. Plant personnel have been informed



LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Palo Verde Unit 3	0 5 0 0 0 5 3 0	8 8	— 0 0 5	— 0 1	0 7	OF	0 7

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

that entry into locked areas without a key (i.e., proper authorization) is inappropriate and that no other means to open a locked door should be used.

An independent evaluation of the Radiological Protection program is complete. As part of the evaluation, the communications aspect was reviewed. The ANPP Site Radiation Protection Manager (utility, non-licensed) has issued a memo to the Unit RP Managers and Lead Technicians discussing the importance of ensuring that RP personnel adequately discuss planned work with radiation workers. The evaluation has determined that communications have adequately improved and that further action is required.

Although the "Radiological Posting" procedure, 75RP-0ZZ01 met the federal requirements for posting high radiation areas (greater than 100 mrem/hr), the procedure has been changed to require specific posting for high radiation areas greater than 1,000 mrem/hr.

ANPP is developing a policy to control the issuance of dose rate instrumentation.

ANPP has evaluated the locking mechanism on the locked high radiation areas for potential improvement. A special locking mechanism will be installed on doors that are expected to require locking as LHRAs but allows the doors to be locked/unlocked by the RP Groups based upon current radiological survey results. These locking mechanisms have been determined to provide adequate protection against defeat by unauthorized personnel.

IV. PREVIOUS SIMILAR EVENTS:

A previous similar event was reported in Unit 1 LER 87-017-00. The root causes of the events described in both LER's (i.e., LER's 1-87-017 and 3-88-005) were cognitive personnel errors. The corrective actions taken as a result of the event described in Unit 1 LER 87-017-00 involved appropriate disciplinary action. Therefore, the previous corrective actions did not and would not be expected to prevent the event described in this LER.



Arizona Nuclear Power Project

P.O. BOX 52034 • PHOENIX, ARIZONA 85072-2034

192-00450-JGH/TDS/JJN

February 2, 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-74)
Licensee Event Report 88-005-01
File: 89-020-404

Attached please find Supplement No. 1 to Licensee Event Report (LER) No. 88-005-00 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. G. Haynes
Vice President
Nuclear Production

JGH/TDS/JJN/kj

Attachment

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

IER2
11

