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50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251
AUTH.NAME AUTHOR AFFILIATION
CONWAY,W.F. Florida Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION
GRACE,J.N. Region 2, Ofc of the Director

SUBJECT: Forwards summary of mgt-on-shift repts per NRC 871019 order.
Plant supervisor nuclear shift repts also encl.

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TITLE: Turkey Point Management Onshift Program

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AUGUST 31 1988

L-88-386

Dr. J. Nelson Grace
Regional Administrator, Region II
U.S. Nuclear Regulatory Commission
101 Marietta Street, N. W., Suite 2900
Atlanta, Georgia 30323

Dear Dr. Grace:

Re: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Management-on-Shift Weekly Report

Pursuant to the Nuclear Regulatory Commission Order dated October 19, 1987, the attached summary of Management-on-Shift (MOS) reports is submitted. The Plant Supervisor-Nuclear Shift Reports are also being submitted.

Should there be any questions on this information, please contact us.

Very truly yours,

W. F. Conway
Senior Vice President - Nuclear

WFC/SDF/gp

Attachment

cc: J. Lieberman, Director, Office of Enforcement, USNRC
Dr. G. E. Edison, Project Manager, NRR, USNRC
Senior Resident Inspector, USNRC, Turkey Point Plant
R. E. Tallon, President, FPL

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an FPL Group company

MANAGEMENT ON SHIFT (MOS)

WEEKLY SUMARY REPORT

WEEK STARTING: 08/19/88

PAGE 1 OF 2

Six MOS Observers were on shift: Richard Coulthard, Westinghouse Electric Corporation (08/19-21/88, days); Andrew P. Drake, Westinghouse Electric Corporation (08/19-22/88, nights); Sidney Brain, Chairman, Independent Safety Evaluation Group, St. Lucie Nuclear Plant (08/22-25/88, days); Joseph P. Brannin, Senior Engineer, Nuclear Licensing, Juno Beach (08/22-26/88, nights); John Evans, Turkey Point Nuclear Plant Document Control Supervisor (08/19-23/88, nights); and Don Haase, Chairman, Safety Engineering Group, Turkey Point Nuclear Plant (08/23-26/88, nights).

Unit 3 operated in Mode 1 for the duration of the reporting period. Unit 4 tripped at 2120, 8/19/88, due to steam generator low-low level. Unit 4 was returned to Mode 1 at 0022, 8/22/88.

No immediate safety problems were noted by any observer during the reporting period.

The independent observers did not note any questionable work practices. They did note fourteen areas for improvement, as follows:

- Three recommendations for improving procedures.
- Two comments on communications.
- Three comments on attention to detail.
- Four comments on hardware deficiencies.
- Two comments on inconsistent practices.

The Turkey Point observers did not note any questionable work practices. They did note four areas for improvement, as follows:

- Three recommendations for procedure improvement.
- A determination that a reactor control operator was unaware of the effect of hand-held radios on a chart recorder.



MANAGEMENT ON SHIFT (MOS)

WEEKLY SUMARY REPORT

WEEK STARTING: 08/19/88

PAGE 2 OF 2

One questionable work practice was noted by a Plant Supervisor - Nuclear (PSN) regarding failure of I&C specialists to perform independent verifications of lineups. It has since been determined that only qualified operators will verify equipment on Control Room panels.

The PSNs also noted nine areas for improvement, as follows:

- Four comments on procedures, one of which resulted in six specific recommendations.
- A recommendation to upgrade the weir pit for the fossil units as has been done for the nuclear Units.
- A recommendation to provide training to maintenance personnel on the Plant Clearance Order Network (PCON).
- A recommendation regarding apparent miscalculation of releases.

Date 08/19/88

● Shift Report

Shift _____ Days _____

Shift Management

PSN Anderson APSN Singer NWE Vetromile

A. Questionable Work Practices/Actions Taken/Recommendations

None

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B. Areas for Improvement/Recommendations/Actions Taken

In the last couple of days we have been trying to do our releases and have been tripping R-14 several times. Each time the release permit is terminated and re-sampling or re-evaluation is done to create another permit in which allows the release to go out. This is very time consuming.

Recommend: Troubleshoot and find the root cause of miscalculated releases and if it is a procedure problem correct the procedure. If it is a sampling problem, correct the sampling method.

C. Good Practices/Professionalism Observed

Routine operations

Reviewed By SW Pearce Date 8/22/88 Actions Completed _____ Date _____



Date 08/19/88

Shift Report

Shift _____ Peak _____

Shift Management

PSN Schimkus APSN Reese NWE Spence

A. Questionable Work Practices/Actions Taken/Recommendations

None

B. Areas for Improvement/Recommendations/Actions Taken

On 8/18/88 and 8/16/88 (peakshift) the PSN and APSN needed to contact the Nuclear Energy Duty Officer (NEDO) for procedurally required notifications or in the case of yesterday when the System Dispatcher was causing a potential load threat to all four of the Turkey Point units, by re-closing a faulted breaker. Due to the timing of the incidents, the NEDO was in his car. We could not contact because the car phone was not upgraded to receive calls outside of Dade County. The NEDO carries a beeper and the PSN is given a list of five beeper numbers for various cities from Miami to Stuart. The PSN is not given a location of residence for various NEDOs. If an NEDO lives in Stuart and is driving home from Juno, his beeper won't work until he is in Stuart. When an event is occurring, the PSN must go through a Russian roulette method of going through the various beeper numbers, office number, home number, car phone number and this usually takes from 15 - 20 minutes for each cycle until the NEDO is reached.

Recommendations:

1. Have a call transfer number at the Miami General Office for not only the NEDOs home number but also the car phone (would automatically search for NEDO location).
2. Have a call transfer number programmed into the Miami G.O. for the Duty NEDO beeper number.
3. As a backup, change the PSN duty call NEDO list to include beside each NEDOs name:
 - a. His "own" beeper number
 - b. City he resides in
 - c. Also include the current phone numbers listed on the Duty Call list
4. As a last resort - allow the PSN to call the Emergency Control Officer (ECO) directly if NEDO contact has not been made within 30 minutes of an occurrence on off business hours.

C. Good Practices/Professionalism Observed

Reviewed By [Signature] Date 8/22/88 Actions Completed _____ Date _____

Week Beginning
8:00^{am} on:

Residence
City

Office
Telephone #

Beeper
#

Home
Telephone #

Week Beginning 8:00 ^{am} on:	DCS	NEDO	Person	Office Telephone #	Beeper #	Home Telephone #
08/01/88	DCS	NEDO	P. W. Hughes C. M. Wethy	6195 694-4424 552-4136		246-2883 255-1785
08/08/88	DCS	NEDO	D. W. Haase J. P. Lowman	6226 6077 694-4229		255-1785 665-6149 407-575-0721
08/15/88	DCS	NEDO	J. C. Strong J. Scarola	6177 694-4425		245-7132 407-334-4663
08/22/88	DCS	NEDO	R. A. Longtemps D. A. Sager	6495 694-4188		248-7996 or 245-7747 407-334-6776
08/29/88	DCS	NEDO	J. Arias J. L. Danek	6007 694-4213		382-6806 407-747-7870
09/06/88	DCS	NEDO	W. R. Williams J. J. Hutchinson	6455 694-4211		245-0264 407-694-2507
09/12/88	DCS	NEDO	J. C. Balaguero P. L. Pace	6008 694-4431		238-4072 407-694-1398
09/19/88	DCS	NEDO	J. E. Crockford J. K. Hays	6253 694-3592		251-5255 407-546-1761
09/26/88	DCS	NEDO	D. J. Tomaszewski J. E. Moaba	6158 694-4216		248-7756 407-627-4483
10/03/88	DCS	NEDO	T. A. Finn H. E. Yaeger	6121 694-4189		248-7481 552-0980
10/10/88	DCS	NEDO	V. A. Kaminskas R. J. Acosta	6090 694-3656		595-6845 407-798-3861
10/17/88	DCS	NEDO	J. A. Labarraque W. J. Waylett	6151 694-4217		382-7480 407-626-8930
10/24/88	DCS	NEDO	L. C. Huenniger C. M. Wethy	6171 694-4424 552-4136		248-5671 255-1785
10/31/88	DCS	NEDO	F. H. Southworth D. A. Sager	6185 694-4188		253-0172 407-334-6776
11/07/88	DCS	NEDO	P. W. Hughes H. N. Paduano	6195 694-4190		246-2883 407-575-0152
11/14/88	DCS	NEDO	D. W. Haase J. Scarola	6077 694-4425		665-6149 407-334-4663
11/21/88	DCS	NEDO	J. C. Strong J. P. Lowman	6177 694-4229		245-7132 407-575-0721

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DCS Beeper Instructions:

A touch tone phone must be used. Dial beeper phone number 882-4800. After completion of the tone, dial the phone number that the Duty Call Supervisor should call in order to obtain any necessary message. Then dial a # sign and hang up. The phone number dialed will be indicated on the beeper.

NEDO Beeper Instructions:

The NEDO carries an FPL Beeper which uses different access numbers for various geographical areas. Those numbers are listed below.

Miami	8-118-1418
Ft. Lauderdale	8-106-418
Delray Beach	8-631-418
West Palm Beach	8-444-418
Stuart	8-630-418

→ "Phone call Roulette"

To deliver a message to the NEDO, the caller should dial the appropriate number and speak following the tone. The spoken message will be heard on the beeper.

NOTE: Individuals should always attempt to contact the DCS or NEDO via the appropriate office or home telephone number prior to using the beeper. After business hours, the NEDO may also be contacted at (407) 694-4223 or at cellular phone number (305) 343-8964.

4420

In accordance with EP-20101, "Duties of Emergency Coordinator," the Emergency Control Officer must be notified of all Emergency Plan activating events. The designated ECO's and their phone numbers are listed below.

		<u>Office</u>	<u>Home</u>	<u>Beeper</u>	<u>Cellular Phone</u>
Primary	J. W. Dickey	694-4223	475-1279 (Ft.L)	407	343-8965
Alternate 1	D. A. Sager	694-4188	407-334-6776		
Alternate 2	J. K. Hays	694-3592	407-546-1761		
Alternate 3	R. J. Acosta	694-3656	407-798-3861		
Alternate 4	H. N. Paduano	694-4190	407-575-0152		
Alternate 5	NEDO listed on NEDO Schedule				

Any questions regarding the DCS or NEDO schedule should be referred to Lew LaGarde at Extension 6226.

C. J. Baker

C. J. Baker
Plant Manager-Nuclear

Go operator doesn't connect
CJB/GLL/md★EP:1 call forward # on
weekends on occasions

PSN's are not given a WATTS Access code due to previous abuse in the past. We must use the more costly "Bell" system for out of Area code calls

Date 08/20/88

Shift Report

Shift Mid

Shift Management

Personnel Jones APSN Haley NWE

A. Questionable Work Practices/Actions Taken/Recommendations

None

B. Areas for Improvement/Recommendations /Actions Taken

Step 5.2 of 4-GOP-103, Power Operation to Hot Standby had the operator go to Step 5.23 following a reactor trip - by doing this the Moisture Separator Reheaters (MSR) are not removed from service and lined up for restart. PUP needs to address this issue. Also taking a clearance on generator disconnects is passed over.

C. Good Practices/Professionalism Observed

The NTO (Hobson) noticed the MSRs had not been realigned. Procedure 4-OP-72.1, Moisture Separator Reheater was performed to realign system.

Reviewed By L.W. Pease Date 8/22/88 Actions Completed Date

Date 08/20/88

Shift Report

Shift _____ Day _____

Shift Management

Harpel

APSN

Singer

NWE Vetromile

A. Questionable Work Practices/Actions Taken/Recommendations

None

B. Areas for Improvement/Recommendations/Actions Taken

None

Good Practices/Professionalism Observed

Routine Operations

Reviewed By L.W. Pearce Date 8/22/88 Actions Completed _____ Date _____

Date 08/20/88

Shift Report

Shift _____ Peak _____

Shift Management

PSN Schimkus APSN Reese NWE Spence

A. Questionable Work Practices/Actions Taken/Recommendations

None

B. Areas for Improvement/Recommendations/Actions Taken

None

C. Good Practices/Professionalism Observed

While performing Turbine Trip test, a plug (1½") on the underside of the west turbine stop valve blew out, flooding the high pressure turbine housing with oil. The oil immediately started sifting onto hot piping on the mezzanine deck and onto the floor to the 18 foot elevation. The APSN/NWE/RCO/NTOs took immediate corrective actions to stop the oil leak, notify Maintenance and station fire watches. The real hero was the Maintenance Foreman (Clark Boggs) who immediately pulled together a team of personnel to contain the oil preventing an oil release. The cleanup effort was superb with few noticeable traces of oil in any area affected.

Reviewed By *R. L. Pearce* Date 8/22/88 Actions Completed _____ Date _____

Date 08/21/88

Shift Report

Shift Mid

Shift Management

PS Jones

APSN Haley

NWE

A. Questionable Work Practices/Actions Taken/Recommendations

Have I&C Supervisors verify I&C Specialists know how to do independent verification. They are not verifying that they have told the operator to put a particular switch in a required position. They should be verifying that the operator has put the switch in the required position.

B. Areas for Improvement/Recommendations/Actions Taken

Units 1 and 2 are sending all their traveling screen grass to the discharge canal because it is a lot of trouble to keep the Weir Pit cleaned out and it is also deteriorating. They used to have a french fry basket in the Weir pit which made it easier to get rid of.

Recommend: That they upgrade their system just like we are doing since their discharge grass also effects us.

C. Good Practices/Professionalism Observed

Reviewed By W. Leane

Date 8/22/88

Actions Completed _____

Date _____

Date 08/21/88

Shift Report

Shift _____ Day _____

Shift Management

F Harpel APSN Singer NWE Vetromile

A. Questionable Work Practices/Actions Taken/Recommendations

None

B. Areas for Improvement/Recommendations/Actions Taken

None

C. Good Practices/Professionalism Observed

Routine Operations

Reviewed By L.W. Lance Date 8/22/88 Actions Completed _____ Date _____

Date 08/22/88

Shift Report

Shift Mid

Shift Management

PS Jones APSN Haley NWE Matuszewski

A. Questionable Work Practices/Actions Taken/Recommendations

None

B. Areas for Improvement/Recommendations/Actions Taken

None

C. Good Practices/Professionalism Observed

Routine operations

Reviewed By *Lawrence* Date 8/22/88 Actions Completed Date

To: Operations Superintendent - Nuclear

Date: 8/19/88

From: Richard Coulthard
(MOS Observer)Shift: ☒ Day
☐ Night

A. Plant Evolutions Observed

- Units 3 and 4 operations at 100%
- 0715 Plan of the Day meeting
- Start of shift meeting at 1535
- Retest of Auxiliary Feedwater (AFW) Train 2 Backup Nitrogen System per 4-OSP-075.7
- Test Main Steam Isolation Valve (MSIV) Nitrogen Backup System per 3-OSP-072.2

B. Immediate Safety Problems

None

C. Questionable Work Practices

None

D. Areas for Improvement

See PSN, Anderson report of 8/19/88 concerning Gas Decay Tank release process.

E. Professionalism, Summary of Shift, Comments

1. This was the second busy day shift in a row.
2. Recent policy requires all clearances that involve taking a Component Cooling Water (CCW) Heat Exchanger out-of-service have as the first step verification that the appropriate unit Intake Cooling Water (ICW) Valve Watch is in place. A Control Room review of a clearance from last night had determined that this step had not been signed off although it was checked. The shift meeting was used to reinforce the need to sign off all steps even if it involves verifying people in position. Good use of a shift meeting.

Completed By: Richard Coulthard
MOS Observer

Date: 08/19/88

Reviewed By: *S.W. Pearce*
Operations Superintendent - Nuclear

Date: 8/22/88

Management
Review By:*PM-N* 18/22/88 *SVP* 18/22/88 *VP* 18/22/88
Date Date Date

08/19/88

To: Operations Superintendent - Nuclear

Date: 08/19-20/88

From: J. D. Evans

(MOS Observer)

Shift: ☐ Day
☒ Night

A. Plant Evolutions Observed

- Unit 3 at 100% power, Unit 4 trip at 2120
- I&C testing Unit 4 Steam Generator (SG) low level alarms
- Stabilization of Unit 4
- Formation of Emergency Response Team (ERT)
- Valve watch stations

B. Immediate Safety Problems

None

C. Questionable Work Practices

None

D. Areas for Improvement

As identified by RCO on shift and by a previous MOS Observer, there is no logical reason for the stamp (verify O.T.S.C. prior to use) to exist on ONOP and EP procedures used/contained in the Control Room. Primarily due to the current methodology requiring the "Hand-writing" of O.T.S.C.'s to the actual section effected alleviates the application or intent of the stamp.

The masters maintained in the SDC files are stamped and will therefore require the Procedure Upgrade (PUP) Department to regenerate the cover page for each of the procedures described above. SDC staff will issue a non-stamped replacement to the Control Room as soon as the master file is corrected.

E. Professionalism, Summary of Shift, Comments

Within minutes of the reactor trip on Unit 4, the NWE, operators and APSN responded extremely efficiently with excellent continuity and coordination. Everyone involved, both inside the Control Room and outside acted very professional while remaining very calm.

Overall shift turnover and assistance to the ERT very informative and constructive.

Good communication between valve watch stations and ROs.

Security stations well manned and organized.

Completed By: J. D. Evans
MOS Observer

Date: 08/19-20/88

Reviewed By: *[Signature]*
Operations Superintendent - Nuclear

Date: 8/22/88

Management
Review By:

[Signature] 18/22/88 *[Signature]* 18/22/88
PM-N Date SVP Date VP Date

08/19-20/88

To: Operations Superintendent - Nuclear

Date: 08/19-20/88

From: Andrew P. Drake
(MOS Observer)Shift: ☐ Day
☒ Night

A. Plant Evolutions Observed

- Units 3 and 4 at 100% power, normal operations and logs
- Unit 4 trip (peak shift) Steam Generator (SG) B low-low level
- Unit 4 implementation of Emergency Procedures E-O and ES-0.1
- Unit 4 Significant Event Notification
- Unit 4 post trip recovery and Emergency Response Team (ERT) meeting
- Peak to mid shift turnover
- Mid shift briefing

B. Immediate Safety Problems

None observed

C. Questionable Work Practices

No comments at present

D. Areas for Improvement

1. The unit Reactor Control Operators (RCOs) are not consistently informed of clearances issued that the Nuclear Watch Engineer (NWE), Assistant Plant Supervisor Nuclear (APSN) or Plant Supervisor Nuclear (PSN) have suspended. When a clearance is given to the unit RCO to hang, he assigns the clearance to an outside operator (TO, NLO, etc.) to be hung. If the clearance is then suspended, the TO, NLO, etc., who is performing it is called by the PSN, APSN or NWE, but the unit RCO is not always informed. The unit RCOs should be kept informed of any and all changes in the performance of clearances.
2. R-11, containment activity monitor, is out-of-service (OOS) again. When both R-11 and R-12 are OOS, Technical Specifications requires the Control Room ventilation to be placed in the recirculation mode. However with only one OOS, this is not required. Some shifts place the system into recirculation if either is out and then a later shift puts it back to normal. So far this week the system has been switched back and forth at least 2 cycles.

E. Professionalism, Summary of Shift, Comments

The Unit 4 peak shift RCOs (Joe Scott, Andy Newton), NWE (Dave Spence) and APSN (Tom Reese) responded quickly and efficiently to the Unit 4 trip. The emergency procedures were implemented quickly. The STA (Kirk Nordmeyer) monitored the critical safety function status trees most effectively. It was very obvious that everyone on the shift knew how to implement the emergency procedures and did so without hesitation.

Completed By: Andrew P. Drake

MOS Observer

Date: 08/19-20/88Reviewed By: Tom Reese

Operations Superintendent- Nuclear.

Date: 8/22/88Management
Review By:

APC 18/22/88 Joe 18/22/88
PM-N Date SVP Date VP Date

08/19-20/88

To: Operations Superintendent - Nuclear

Date: 08/20/88

From: Richard Coulthard
(MOS Observer)Shift: ☒ Day
☐ Night

A. Plant Evolutions Observed

- ° Unit 3 at 100% power
- ° Unit 4 at Hot Standby
- ° 0735 and 1535 start of shift meetings
- ° 1345 Event Response Team (ERT) meeting on 8/19/88 reactor trip

B. Immediate Safety Problems

None

C. Questionable Work Practices

None

D. Areas for Improvement

I reviewed previous MOS reports on Component Cooling Water (CCW) heat exchanger cleaning criteria and discussed this issue with the STA. The current sequence is to clean the heat exchanger, return it to service, performance test the heat exchanger to calculate a new limit based on the "worst" fouling rate we have ever experienced and then take the heat exchanger out-of-service (OOS) based on Intake Cooling Water temperature. Heat exchanger performance (differential temperatures, etc.) are not measured to make a decision to take the heat exchanger OOS. Heat exchangers have been cleaned many times only to discover no fouling had occurred. See response to MOS item 88-1700 of 7/18/88.

The above suggestion may result in additional performance testing of heat exchangers and associated manpower; but I think has the potential to significantly reduce the number of times heat exchangers are taken OOS. This would make a corresponding reduction in number of LCOs entered into as well as demands on operators, heat exchanger cleaning crews, Quality Control inspectors, tube wear, etc.

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E.

Professionalism, Summary of Shift, Comments

1. Day crew made a good effort to determine and complete all items necessary to return Unit 4 to criticality and power.
2. Several members of the Event Response Team (ERT) put in long days analyzing the events associated with the trip.

Completed By:

Richard Coulthard

MOS Observer

Date: 08/20/88

Reviewed By:

R. Pearce

Operations Superintendent- Nuclear

Date:

8/22/88Management
Review By:REC
PM-N

Date

18/22/88

SVP

Date

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08/20/88

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COMMITMENT ID #

MOS ACTION ITEM

Type: PSN-PROC Due Date: 08 17 88 67-29-88

CTRAC Description: A: PRESENT CCM HX CLEANING CRITERIA NOT IAW
TP-440.

Source Document/Basis: 07 27 88 ANDERSON, DRAKE

Assigned to:

PIKE / FHS / ARIAS / M. BOWSE
Tracker Implementor Designee

Description of Item: SEE ATTACHED

Short Term Corrective Action: In the past few days, there has been little or no fouling of HX's. This means that there was no need to clean the HX's. However, the extremely high inlet temperature kept us above the 2° margin line. We tested frequently to determine when some benefit could be derived by cleaning.

Action Taken to Prevent Recurrence: The procedure for monitoring HXs is being revised to incorporate all possible all foreseeable conditions. However there may be a time when the heat exchangers cannot be kept clean enough to meet the needs and shut down may be necessary. Procedure change by 7/29/88.

Reply prepared by:

T.W. Fisher / Tech / 7/27/88 / 6967 / J.W. Fisher
Name (Print) Department Date Ext. # Signature

Concurrence: J. H. Southworth / 7/28/88
Implementor DATE

Note: Please obtain concurrence from the Implementor, then return original to MOS Coordinator (Room 1630) with any supporting documentation attached. Call Extension 1221 if you have any questions. THANK YOU!

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ATTACHMENT ID #

MOS ACTION ITEM

Type: PSN-RDOC Due Date: 08/17/88 07-29-88

CTRAC Description: B: CCW HX FOULING PREDICTION CURVES NOT CREDIBLE. IMPROVED W/O CLEANING HX.

Source Document/Basis: 07-27-88 ANDERSON, DRAKE

Assigned to:

PIKE 1 FHS 1 Balaguerio
Tracker Implementor Designee

Description of Item: SEE ATTACHED

Short Term Corrective Action: The reason the curves "jumped up" was since no fouling had occurred. This is experienced quite often and tests are usually conducted more than once to verify unexpected data. This data was expected since a special test rig on the canal also showed no fouling. This was explained to the PS-N at 3:00 am and should not have been written up on 7/27/88.

Action Taken to Prevent Recurrence:

The fouling curves are not meant to be extremely accurate but conservative. The fouling rate we use is the worst we have ever experienced. Due to the importance of this system we will continue to use this rate. We will retest based on the engineering judgement of the system engineer, his lead and their supervisor and the STA. Verbal com- See attach

T.W. Fisher 1 Tech 1 6967 1 J.W. Fisher
Name (Print) Department Ext. # Signature

Concurrence: J. H. Southworth 7/28/88
Implementor

Note: Please obtain concurrence from the Implementor, then return original to MOS Coordinator (Room 1630) with any supporting documentation attached. Call Extension 1221. If you have any questions. THANK YOU!

communication as well as better use of the comment section of the heat exchanger test sheet will be provided in the future to ~~ensure~~^{ensure} that the PS-N and STA are aware of the reason for the test results as well as the actual data points. Changes in our monitoring procedure will be completed by 7/29/88 to incorporate this ^{responsibility} ~~communication~~. Review of the procedure changes will include the STA. ~~in it~~

Operations Superintendent - Nuclear

Date: 08/20-21/88

From: John D. Evans
(MOS Observer)Shift: ☐ Day
☒ Night

A. Plant Evolutions Observed

- Unit 3 at 100% power, Unit 4 in Hot Standby
- Oil spill in Turbine
- Fire watch notification
- Continuation of Steam Generator (SG) channel alarms by I&C
- Volume control tank purge
- Shift turnover

B. Immediate Safety Problems

None

C. Questionable Work Practices

None

D. Areas for Improvement

A Unit 3 RCO was not aware of radio transmission causing spurious alarms at the reactor coolant pump temperature chart recorder. The use of a radio within approximately 3 or 4 feet will cause alarm. Unit 3 RCO is now aware of situation. Assure other RCOs are made aware of this problem.

E. Professionalism, Summary of Shift, Comments

Good quiet shift overall. Good response from Maintenance staff and Operations (TOs and NOs) on oil spill. Firewatch and Security well manned and alert.

Completed By: John D. Evans
MOS Observer

Date: 08/20-21/88

Reviewed By: *[Signature]*
Operations Superintendent - Nuclear

Date: 8/22/88

Management
Review By:*[Signature]* 8/22/88 *[Signature]* 8/22/88
PM-N Date SVP Date VP Date

08/20-21/88

Operations Superintendent - Nuclear

Date: 08/20-21/88

From: Andrew P. Drake
(MOS Observer)Shift: ☐ Day
☒ Night

A. Plant Evolutions Observed

- Unit 3 at 100% power
- Unit 4, Mode 3, Hot Standby
- Normal operations and logs
- Peak to mid shift turnover
- Mid shift briefing
- Intermediate Range surveillance
- Volume Control tank purge, Unit 3
- Unit 4, Turbine trip test and subsequent oil leak on left stop valve

B. Immediate Safety Problems

None observed

C. Questionable Work Practices

None observed

D. Areas for Improvement

1. Mechanical Maintenance and Instrumentation and Control (I&C) were not in attendance at the mid shift meeting.
2. The last few days the peak and mid shifts have had trouble logging onto the Nuclear Job Planning System (NJPS). This makes it difficult to approve hot jobs that come up since they cannot be approved nor can work authorization (WA) numbers be given out to the crews.
3. For the last several days the turbine gantry crane has been parked right in front of the south end stairs making passage extremely difficult. No work goes on during the peak or mid shift involving this crane. A good operating practice would be to park this crane out of the way unless work is ongoing.

E. Professionalism, Summary of Shift, Comments

Quiet, smooth night on both units.

Completed By: Andrew P. Drake
MOS Observer

Date: 08/20-21/88

Reviewed By: *L. W. Pearce*
Operations Superintendent - Nuclear

Date: 8/22/88

Management
Review By:*JEC* 18/22/88 *JHO* 18/22/88
PM-N Date SVP Date VP Date

08/20-21/88

To: Operations Superintendent - Nuclear

Date: 08/21/88

From: Richard Coulthard
(MOS Observer)Shift: ☒ Day
☐ Night

A. Plant Evolutions Observed

- Unit 3 at 100% power operations
- Unit 4 at Hot Standby
- 0715 Special Sunday Plan of the Day meeting
- 1535 shift turnover meeting
- Feedwater Regulating Valve testing per 4-GOP-301

B. Immediate Safety Problems

None

C. Questionable Work Practices

none

D. Areas for Improvement

None

E. Professionalism, Summary of Shift, Comments

Very quiet shift.

Completed By: Richard Coulthard
MOS Observer

Date: 08/21/88

Reviewed By: [Signature]
Operations Superintendent - Nuclear

Date: 8/22/88

Management
Review By:

[Signature] 8/22/88 [Signature] 8/22/88
PM-N Date SVP Date VP Date

08/21/88

To: Operations Superintendent - Nuclear

Date: 08/21-22/88

From: John D. Evans
(MOS Observer)Shift: ☐ Day
☒ Night

A. Plant Evolutions Observed

- Unit 3 at 100%, Unit 4 Mode 3 to Mode 1
- Turbine Trip test and Turbine Valve test
- Diesel oil recirculation valve watch
- Turbine deck all elevation tour
- Health Physics facility check

B. Immediate Safety Problems

None

C. Questionable Work Practices

None

D. Areas for Improvement

None

E. Professionalism, Summary of Shift, Comments

During the Turbine valve and Turbine trip tests, the non-licensed groups both peak and mids deserve recognition for a job well done in their support of these evolutions. Operations brought the unit up through the mode changes very systematically and without incident.

Good shift turnover and the peak shift stayed with the startup into the mid shift to maintain thorough continuity.

Completed By: John D. Evans
MOS Observer

Date: 08/21-22/88

Reviewed By: [Signature]
Operations Superintendent - Nuclear

Date: 8/22/88

Management
Review By:

[Signature] 8/22/88 [Signature] 8/22/88
PM-N Date SVP Date VP Date

08/21-22/88

To: Operations Superintendent - Nuclear

Date: 08/21-22/88

From: Andrew P. Drake
(MOS Observer)Shift: ☐ Day
☒ Night

A. Plant Evolutions Observed

- Unit 3, 100% power normal operations/logs
- Unit 4, Reactor Startup, Turbine Trip test, Turbine roll
- Unit 4 Sync to grid, power increase to 50% power
- Peak to mid shift turnover
- Mid shift briefing (short due to Unit 4 startup)
- Completion of Unit 4 stop valve repairs
- Reviewed Emergency Response Team (ERT) report on Unit 4 trip of 8/19/88

B. Immediate Safety Problems

None observed

C. Questionable Work Practices

None observed

D. Areas for Improvement

1. Auto sync circuit on Unit 4 Turbine startup did not work as smoothly as it did for the startup on 8/16-17/88. Further investigation may be warranted.
2. The Control Room access gates (3 of 5) are broken again. These gates have been frequent items on MOS reports. They should be removed as quickly as possible. The one at the Nuclear Watch Engineer's (NWE) station was a safety hazard with the end protruding out into the walkway. It was finally removed.
3. Why do some I&C Specialists require a PWO to be submitted to change the recording tape on the Metal Impact Monitor (MIMS) recorder and others do not? This is a fairly regular operation and should not require a PWO to be performed.

E. Professionalism, Summary of Shift, Comments

1. Unit 4 reactor startup went very well. The operators were cognizant of plant conditions at all times and frequently questioned the trainee performing the startup to ensure he understood the current plant conditions. A job well done by the entire peak shift.
2. The week of June 6, 1988, the new Control Room ventilation system was placed in service. During the startup testing a problem was discovered with the test switches on the Control Room Normal Air Intake Rad Monitor Channels A and B (RAI-6642/6643). If these switches were released too fast an inadvertant Control Room isolation signal would occur and a significant event would result. The "Short term" fix was to place caution tags on these switches to alert the operators to this problem. The operators on shift at the time, were assured by plant management, that they too saw this an unacceptable solution and these switches would be "Hot Items" to fix. The board operators frequently point this out as a case for "new management philosophy" (i.e., do it right the first time) to disprove the old style (put it in and fix it right later). What is the status on these switches? Provide feedback to the operation personnel on "Hot Items" jobs" that directly effect their jobs. This feedback will help them feel they are a part of the team and not just a bench warmer.

Completed By: Andrew P. Drake
MOS ObserverDate: 08/21-22/88Reviewed By: [Signature]
Operations Superintendent- NuclearDate: 8/22/88Management
Review By:[Signature] 8/22/88 [Signature] 8/22/88
PM-N Date SVP Date VP Date

08/21-22/88



Date 08/22/88

Shift Report

Shift

weekly

Days

Shift Management

PSN

Jones/Anderson

PSN

Singer

NWE

Vetromile

A. Questionable Work Practices/Actions Taken/Recommendations

None

B. Areas for Improvement/Recommendations/Actions Taken

None

C. Good Practices/Professionalism Observed

Routine operations

Reviewed By

P.W. Pearce

Date

8/23/88

Actions Completed

Date

To: Operations Superintendent - Nuclear

Date: 08/22/88

From: Sidney G. Brain
(MOS Observer)Shift: ☒ Day
☐ Night

A. Plant Evolutions Observed

- Unit 3 at 100% power
- Unit 4 at approximately 65% power, ramped to approximately 84% power
- Manipulation of Unit 3 Volume Control Tank (VCT) press to stabilize seal leakoff ONOP 1108.1 and 3-OP-047.1
- 0740 phone call
- Individual Reactor Operator (RO) turnovers

B. Immediate Safety Problems

None

C. Questionable Work Practices

None

D. Areas for Improvement

None

E. Professionalism, Summary of Shift, Comments

1. Good communications between RO and APSN during the VCT pressure changes to stabilize "3A" Reactor Coolant Pump (RCP) seal leakoff. Procedures were used and discussed.
2. Valve watch radio checks were crisp and clear.
3. Personnel in Control Room whose reason for being there was not known to RO's were challenged. They were there to take switch/escutcheon measurements.

Completed By: Sidney G. Brain
MOS Observer

Date: 08/22/88

Reviewed By: S. W. Pearce
Operations Superintendent - Nuclear

Date: 8/23/88

Management
Review By:

MC 18/23/88 MC 18/23/88 VP 18/23/88
PM-N Date SYP Date VP Date
08/22/88

To: Operations Superintendent - Nuclear

Date: 08/22-23/88

From: J. P. Brannin
(MOS Observer)Shift: ☐ Day
☒ Night

A. Plant Evolutions Observed

- Reduction in power from approximately 80% to approximately 23%
- Unit 4 Main Turbine Trip test
- Peak to mid turnover
- Mid shift briefing
- Increase in power from approximately 23% to approximately 60%

B. Immediate Safety Problems

None observed

C. Questionable Work Practices

None observed

D. Areas for Improvement

None at this time.

E. Professionalism, Summary of Shift, Comments

A good discussion was held prior to plant evolutions. Good use of procedures.

Completed By: Joseph P. Brannin
MOS Observer

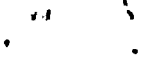
Date: 08/22-23/88

Reviewed By: L. W. Pearce
Operations Superintendent - Nuclear

Date: 8/23/88

Management
Review By:

PEC 18/23/88 PEC 18/23/88 JLB 1 8/23/88
PM-N Date SVP Date VP Date
08/22-23/88



To: Operations Superintendent - Nuclear

Date: 08/22-23/88

From: John D. Evans
(MOS Observer)Shift: ☐ Day
☒ Night

A. Plant Evolutions Observed

- Unit 3 at 100% power
- Unit 4, power ascension from 85% to 20%
- Turbine trip test
- Shift turnover, peak to mid

B. Immediate Safety Problems

None

C. Questionable Work Practices

None

D. Areas for Improvement

Procedure 4-OSP-200.3, Secondary Plant Periodic Tests, step 7.2.17 timing of the actual reading of P.I. 3658 vs actual green light indication caused a lot of concern for the results as recorded on record copy (see attached) 170 psig actual recorded.

Recommendation: The acceptance criteria should be reviewed.

E. Professionalism, Summary of Shift, Comments

Very good shift turnover meeting. Overall smooth shift, good support from the NLO's and other support groups.

During my general walkthrough, Security and Firewatch crews were very alert, courteous and helpful.

Completed By: John D. Evans
MOS Observer

Date: 08/22-23/88

Reviewed By: *[Signature]*
Operations Superintendent - Nuclear

Date: 8/23/88

Management
Review By:

[Signature] 8/23/88 *[Signature]* 8/23/88
PM-N Date SVP Date VP Date
08/22-23/88

4-OSP-200.3

Secondary Plant Periodic Tests

Approval Date:

7/19/88

INIT

- 7.2.15 Close the Low Vacuum Trip Test valve.
- 7.2.16 While monitoring the Turbine Auto Stop PI-3658, position and hold the Trip/Reset lever to the Reset/Latch position.
- 7.2.17 When the green Reset light comes On, record the pressure indicated at Turbine Auto Stop PI-3658.
- _____psig (140 to 160 psig increasing)
- 7.2.18 Verify annunciator E-5/3, CONDENSER LOW VACUUM, is clear.
- 7.2.19 Slowly release the Trip/Reset lever.
- 7.2.20 Verify the Trip/Reset lever returned to the Normal position.
- 7.2.21 Establish communications with the control room and request prompt notification of the actuation of annunciator E-2/1, TURBINE BEARING OIL LOW PRESSURE.

NOTE

In the following steps the Test handle shall be held in the To Test position until the controls are reset as indicated by the green Reset light at PI-4-3658. If the test must be discontinued for any reason other than a Turbine Trip and the controls are not reset, proceed to Step 7.2.28 to ensure adequate restoration of the turbine controls.

- 7.2.22 Continue to hold the test handle to the To Test position.
- 7.2.23 While monitoring the Low Brg Oil Press Trip Test PI-3612, slowly throttle open the Low Brg Oil Press Trip Test valve.
- 7.2.24 When notified by the control room that annunciator E-2/1, TURBINE BEARING OIL LOW PRESSURE, is actuated, record the pressure indicated at Low Brg Oil Press Trip Test PI-3612.
- _____psig (7 to 9 psig decreasing)
- 7.2.25 Continue to monitor the Low Brg Oil Press Trip Test PI-3612 until actuation of the trip lever at the turbine front standard.
- 7.2.26 When the trip lever actuates, record the pressure indicated at Low Brg Oil Press Trip Test PI-3612.
- _____psig (4 to 6 psig decreasing)



Date 08/23/88

Shift Report

Shift Weekly
Days

Shift Management

PSN Anderson APSN Singer NWE Vetromile

A. Questionable Work Practices/Actions Taken/Recommendations

None

B. Areas for Improvement/Recommendations/Actions Taken

None

Good Practices/Professionalism Observed

Routine operations

Reviewed By [Signature] Date 8/24/88 Actions Completed Date

Date 08/24/88

Shift Report

Shift Mid

Shift Management

PSN Schimkus APSN Reese NWE Spence

A. Questionable Work Practices/Actions Taken/Recommendation

None

B. Areas for Improvement/Recommendations/Actions Taken

1. A possible Unit 4 shutdown was at hand tonight, dependent on Component Cooling Water (CCW) efficiency testing followig 4B CCW Heat Exchanger cleaning. The STA called out the designated Test Engineer at 0005. At 0145, the PSN noticed no testing activity in progress on 4B CCW Heat Exchanger. The PSN contacted the STA. The STA informed that the Test Engineer could not be reached. The PSN requested STA call out an alternate to accomodate the test ativity. The originally contacted Test Engineer arrived on site at 0221 and started test activity Note: He lives approximately 30 minutes away.

Recommend:

- a. Have a Test Engineer on site continually.
 - b. Find out why we are experiencing such extensive time lags occassionaly to accomodate these tests.
2. Tonight (peaks/mids) dispute arose concerning actions to be taken in the event Intake temperatures exceeded the allowable temperature for CCW Heat Exchangers to remove design basis accident, heat load. Current Technical Specifications allow a Heat Exchanger out-of-service for 72 hours. Intake Cooling Water (ICW) JCO dictates the operability of the CCW system is dependent on Intake temperature vs CCW Heat Exchanger efficiency (cleanliness). ADM-021 informs that if Intake temperatures reach 95° F, the unit enters a 72 hour LCO and an engineering study must be performed to ensure the ICW system can mitigate the consequences of a DBA.

If the CCW Heat Exchanger cleanliness curve dictates that a unit shutdown must commence, Technical Specification 3.0.1. applies. Additionally, EP-20101 dictates that loss of any equipment in current Technical Specification 3.4 requiring a plant shutdown shall be reported as an Unusual Event if:

The system can't be made operable or we are unable to take compensatory measures within the time limits of the Technical Specification.

Reviewed By R. W. Reese Date 8/24/88 Actions Completed _____ Date _____

Date 8/24/88

Shift Report

Page 2

Continuation Page

Actions: Complying to Technical Specification, ADM-021, Ep-20102 and ICW JCO simultaneously until a good solid interpretation or EP-20101 procedure change exists which deletes requirement for Unusual Event.

Recommend:

Change EP-20101 to read that a loss of both redundant trains of equipment listed in section 3.4, requiring a plant shutdown and inability to make either or any train operable shall constitute an Unusual Event only if the LCO action statements and applicable time limits are exceeded or can't be met. Need licensing to research this possibility if it is not in violation of requirements.

C. Good Practices/Professionalism Observed

Routine operations

EMERGENCY CLASSIFICATION TABLE

01
Page 25
10/3/85

25. LOSS OF ENGINEERED SAFETY FEATURES/FIRE PROTECTION SYSTEMS

UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
<p>1) Any one of the following three:</p> <p>a) Loss of any equipment listed in Tech. Spec. Section 3.4 requiring plant shutdown. OR</p> <p>b) Loss of any fire protection systems listed in Tech Spec section 3.5 requiring plant shutdown. OR</p> <p>c) Loss of any fire protection systems listed in Tech Spec. Section 3.14 AND</p> <p>2) Inability to make any systems addressed above operable OR To provide compensatory measures within the specified time limits of the applicable Tech. Spec</p> <p>NOTE</p> <p>An UNUSUAL EVENT shall be declared when actual load reduction <u>begins</u>.</p>			

ACTION

Complete actions listed in Step 8.4, page 28	Complete actions listed in Step 8.5, page 40	Complete actions listed in Step 8.6, page 53	Complete actions listed in Step 8.7, page 60
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To: Operations Superintendent - Nuclear

Date: 08/23/88

From: Sidney G. Brain
(MOS Observer)Shift: ☒ Day
☐ Night

A. Plant Evolutions Observed

- 0715 Plan of the Day meeting
- Unit 4 continued power escalation to 100% power
- Calorimetric - 4-OSP-059.5
- Nuclear Instrumentation System (NIS) Gain Pots adjustment 4-OSP-059.5
- Unit 3 Area Radiation Monitoring System (ARMS) tests 11204.1
- 1530 shift meeting

B. Immediate Safety Problems

None

C. Questionable Work Practices

None

D. Areas for Improvement

Procedure 11204.1 ARMS - periodic test on page 3, step 8.2.3 calls for a PWO to be issued to I&C if the low or high setpoint tests do not meet the acceptance criteria. The high setpoint acceptance criteria are stated; the low setpoint acceptance criteria are not. The RO's are aware of the low setpoints. Recommend the procedure be modified to include the low setpoint acceptance criteria.

E. Professionalism, Summary of Shift, Comments

Unit 4 RCO held power escalation until I&C worked on Control bank D H-12 Rod Position Indication (RPI), which was showing approximately 12 steps out to avoid going into a LCO.

Solid routine shift performances.

Completed By: Sidney G. Brain
MOS Observer

Date: 08/23/88

Reviewed By: *[Signature]*
Operations Superintendent - Nuclear

Date: 8/24/88

Management
Review By:*[Signature]*
PM-N18/24/88
Date

SVP

18/24/88
Date*[Signature]*
VP18/24/88
Date

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To: Operations Superintendent - Nuclear

Date: 08/23-24/88

From: Joseph P. Brannin
(MOS Observer)Shift: ☐ Day
☒ Night**A. Plant Evolutions Observed**

- ° Discussion of Intake temperature and Component Cooling Water (CCW) situation
- ° Misaligned rod on Unit 4

B. Immediate Safety Problems

None observed

C. Questionable Work Practices

None

D. Areas for Improvement

See section E

E. Professionalism, Summary of Shift, Comments

During the peak shift Rod Cluster Control Assembly H-12 on Unit 4 was found to be misaligned. The operators used three documents in dealing with this situation. They are:

1. Current Technical Specifications
2. Interim Technical Specifications (0-ADM-021)
3. Procedure 4-ONOP-028 Reactor Control System Malfunction

I have attached copies of the pertinent pages.

The current Technical Specifications refer to a misaligned control rod as one being "...more than 12 steps out of alignment with its bank..."

The Interim Technical Specifications discuss alignment as being "...positioned within \pm 12 steps (indicated position) of the REFERENCE POSITION corresponding to the group demand counter position..."

The ONOP discusses, under a section entitled symptoms, Rod Cluster Control Assembly Misalignment as the two Technical Specifications mentioned above but adds a further "symptom", that is, "Bank RPI (Rod Position Indication) highest to lowest difference of greater than 12 steps."

This is not a Technical Specification requirement.

This practice causes unnecessary delays and work. It also opens up some interesting questions.

If this is a valid way of determining Rod Cluster Control Assembly Misalignment then since Rod H-12 was greater than 12 steps away from Rod H-4 Rod 4 was greater than 12 steps away from Rod H-12, and we therefore had two Rod Cluster Control Assemblies misaligned. There is no way of knowing which rod was misaligned until the proper checks were performed. This being the case we should take action in accordance with the Technical Specifications for two misaligned rods.

Upon discussing this with the PSN I was informed that this was not the first time this had occurred or was handled in this way.

I believe this ONOP symptom of Rod Control Cluster Assembly Misalignment to be non-useful, it's misused when it does occur, and it adds to complications in operations. It is not required by the Technical Specifications as they make no reference to comparing highest to lowest Rod Control Cluster Assembly position.

In tonight's situation neither rod was misaligned more than 12 steps (9 steps was maximum) from its bank. Due to this ONOP symptom Reactor Engineering was called in to perform a flux map and I&C was diverted from other efforts to reset the indicators. The flux map found both rods in agreement with the bank position.

I recommend deletion of this step from the ONOP.

If the step is not deleted we should formalize the determination of the rods being misaligned. Comparing one rod to another and then saying only one is misaligned implies that the other is known to be aligned and can be proven so. This is not true.

Problems were handled well by both shifts. Both shifts very persistent in seeking solutions.

Completed By: Joseph P. Brannin
MOS Observer

Date: 08/23-24/88

Reviewed By: *L. W. Pearce*
Operations Superintendent- Nuclear

Date: 8/24/88

Management
Review By:

DEC 1 8/24/88 *me* 1 8/24/88 *VP* 1 8/24/88
PM-N Date SVP Date VP Date

08/23-24/88

Current Tech Specs

- f. Except for low power physics tests, the shutdown margin with allowance for a stuck control rod shall exceed the applicable value shown on Figure 3.2-2 under all steady-state operating conditions from zero to full power, including effects of axial power distribution. The shutdown margin as used here is defined as the amount by which the reactor core would be subcritical at hot shutdown conditions (540°F) if all control rods were tripped, assuming that the highest worth control rod remained fully withdrawn, and assuming no changes in xenon, boron concentration or part-length rod position.
- g. During physics tests and control rod exercises, the insertion limits need not be met, but the required shutdown margin, Figure 3.2-2 must be maintained or exceeded.

2. MISALIGNED CONTROL ROD

If a part length* or full length control rod is more than 12 steps out of alignment with its bank, and is not corrected within 8 hours, power shall be reduced so as not to exceed 75% of interim power for 3 loop or 45% or interim power for two loop operation, unless the hot channel factors are shown to be no greater than allowed by Section 6a of Specification 3.2

3. ROD DROP TIME

The drop time of each control rod shall be no greater than 2.4 seconds at full flow and operating temperature from the beginning of rod motion to dashpot entry.

4. INOPERABLE CONTROL RODS

- a. No more than one inoperable control rod shall be permitted during sustained power operation, except it shall not be permitted if the rod has a potential

* Any reference to part-length rods no longer applies after the part-length rods are removed from the reactor.

This amendment effective as of date of issuance for Unit 3 and date of startup, Cycle 10, Unit 4.

INTERIM

REACTIVITY CONTROL SYSTEMS

3/4.1.3 MOVABLE CONTROL ASSEMBLIES

GROUP HEIGHT

LIMITING CONDITION FOR OPERATION

3.1.3.1 All full length (shutdown and control) rods, shall be OPERABLE and positioned within ± 12 steps (indicated position) of the REFERENCE POSITION corresponding to the group demand counter position within one hour after rod motion.

APPLICABILITY: MODES 1* and 2*.

ACTION:

- a. With one or more full length rods inoperable due to being immovable as a result of excessive friction or mechanical interference or known to be untrippable, determine that the SHUTDOWN MARGIN requirement of Specification 3.1.1.1 is satisfied within 1 hour and be in HOT STANDBY within 6 hours.
- b. With one full rod inoperable due to causes other than addressed by ACTION a, above, or misaligned from its REFERENCE POSITION by more than ± 12 steps (indicated position), POWER OPERATION may continue provided that within 1 hour either:
 1. The rod is restored to OPERABLE status within the above alignment requirements, or
 2. The remainder of the rods in the bank with the inoperable rod are aligned to within ± 12 steps of the inoperable rod while maintaining the rod sequence and insertion limits of Figure 3.1-1; the THERMAL POWER level shall be restricted pursuant to Specification 3.1.3.6 during subsequent operation, or
 3. The rod is declared inoperable and the SHUTDOWN MARGIN requirement of Specification 3.1.1.1 is satisfied. POWER OPERATION may then continue provided that:

*See Special Test Exceptions 3.10.2 and 3.10.3.

INTERM

REACTIVITY CONTROL SYSTEMS

LIMITING CONDITION FOR OPERATION

ACTION (Continued):

- a. A re-evaluation of each accident analysis of Table 3.1-1 is performed within 5 days; this re-evaluation shall confirm that the previously analyzed results of these accidents remain valid for the duration of operation under these conditions.
 - b. The SHUTDOWN MARGIN requirements of Specification 3.1.1.1 is determined at least once per 12 hours.
 - c. A power distribution map is obtained from the movable incore detectors and $F_0(Z)$ and $F_{\Delta H}$ are verified to be within their limits within 72 hours.
 - d. The THERMAL POWER level is reduced to less than or equal to 75% of RATED THERMAL POWER within one hour and within the next 4 hours the high neutron flux trip setpoint is reduced to less than or equal to 85% of RATED THERMAL POWER. THERMAL POWER shall be maintained less than or equal to 75% of RATED THERMAL POWER until compliance with ACTIONS 3.1.3.1.b.3.a and 3.1.3.1.b.3.c above are demonstrated.
 - e. Within 4 weeks determine the rod worth of the inoperable rod. If the rod is determined to have a potential reactivity insertion of greater than 0.3% $\Delta k/k$ upon ejection at rated power, be in HOT STANDBY within 6 hours.
- c. With more than one rod trippable but inoperable due to causes other than addressed by ACTION a. above, POWER OPERATION may continue provided that:
- 1. Within one hour, the remainder of the rods in the bank(s) with the inoperable rods are aligned to within ± 12 steps of the inoperable rods while maintaining the rod sequence and insertion limits of Figure 3.1-1. The THERMAL POWER Level shall be restricted pursuant to Specification 3.1.3.6 during subsequent operation, and
 - 2. The inoperable rods are restored to OPERABLE status within 72 hours.
- d. With more than one rod misaligned from its reference position by more than ± 12 steps (indicated position), be in HOT STANDBY within 6 hours.

INTERIM

REACTIVITY CONTROL SYSTEMS

SURVEILLANCE REQUIREMENTS

4.1.3.1.1 The position of each full rod shall be determined to be within ± 12 steps (indicated position) of the REFERENCE POSITION corresponding to the group demand position at least once per 12 hours (allowing for one hour thermal soak after rod motion) except during time intervals when either the rod position deviation monitor or the power range channel deviation alarm is inoperable, then verify the group positions at least once per 4 hours or after a load change of greater than 10% power. If both alarms are inoperable for two hours or more, the nuclear overpower trip shall be reduced to 93% of RATED THERMAL POWER.

4.1.3.1.2 Each full length rod not fully inserted which is inserted in the core shall be determined to be OPERABLE by movement of at least 10 steps in any one direction at least once per 14 days.

Procedure No	Procedure Title	Page
4-ONOP-028	Reactor Control System Malfunction	6
		Approval Date. 10/20/87

1.0 PURPOSE

1.1 This procedure provides instructions to be followed in the event of a Reactor Control System Malfunction due to:

- 1.1.1 A rod cluster control assembly (RCC) that is misaligned with its bank
- 1.1.2 Failure of an RCC to move due to being untrippable, CRDM failure, or rod control power supply failure
- 1.1.3 Failure of an RCC control bank to insert following a change in turbine load or in boron concentration with reactor control in automatic
- 1.1.4 Failure of the individual rod position indicators (RPI) or the group demand step counters
- 1.1.5 Dropped RCC
- 1.1.6 Continuous insertion of an RCC control bank
- 1.1.7 Continuous withdrawal of an RCC control bank

2.0 SYMPTOMS

2.1 RCC Misalignment

- 2.1.1 Power range nuclear instrumentation variation of greater than 3 percent difference between any two detectors at the same elevation
- 2.1.2 Axial flux difference indicators difference of 3 percent between any two channels
- 2.1.3 Significant axial power shape difference from symmetric assemblies, as determined by the Reactor Supervisor
- 2.1.4 Rod position indicator (RPI) vs. group demand step counter difference of greater than 12 steps
 - 1. A difference of greater than 12 steps between RPI and group demand step counter is acceptable for power operation below 50 percent power.
 - 2. The position indication difference may be caused from transferring RPI power supplies.
- 2.1.5 Bank RPI highest to lowest difference of greater than 12 steps
- 2.1.6 Difference of greater than 1 step between the group step counters for the same bank
- 2.1.7 Core exit thermocouple difference of 10°F relative to symmetric thermocouples

Operations Superintendent - Nuclear

Date: 08/23-24/88

From: D. W. Haase
(MOS Observer)Shift: ☐ Day
☒ Night

A. Plant Evolutions Observed

- Steady state operation on Unit 3 at 100%
- Leveling out at 100% power on Unit 4
- Control Rod deviation off normal procedure - Unit 4
- Discussions with plant management and engineering on Component Cooling Water (CCW) Heat Exchanger operability concerns due to increasing circulating water temperatures
- Accumulator level periodic - Unit 4
- Tour of "A" and "B" Motor Control Centers - Units 3 and 4

B. Immediate Safety Problems

None

C. Questionable Work Practices

None

D. Areas for Improvement

None

E. Professionalism, Summary of shift, Comments

None

Completed By: D. W. Haase
MOS Observer

Date: 08/23-24/88

Reviewed By: *[Signature]*
Operations Superintendent - Nuclear

Date: 8/24/88

Management
Review By:

<i>[Signature]</i>	1 8/24/88	<i>[Signature]</i>	1 8/24/88	<i>[Signature]</i>	1 8/24/88
PM-N	Date	SVP	Date	VP	Date

08/23-24/88

Date 08/24/88

Shift Report

Shift _____ Days _____

Shift Management

PS Schimkus APSN Singer NWE Vetromlle

A. Questionable Work Practices/Actions Taken/Recommendations

None

REC

AUG 25 1988

B. Areas for Improvement/Recommendations/Actions Taken

None

C. Good Practices/Professionalism Observed

Operators made good efforts to complete all surveillance testing required on both units.

Reviewed By L. W. Pearce Date 8/25/88 Actions Completed _____ Date _____

Date 08/25/88

Shift Report

Shift Mids

Shift Management

Schimkus

APSN

Reese

NWE

Spence

A. Questionable Work Practices/Actions Taken/Recommendations

None

B. Areas for Improvement/Recommendations/Actions Taken

The Senior Reactor Control Operator (SRO) informed the PSN that it is becoming apparent that many of the Maintenance Foremen and Supervisors are lacking training on the Plant Clearance Order Network (PCON). They are continually asking operators/NWE to originate their work requests or releases because of lack of training in how the system works. This creates an extra work load for Control Room staff.

Recommend: PCON training for Maintenance Foremen and Supervisors.

C. Good Practices/Professionalism Observed

Routine operations.

Reviewed By

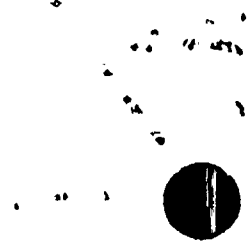
W. P. Spence

Date

8/25/88

Actions Completed

Date



Date 08/24/88

Shift Report

Shift _____ Peaks _____

Shift Management

PSN Anderson APSN Dallau NWE Fernandez

A. Questionable Work Practices/Actions Taken/Recommendations

None

B. Areas for Improvement/Recommendations/Actions Taken

Today we sent a Turbine Operator (TO) to manipulate valves as per procedures for the secondary efficiency test on Unit 4. The TO then called back to inform us that the procedure had no guidance for opening the valves that needed to be opened. It just stated to install test equipment.

Recommend: All procedures used infrequently be proofread prior to using to avoid interruption of the evolution to fix the procedure.

C. Good Practices/Professionalism Observed

I would like to comment a Nuclear Operator (NO) (Gerald Johnson) in finding several existing problems on his rounds and professionally troubleshooting these problems in a very timely manner and correcting them. Some of these were:

1. Finding the Unit 4 Spent Fuel Pool (SFP) at a higher than usual temperature and finding the throttling valve on the SFP heat exchanger was throttled too much.
2. While troubleshooting the existence of standing water in the 2 ft. elevation of the Auxiliary Building, he had the foresight to check the electrical plug for the sump pump and it was not inserted in the socket properly.
3. While investigating the sudden increase in sump level of Unit 3 Containment, he immediately found the switch for the drain from the Reactor Coolant Drain Tank (RCDT) to containment sump in the open position.

Gerald was very expedient in finding the cause of all these problems.

Reviewed By RW Pearce Date 8/24/88 Actions Completed _____ Date _____

To: Operations Superintendent - Nuclear

Date: 08/24/88

From: Sidney G. Brain
(MOS Observer)Shift: ☒ Day
☐ Night

A. Plant Evolutions Observed

- 0715 Plan of the Day meeting
- 1300 Plan of the Day meeting
- 1540 Peak shift meeting
- Unit 4 Safeguards test - OP-4004.2
- Unit 3 Full Length Rod Control Cluster - periodic test OP-1604.1
- Unit 3 Leak Rate calculation 3-PSP-041.1
- I&C Maintenance verification of 3-PMI-067.1 versus OTSC log

B. Immediate Safety Problems

None

C. Questionable Work Practices

None

D. Areas for Improvement

I&C should attend peak shift meeting.

E. Professionalism, Summary of Shift, Comments

Early during the peak shift, the Unit 3 RCO observed the Unit 3 Containment Sump level rapidly fluctuating. The RCO sent an NO to investigate. The NO found on the Waste Boron Panel the switch to the Unit 3 Reactor Coolant Drain Tank Drain to Containment Sump valve 3-4674 in the open position. The NO closed the switch terminating the Containment Sump fluctuation. The whole evolution was quickly identified and resolved. The reason the switch was in the open position is unknown. The PSN used this example during the shift meeting to caution and to request all shift personnel to be careful and double check their actions.

Completed By: Sidney G. Brain
MOS Observer

Date: 08/24/88

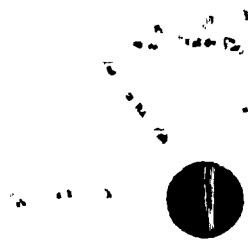
Reviewed By: *[Signature]*
Operations Superintendent - Nuclear

Date: 8/24/88

Management
Review By:

[Signature] 8/25/88 *[Signature]* 8/25/88
PM-N Date SVP Date VP Date

08/24/88



To: Operations Superintendent - Nuclear

Date: 08/24-25/88

From: Joseph P. Brannin
(MOS Observer)Shift: ☐ Day
☒ Night

A. Plant Evolutions Observed

- Shift turnover
- Shift briefing
- Toured Turbine Building

B. Immediate Safety Problems

None observed

C. Questionable Work Practices

None observed

D. Areas for Improvement

While the Turbine building appearance is improving, there are still indications that we have a long way to go in finishing up a job. I found cleaning gear and trash hidden behind the Unit 4 4A Low Pressure Feedwater Heater. In addition to that there were a couple of pieces of wood in different locations left in the overhead after work had been completed. I also noticed what I consider to be a lot of temporary wiring strung about the plant.

E. Professionalism, Summary of Shift, Comments

Good teamwork by Operations in the Control Room on both shifts.

Completed By: Joseph P. Brannin
MOS Observer

Date: 08/24-25/88

Reviewed By: *J. W. Preece*
Operations Superintendent - Nuclear

Date: 8/24/88

Management
Review By:*JSC* 8/25/88 *J. W. Preece* 8/25/88
PM-N Date SVP Date VP Date

08/24-25/88



To: Operations Superintendent - Nuclear

Date: 08/24-25/88

From: D. W. Haase
(MOS Observer)Shift: ☐ Day
☒ Night

A. Plant Evolutions Observed

- Units 3 and 4 steady state operation at 100% power
- Unit 4 Emergency Core Cooling System (ECCS) monthly valve cycling periodic test procedure
- Portions of maintenance work on cleaning and closing up 4C Component Cooling Water (CCW) Heat Exchanger
- Investigation of No. 1 seal leakoff flow increase in 3A Reactor Coolant Pump

B. Immediate Safety Problems

None

C. Questionable Work Practices

None

D. Areas for Improvement

In response to the increase in No. 1 seal leakoff flow on the 3A Reactor Coolant Pump, the Off-Normal Procedure 1108.1, Reactor Coolant Pump Off-Normal Conditions, was consulted. This procedure gives very little guidance for determining if the increase in flow can be proven real. A good cross-check on an increase in flow would be to determine if the thermal barrier differential pressure decreased accordingly. Recommend that such a cross-check be incorporated into this off-normal procedure.

E. Professionalism, Summary of Shift, Comments

The shift responded promptly to a sudden increase in the No.1 seal leakoff flow on the 3A Reactor Coolant Pump. The off-normal procedure was implemented, the STA retrieved relevant data from the Safety Assessment System (SAS) computer, appropriate parameters were monitored, and plans for subsequent actions were discussed.

Completed By: D. W. Haase
MOS Observer

Date: 08/24-25/88

Reviewed By: *D. W. Haase*
Operations Superintendent - Nuclear

Date: 8/24/88

Management
Review By:

DEC 1 8/25/88 *JPO* 1 8/25/88
PM-N Date SVP Date VP Date
08/24-25/88

