

BOSTON Edison COMPANY

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NUCLEAR OPERATIONS DEPARTMENT
PILGRIM NUCLEAR POWER STATION
Procedure No. 1.3.34

CONDUCT OF OPERATIONS

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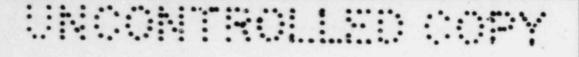
1.3.34E-2

9408020144 840727 PDR ADOCK 05000293 PDR Approved_

ORC Chairman

Date Man 31, 1983

1.3.34-1 Rev. 4



I. PURPOSE

To provide guidance for conduct of operations at Pilgrim Nuclear Power Station and to specify the authority and responsibility of individuals to ensure the requirements of Federal Regulations are met.

II. DISCUSSION

The professional attitude of nuclear power plant's staff has a direct relationship on the degree to which the health and safety of the public is protected. High standards of performance which include, but are not limited to, pride in the facility, knowledge of all aspects of plant status by licensed personnel, maintaining an orderly and clean work environment, aggressiveness of staff to identify/prevent operational problems, and timely correction of observed deficiencies are attributes of a professional attitude.

This procedure addresses the conditions and practices which are to be observed in the limiting of access to the Control Room, conduct of personnel in the Control Room, manning to ensure minimum shift crew composition and relief of personnel.

III. REFERENCE MATERIAL

- A. Technical Specifications, Section 6.2.B.
- B. 10CFR50, Paragraph 50.54
- C. 10CFR55, Paragraph 55.31 and 55.40
- D. Regulatory Guide 1.114
- E. IE Information, Notice 79-20, Rev. 1
- F. IE Circular 81-02
- G. Policy Directive from V.P. Nuclear

IV. AUTHORITY/RESPONSIBILITY

A. Manager of Nuclear Operations

The Plant Manager is responsible for ensuring that the facility organization as defined in figure 6.2.2 of the Technical Specifications is maintained at all times.

B. Nuclear Watch Engineer (NWE)

- The NWE is responsible for overall safe operation of the facility and has the authority to limit Control Room access to those personnel necessary for the particular plant conditions.
- The NWI is responsible for assuring that the minimum shift crew composition, as specified in Table 6.2-1 of the Technical Specifications is maintained at all times.
- 3. The NWE is responsible for assuring that the requirements of Sections 6.2.B.1 thru 6.2.B.6 of the Technical Specifications are met at all times.

NOTE: Every effort shall be made to obtain a qualified relief to ensure that a licensed operator does not exceed sixteen (16) hours in the control room performing nuclear safety related functions. Approval from the Plant Manager shall be obtained to exceed this sixteen (16) hours.

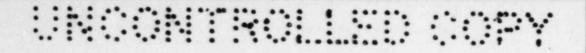
- The NWE is responsible for keeping personnel assigned to his watch informed of changes in plant status and operational problems.
- NWE responsible for informing his personnel and on-shift STA of pertinent operating experience feedback from internal and external sources.
- NWE is responsible for the safe handling of all irridated nuclear fuel bundles.
- 7. The NWE is responsible for ensuring adequate turnover is given and received.

C. Nuclear Operation Supervisor (NOS)

- The NOS is responsible for ensuring that the rules and regulations pertaining to conduct in the Control Room are adhered to at all times.
- The NOS is responsible for keeping personnel reporting to him informed of changes in plant conditions.
- Maintaining knowledge current regarding procedure changes, modification and pertinent operating experience information.
- 4. The NOS is responsible for ensuring adequate turnover is given and received.

D. Shift Technical Advisor (STA)

- The STA is responsible for reviewing plant status upon relieving the watch and for maintaining an awareness of changes in plant status.
- The STA is responsible for maintaining his continued availability to assist/advise the NWE during off-normal conditions.
- Maintaining knowledge current regarding procedure changes, modification and pertinent operating experience information.
- 4. The STA is responsible for ensuring adequate turnover is given and received.



E. Nuclear Plant Operators (NPO)

- The NPO is responsible for adhering to the Technical Specifications, plant operating procedures, and NRC regulations at all times.
- The NPO is responsible for reviewing plant status upon relieving the watch and for maintaining an awareness of changes in plant conditions.
- 3. The NPO is responsible for maintaining alertness at all times in order to ensure that the plant is operating safely and must be capable of taking action to prevent any progress toward a condition that might be unsafe.
- 4. Maintaining knowledge current regarding procedure changes, modification and pertinent operating experience information.
- The NPO is responsible for ensuring adequate turnover is given and recieved.

F. Nuclear Auxiliary Operator (NAO)

- The NAO is responsible for adhering to the plant operating procedures and NRC regulations at all times.
- The NAO is responsible for maintaining an awareness of equipment under his control.
- The NAO is responsible for informing the Control Room of changes in equipment status in a timely manner.
- The NAO is responsible for ensuring adequate turnover is given and received.

G. Station Personnel

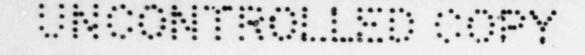
- Station personnel are responsible for limiting their time in the Control Room to that necessary to perform their required tasks.
- 2. Station personnel are responsible for adhering to rules and regulations pertaining to conduct in the Control Room.

NOTE: STATION PERSONNEL SHALL VACATE THE CONTROL ROOM WHEN REQUESTED BY THE NWE/NOS.

V. PROCEDURE

A. Access

 Normal access to the Control Room is required by many groups during plant operations, however, access is or official business only and loitering is prohibited.



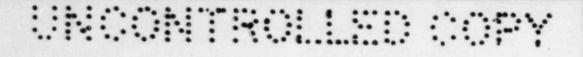
2. During startups, shutdown, or transient conditions, access shall be limited to those individuals responsible for the direct operation of the plant (e.g. NWE, NOS, STA, & NPO), predesignated NRC personnel, and personnel requested or required to support operations. All other personnel must obtain the permission of the on shift NWE prior to entry.

B. Conduct of Personnel in the Control Room

- 1. All personnel having access to the Control Room shall adhere to rules and regulations pertaining to good conduct. Potentially distracting activities such as radios, TV, games, horseplay, hobbies, and reading that is not directly job related is prohibited.
- All necessary plant-related technical/administrative business must be conducted in a manner such that neither the licensed control room operator's attentiveness nor the professional atmosphere will be comprised.
- The taking of food/drink to the control consoles shall be prohibited.
- The wearing of hard hats near the Control consoles shall be prohibited.
- 5. The only personnel allowed within the green area are the onshift NWE, NOS, STA, and NPO's. All other personnel must obtain permission of the NWE/NOS, or the control room operator prior to crossing the green area.
- 6. All personnel will contribute to the implementation and maintenance of good housekeeping activities in the Control Room. The Control Room shall be kept in a clean and orderly condition.
- Only licensed operators are permitted to manipulate the controls that directly affect the power level of the reactor.

NOTE: PERSONNEL WHO ARE REQUIRED TO MANIPULATE CONTROLS AS A PART OF THEIR TRAINING TO QUALIFY FOR AN OPERATOR LICENSE SHALL DO SO ONLY UNDER THE DIRECTION OF AND IN THE PRESENCE OF A LICENSED OPERATOR OR SENIOR OPERATOR.

- 8. Operations of mechanisms and apparatus other than the controls that may indirectly affect the power level or reactivity of the reactor shall only be accomplished with the knowledge and consent of the control room operator and the permission of the NWE/NOS.
- The control room operator should not normally leave the area designated by the green without obtaining a qualified relief. However, in the event of an emergency, the operator may



be absent from the area momentarily in order to verify the receipt of an annunciator alarm or to initiate corrective actions, provided he remains within the confines of the Control Room.

NOTE:

THE NOS IS CONSIDERED A QUALIFIED RELIEF FOR SHORT DURATIONS DURING STEADY STATE OPPORTIONS, ALL OTHER RELIEFS MUST BE BRIEFED ON PLANT STATUS/CHANGES BEFORE ASSUMING CONTROL ROOM DUTIES.

NOTE:

NON ESSENTIAL PERSONNEL SHALL VACATE THE CONTROL ROOM WHEN REQUESTED BY THE NWE/NOS.

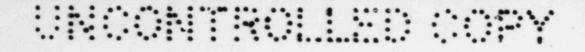
C. Manning

- The Control Room shall be manned at all times except when uninhabitable.
- 2. The minimum crew composition as specified in Table 6.2-1 of the Technical Specifications shall be maintained at all times. The names of individuals performing specific watch standing duties shall be logged in the Control Room Log.

	Shift Technical Advisor	None
REFUELING	Unlicensed Operator	1
or	Licensed Reactor Operator	1
COLD SHUTDOWN	Licensed Sr. Reactor Operator	1
	Shift Technical Advisor	1
	Unlicensed Operator	2
	Licensed Reactor Operator	2
OPERATING	Licensed SR. REACTOR OPERATOR	1
STATION CONDITION	CREW	MINIMUM

NOTE: A HIGHER LICENSE MAY SUBSTITUE FOR A LOWER LICENSE.

- At least one Licensed Operator shall be in the Control Room when fuel is in the reactor.
- 4. At least two Licensed Operators shall be present in the Control Room during reactor startup, scheduled reactor shutdown and during recovery from reactor trips.
- -5. An individual qualified in radiation protection shall be on site when fuel is in the reactor.

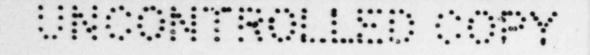


- 6. A Fire Brigade of 5 members including the Brigade Leader shall be maintained on site at all times. This excludes 3 members of the minimum shift crew necessary for safe shutdown and personnel required for other essential functions during a fire emergency.
- 7. ALL CORE ALTERATIONS performed while fuel is in the reactor vessel after initial loading shall be directly supervised by a licensed Senic. Reactor Operator or a Senior Reactor Operator Limited to Fuel Handling who has no other concurrent responsibilities during this operation.

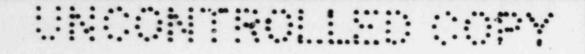
D. Watch Relief

The continuous and effective transmittal of information is most likely to suffer at the change of shift, particularly during times of unusual activities. Whenever practical, planned, transient activities should be minimized during shift change.

- 1. The off going shift shall prepare the Shift Turnover Sheets prior to shift change.
 - a. All sections of the Emergency Safeguards Equipment Checklist (OPER 38A) must be filled out.
 - (1) System Operability and correct valve line up is as defined in the applicable operating procedure.
 - (2) Per Technical Specification 4.7.B.1.a (6), analysis of the SBGTS filter medium is required every 720 hours of operation. Operation is defined as air flow thru the unit, therefore, when both train inlet dampers are open the run-time is for both units even though only one fan was running.
 - (3) Per Technical Specification 4.7.B.2.b (5) analysis of Control Room high efficiency air filtration system filter medium is required every 720 hours of operation.
 - (4) Technical Specification 3.2.C.2 allows each Rod Block Monitor to be out of service for maintenance/testing for 24 hours in any thirty day period. This is for reporting purposes only, additional corrective action is not required unless the out of service time approaches seven days (see note 1 to Table 3.2.C.)
 - (5) The 20" Drywell and Torus purge and vent valves are limited to 90 hours in the open position per year with the reactor abov: 1% (20 MWT). OPER 30 will be utilized to collect data for transposing to this OPER. Every effort must be made to minimize the time these valves are in the open position.



- b. All sections of the Watch Engineer/Shift Technical Advisor turnover sheet must be filled out prior to shift turnover. It must be reviewed by the encoming watch prior to assuming the watch.
- c. All sections of the shift supervisor relief checklist must be filled out prior to shift turnover. It must be reviewed by the oncoming watch prior to assuming the watch and the form completed shortly after.
- d. The R.O. relief checklist must be filled out prior to shift turnover. It must be reviewed by the oncoming watch prior to assuming the watch and the form completed shortly after.
- e. All sections of the Radwaste Turnover Sheet (OPER 38E) must be filled out and delivered to the Control Room prior to shift change.
- The off going NOS, RO and NWE shall review and sign turnover forms prior to shift change.
- 3. Each Individual watch stander shall review the required turnover sheet with his relief and the on coming watch stander
 shall sign the applicable section prior to assuming watch.
 Additional information concerning changes in routine operation
 which have occurred during the previous two working shifts,
 surveillance tests in progress, non-safety related equipment
 out of service, and other pertinent information shall be transmitted verbally.
- 4. The NOS, NWE, RO and STA shall review the Emergency Safeguard Equipment Checklist with his relief and the on-coming NOS, NWE, RO and STA shall sign the applicable section prior to assuming the watch.
- The on-coming NAO shall deliver the Radwaste Turnover Sheet to the Control Room after assuming the watch.
- 6. The on-coming NOS and NWE shall review the Radwaste Turnover Sheet as soon as practical after relieving the watch.
- The Shift Turnover Sheets shall be filed in the OPER file in the Control Room and forwarded to the Record Center on a monthly basis.
- 8. The on-coming shift shall review applicable logs (Control Room Log, Radwaste Log, Instruction Log, and SRO Procedure Log) and any Special Orders issued since their last working shift.



VI. ATTACHMENTS

		OPER
A.	Emergency Safeguards Equipment Checklist	38A
B.	Watch Engineer/STA turnover sheet	38B
C.	Shift Supervisor turnover sheet	38C
D.	Reactor Operator Relief checklist	38D
E.	Radwaste turnover sheet	38E

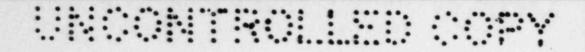
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EMERGENCY SAFEGUARDS EQUIPMENT CHECKLIST

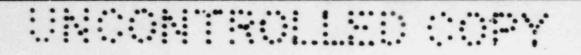
	EILER	GENCI	OUT TOO! THE -4.		
r.		Мо	de	Shifts	
					/A/ Date
Offgoing NPO					
II. Safety Systems:	Val	ve line	eup correct an	d system operabl	e.
SYSTEM	YES	NO	REQUIRED	NOT REQUIRED	REMARKS MR/S
ADS					
HPCI					
RCIC					
LPCI Loop A					
LPCI Loop B					
Core Spray Loop A					
Core Spray Loop B					
RBCCW Loop A					
RBCCW Loop B					
SBLC					
SSW Loop A					
SSW Loop B					
D/G A					
D/G B					
SBGT A					
SBGT B					
C.R.H.A.F. A					
C.R.H.A.F. B			1.		

IV.	STANDBY GAS TREAT	MENT SYSTE	M accumula	ated run	time (From OP)	ER 30)	
**	SIANDI GAS INCAI	Hrs	Brought	Acci	umulated s Shift	Hours Total	
Noti	Train 'A' Train 'B' fy Chemistry when			650 for	either train.		
٧.	CONTROL ROOM HIGH	EFFICIENC	CY AIR FILT	TRATION S	YSTEM		
			Brought		umulated s Shift	Hours Total	
	Train 'A' Train 'B' fy Chemistry when						
VI.	Train 'B' fy Chemistry when 20" PURGE AND VEN Hrs Brought T						Hours
VI. DRYWELL A05035A A05035B A05044A	Train 'B' fy Chemistry when 20" PURGE AND VEN Hrs Brought T	T VALVE OF	PEN TIME A	BOVE 20 M	WT (From OPER	30) Time	Hours YTD
VI. DRYWELL A05035A A05035B A05044A	Train 'B' fy Chemistry when 20" PURGE AND VEN Hrs Brought T	T VALVE OF	PEN TIME A	BOVE 20 M	WT (From OPER Hrs Brought Forward	30) Time	
VI. DRYWELL A05035A A05035B A05044A A05044B	Train 'B' fy Chemistry when 20" PURGE AND VEN Hrs Brought T Forward Thi	T VALVE OF	PEN TIME A	BOVE 20 M TORUS	WT (From OPER Hrs Brought Forward	30) Time This Shift	YTD
	Train 'B' fy Chemistry when 20" PURGE AND VEN Hrs Brought T Forward Thi Notify NWE when a	T VALVE OF	PEN TIME AT Hours YTD	BOVE 20 M TORUS	WT (From OPER Hrs Brought Forward	30) Time	YTD



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Panel No.	Time Out	Time In	Reason	MR No
		1		
	NWE STA NOS			
	NPO NPO			
		NWE STA NOS NPO	NWE STA NOS NPO NPO	NVE STA NOS NPO NPO



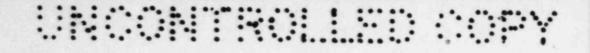
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WATCH ENGINEER/SHIFT TECHNICAL ADVISOR TURNOVER SHEET

ffgoing WE/STAode Switch	
Part I - To be reviewed prior to	oncoming WE/STA assuming the shift. (Check box)
Unit Status:	
Evolutions (completed/:	in progress/planned)
/_/ General Information:	Abnormal lineups Off-normal conditions Special instructions/considerations

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	Equipmen	t Status	Signifi Equipme requi Signifi Mainten outst	lance test in progress cant equipment deficience ent currently out of serve red as a result cant maintenance in progrance completed/restoration	ice/measures ress on measures
	Radwaste	Status	Radwast Condens	te problems sate demineralizer status	
			NAME AND ADDRESS OF THE OWNER, WHEN PERSON ADDRESS OF THE OWNER, WHEN PERSON AND ADDRESS OF THE OWNER, WHEN		
(Check be	ox)		Operating Log		
			Instruction Log		
			Emergency Safegu	uard Equipment Checklist	
			LCO Status		



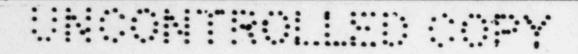
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	WE Red Tag Log	
	Chemistry Data	
	Liquid Discharge Permits	
	Active MRs	
	Temporary Modification Log	
art II		
emarks:_		
lemarks:		
Remarks:_		
emarks:_	Date/Time/Initials	
emarks:_	Date/Time/Initials Offgoing WE/	
emarks:_	Date/Time/Initials	

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SHIFT SUPERVISOR RELIEF CHECKLIST

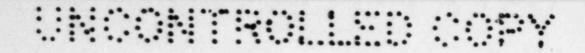
Offgoing	Supervisor	N D A	Date
art I .	To be reviewed prior to	oncoming Supervisor assuming the shift (Che	eck box)
_	Unit Status		
_/	Unit Status		(4)
7	Evolutions: (comple	ted/in progress/planned)	
			2 ·
			141
7	General Information:	Abnormal lineups	
		Off-normal conditions	
		Special instructions/considerations Administrative information	
		Personnel matters	
		Hourekeeping matters	
7	Equipm∈nt Status:	Surveillance Test Procedures/tests in pr	ogress
		Significant equipment deficiencies ident	ified
		Equipment currently out out of service/m required as a result	easures
		Maintenance in progress	
		Maintenance completed/restoration measur outstanding	es



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(Check)	Box) / Station Logs (last 24 hours) / LCO Status
	/_/ Night Orders/Standing Orders
Part II	- To be completed/reviewed as early in shift as possible (Check box)
	WE Red Tag Log
	Station Logs (initial log since last had shift)
	Surveillance Test Procedures Schedule
Part II	I - To be completed prior to leaving shift (Check box)
	Surveillance Test Procedure Schedule review (Each Shift) - This includes non-safety-related Surveillance Test Procedures and Fire Surveillance Procedures (Each Shift)
	Review/Sign Logs (Each Shift)



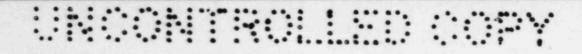
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Part IV.	
Remarks:	
THE RESIDENCE OF THE PARTY OF T	
	Date/Time/Initials

Offgoing SS___/__/__

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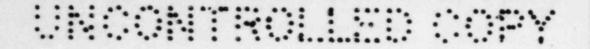
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REACTOR OPERATOR RELIEF CHECKLIST

			Shifts	
	rator		N D A	
Part I - To	be completed by offgoin	g RO		
MODE SWITCH	Shutd wn	Refueling	_ Start & Hot Standby	Run_
Press_			x10 ⁶ lb/hr F/W Flow A	F
Rx Cond			(net) Recirc Pump A	ar 500
Temp: Air_ Drywell 0, C	onc.	. Hg.		
Temp: Air	oncs		prior to shift relief (Check	box)
Temp: Air	oncs	by oncoming RO		
Temp: Air	oncsbe reviewed/completed	by oncoming RO		gress
Temp: Air	oncsbe reviewed/completed	by oncoming RO	Radwaste Releases in Prog	gress
Temp: Air Drywell 0, C Drywell Pres	oncsbe reviewed/completed Station Operational	by oncoming RO	Radwaste Releases in Prog	gress

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	Special ins	tructions (Short-Ter	m)	
	Equipment in degraded motion the degraded	de of operation as pe	st the systems and comp rmitted by Technical Sp	ecifications and time
em C	omponent	Date and Time in Degraded Mode	Length of Time Allowed in Degraded Mode	Date and Time Must be Out of Degraded Mode
	Significant	t Maintenance in Progr	ess (Equipment)	

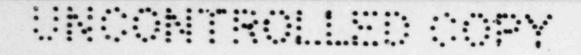


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Part	III.	
	Items to	be reviewed/accomplished shortly after assuming the shift (Check box)
		Surveillance / MRs in Progress
		Shift Routine
		Test All Annunciators
Part	IV.	
	Remarks:	
	and the	
		Date/Time/Initials
		Offgoing Shift//
		Oncoming Shift//

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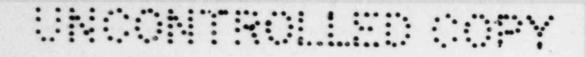


Shift

RADWASTE

SHIFT	TU	RNOVER	SHEET	
(NA	0)	Date_		

Revie	wed By	(NOS)		(NWE)	
	Clean A Chemical A Monitor A Miscellaneous A Mack Wash Receiver Spent Resin Drywell Equip. Int.	B C B C	D		
II. III.	Evolutions in progress (e.g. MAKEUP DEMINERALIZERS	B C B C B C backwash, recy			
	On Line Yes No Anion Through-put (FQ-I-1) Mixed Bed Through-put (FQ- Neutralizing Sump Level (L	I-2) I-4702)	gals. gals.		
IV.	FLAT BED FILTERS "A" On Line No Y "B" On Line No Y Number of dumps: Prior Chute Dose Rates A	es; This	Tank Watch	al	



٧.	Conductivity							
VI.	EQUIPMENT OUT OF S	SERVICE						
VII.	ANNUNCIATOR CARDS Nonmenclature			Time In	Reason	MR i		
			(NAC		(NAO)			
	ONCOMING SHIFT RE	VIEW (NAO)			(NWE)			