

REQUEST TO CHANGE PROCEDURE
NORTH ANNA POWER STATION
VIRGINIA POWER

ADM-5.4
Attachment 3
Page 1 of 1
07-09-87

1. SUPERVISOR RESPONSIBLE FOR FOLLOWING PROCEDURE:

- ☐ ABNORMAL
☐ ADMINISTRATIVE
☐ ANNUNCIATOR
☐ CALIBRATION
☐ CHEMISTRY

- ☐ CURVE BOOK
☐ EMERGENCY
☐ IN-SERVICE INSPECTION
☐ MAINTENANCE
☐ NON-DESTRUCTIVE TEST

- ☐ OPERATING
☒ PERIODIC TEST
☐ HEALTH PHYSICS
☐ SPECIAL TEST
☐ START-UP TEST

- ☐ WELDING

PROCEDURE NO: 1-PT-46.2B 2 UNIT NO: 1 3 REVISION DATE: New Proc.

TITLE: N-16 Radiation Monitor Alarm Setpoint Calculation

CHANGES REQUESTED: (GIVE STEP NUMBER, EXACT SUGGESTED WORDING, AND LIST REFERENCES, STAPLE COPY OF PROCEDURE WITH SUGGESTED CHANGES MARKED TO THIS FORM.)

NEW Procedure

REFERENCES:

Letter to NRC, 9/15/87, Ser No. 87-474A

REASON FOR CHANGES:

NEW Procedure

7 GE REQUESTED BY:

C. I. [Signature]

8 DATE: 10/1/87

ACTION TAKEN:

DOES THIS CHANGE THE OPERATING METHODS AS DESCRIBED IN THE UFSAR? ☐ YES ☒ NO
DOES THIS CHANGE INVOLVE A CHANGE TO THE TECH. SPECS? ☐ YES ☒ NO
DOES THIS CHANGE INVOLVE A POSSIBLE UNREVIEWED SAFETY QUESTION? ☐ YES ☒ NO
IF ALL "NO", NO "SAFETY ANALYSIS" IS REQUIRED. IF ANY "YES", A "SAFETY ANALYSIS" IS REQUIRED.
(10CFR50.59) APPROVED COPY TO BE PROVIDED TO LICENSING COORD. FOR INCLUSION IN ANNUAL REPORT.

RECOMMENDED ACTION:

☒ APPROVED ☐ DISAPPROVED

DOES THIS PROCEDURE CREATE A
QA DOCUMENT? YES ☒ NO ☐

BY: (COGNIZANT SUPERVISOR)

[Signature]

12 DATE: 10/2/87

REVIEWED BY QUALITY ASSURANCE:

CHANGES MADE: YES ☐ NO ☒

BY:

Waiver P. [Signature]

15 DATE: 10-2-87

REVIEWED BY STATION NUCLEAR SAFETY AND OPERATING COMMITTEE:

☒ APPROVED ☐ DISAPPROVED

☐ APPROVED AS MODIFIED BY COMMITTEE

ARMAN SIGNATURE:

[Signature]

18 DATE: 10/2/87

NEW PROCEDURE REVISION DATE:

ACTION COMPLETED BY:

9203030469 710B19
PDR FOIA
WILLIAM91-106 PDR

21 DATE: F/26

PERIODIC TEST CRITIQUE
NORTH ANNA POWER STATION
VIRGINIA POWER

Periodic Test No: 1 1-PT-46.2B	To be Performed By: SHIFT TECHNICAL ADVISOR	2 Unit No: 3 1
Test Title: N-16 RADIATION MONITOR ALARM SETPOINT CALCULATION		4
Test Frequency: SPECIAL		5
Unit Conditions Requiring Test: MODE 1		6
Test Performed By: 7		Date Started: 8A Date Completed: 8B
Test Results (To be completed by performer of test and Cognizant Supervisor(s)):		9
1. <input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory <input type="checkbox"/> Partial Procedure		
2. The following problem(s) was encountered (use back of sheet for additional space): _____ _____		
3. Corrective action taken or initiated: _____ _____		
4. Work Order No.: _____ Dated: _____ _____ _____		
Forward To Cognizant Supervisor		
Test Reviewed and Approved By Cognizant Supervisor(s) or Designee:		10
Reactor Engineer _____ Date: _____		
Supervisor, Surv. & Test _____ Date: _____		
Comments: _____ _____ _____		
Forward To Performance Engineer		
Comment(s) of Performance Engineer:	11	Stamp: 12
_____ _____ _____ _____ _____		

VIRGINIA POWER

PERIODIC TEST PROCEDURE FOR NORTH ANNA POWER STATION UNIT NO.: 1

TITLE: N-16 RADIATION MONITOR ALARM SETPOINT CALCULATION

REFERENCES:

1. 1-PT-46.2
2. Letter to the NRC, 9/15/87 (serial no. 87-474A)

REVISION RECORD:

APPROVED

REV. NO.

PAGE(S)

DATE

CHAIRMAN STATION NUCLEAR SAFETY
AND OPERATING COMMITTEE

RECOMMENDED APPROVAL:

APPROVED BY:

CHAIRMAN STATION NUCLEAR SAFETY
AND OPERATING COMMITTEE

DATE: _____

SUPERINTENDENT TECHNICAL SERVICES

Initials

1.0 Purpose

To determine the N-16 Radiation Monitor "First" and "Second" alarm setpoints, based on primary-to-secondary leakage concerns.

2.0 Initial Conditions

NOTE: If this is an initial startup, then previous PTs may not be available.

2.1 The trend of the N-16 Radiation Monitor from 1-PT-46.2 is available.

NOTE: If this is an initial startup, or a restart following a steam generator tube plugging outage, the initial leak rate is assumed to be 0 gpd.

2.2 The S/G leak rate data from 1-PT-46.2 is available.

3.0 Precautions and Limitations

3.1 This procedure must be performed prior to entering Mode 1.

3.2 For an initial startup, or a plant startup following a S/G tube plugging outage, the previous S/G leak rate is assumed to be 0 gpd.

3.3 To recalculate the N-16 Radiation Monitor "First" and "Second" alarm setpoints, use the most recent leak rate calculations based on the N-16 Monitor. Several leak rate results may be averaged to better ascertain the primary-to-secondary leak rate.

4.0 Instructions

4.1 Record the most recent primary-to-secondary leak rate data (based on the N-16 Monitor) from 1-PT-46.2 on Attachment 6.1. If this is a startup after a S/G tube inspection outage, record 0 gpd total leakage on Attachment 6.1.

- _____ 4.2 Calculate the new "First" alarm setpoint for the N-16 Monitor using the equation at the bottom of Attachment 6.1.
- _____ 4.3 Calculate the new "Second" alarm setpoint for the N-16 Monitor using the equation at the bottom of Attachment 6.1.
- _____ 4.4 Immediately notify the Shift Supervisor of the new alarm setpoint.
- _____ 4.5 Complete Attachment 6.2 and forward a copy to the Instrument Dept. Supervisor.
- _____ 4.6 Update the Radiation Monitor Setpoint Document in the Control Room to reflect the new setpoints.
- _____ 4.7 Verify that the new setpoint has been implemented.
- _____ 4.8 Post an Operator Aid (ADM-19.27) next to the N-16 Monitor stating both the "First" and "Second" alarm setpoints.

5.0 Acceptance Criteria

- _____ 5.1 The new setpoint has been implemented and an Operator Aid has been posted.

6.0 Attachments

- 6.1 N-16 Alarm Setpoint Calculations
- 6.2 Memo to change the alarm setpoints for the N-16 Monitor.

N-16 Monitor Alarm Setpoint Calculations

Recent Total Leak Rate Data Based on the N-16 Monitor (from 1-PT-46.2):

Date(s): _____ Leak Rate(s): _____
Average: _____ gpd

Previous "First" Alarm Setpoint: _____ gpd

Previous "Second" Alarm Setpoint: _____ gpd

* New "First" Alarm Setpoint: _____ gpd

** New "Second" Alarm Setpoint: _____ gpd

* "First" Alarm Setpoint = Recent Leak Rate Data (gpd) + 10 gpd

** "Second" Alarm Setpoint = Recent Leak Rate Data (gpd) + 50 gpd

OR: = 100 gpd, Whichever is lower

PREPARED BY: _____ DATE: _____

1-PT-46.2B
Attachment 6.2
Page 1 of 1
00-00-00

MEMO TO CHANGE THE ALARM SETPOINTS TO THE N-16 MONITOR

TO: Instrument Supervisor
FROM: Shift Technical Advisor

North Anna Power Station
Date: _____

Please immediately update the "First" alarm setpoint and the "Second" alarm setpoint to the Unit 1 N-16 Radiation Monitor as soon as possible, as follows:

"First" Alarm = _____ gpd

"Second" Alarm = _____ gpd

Shift Technical Advisor

Date: _____

MEMORANDUM

TO G. E. Kane
FROM L. N. Hartke

Inservice Inspection
September 17, 1987

UNIT 1 'B' STEAM GENERATOR PLUG LIST

The following plug list is provided for your approval.

Row	Column	Indication	Row	Column	Indication
12	21	PI*	15	49	PI
12	26	PI	15	50	PI
13	26	PI	45	54	Restricted
44	33	TI	5	58	PI
16	35	DI	2	59	PI
39	35	DI	19	62	TI
21	37	PI	29	70	PI
19	45	PI	8	77	PI*
15	48	DI	4	79	PI
23	48	TI			

The following tubes have pluggable indications and do not require stabilisation. It is recommended that these tubes be plugged.

Row	Column	Indication
9	23	TI
11	23	TI

The following tubes are not properly supported by AVB and it is recommended that they be mechanically plugged on the hot leg and plugged with a sentinel plug on the cold leg.

Row	Column	Row	Column
9	44	11	3
9	34	11	3
9	23	11	93
10	2	12	3
10	93	12	93
		12	2

The following tubes were heat treated in May 1987 and show evidence of bulging. It is recommended that these tubes be mechanically plugged.

Row	Column
25	48
28	34
19	33
12	36
11	35
7	33

SUMMARY
12 PI's
3 TI's
3 DI's
4 Bulged Tubes
11 Sentinel Plugs
1 Restricted Tube

38 Total

[Signature]
Approved for plugging
G. E. Kane

* Circumferential in nature, all in hot leg tubesheet region.

E/27

MEMORANDUM

TO G. E. Kene
FROM L. W. Harts

Inservive Inspection

September 18, 1987

UNIT 1 'A' STEAM GENERATOR PLUG LIST

The following plug list is provided for your approval.

<u>Row</u>	<u>Column</u>	<u>Indication</u>
4	19	PI*
27	30	DI
38	33	Broken Probe
45	34	PI
21	38	PI
22	38	PI
23	39	TI
13	43	PI
14	43	PI
15	44	PI
18	46	PI
92	47	TI
25	48	TI
28	48	TI
31	48	TI
8	53	DI
43	54	Restricted
40	56	DI
6	61	DI
13	63	TI
5	68	DI
12	88	PI
15	90	TI

The following tubes have pluggable indications and do not require stabilization. It is recommended that they be plugged.

<u>Row</u>	<u>Column</u>	<u>Indication</u>
11	53	DI
11	63	PI*

Summary

71 Sentinel Flags
11 PI's
6 DI's
6 TI's
1 Restricted Tube
1 Broken Probe

96 Total

* Circumferential in nature, all in the hot leg tubesheet region.

A
page 2

The following tubes are not properly supported by AVE or are adjacent to a plugged tube that is not properly supported by AVE. It is recommended that these tubes be mechanically plugged on the hot leg and plugged with a sentinel plug on the cold leg.

Row	Column	Row	Column
9	2	12	53
10	2	10	54
8	3	11	54
10	3	12	54
11	3	9	59
12	3	10	59
13	3	11	59
8	4	9	60
10	4	11	60
11	4	9	61
10	5	10	61
11	5	11	61
10	7	9	66
11	7	10	72
10	8	10	73
11	8	10	76
9	14	10	77
9	24	10	78
10	32	11	78
10	33	12	78
9	35	10	79
10	35	11	79
10	36	12	79
10	37	10	93
11	37	11	93
10	38	12	93
11	38		
10	39		
9	40		
10	40		
9	41		
10	41		
9	42		
10	44		
10	45		
10	46		
11	46		
9	47		
10	47		
11	47		
9	48		
10	52		
11	52		
12	52		
10	53		

HEH
Approved for plugging
G. E. Kane

MEMORANDUM

TO G. E. Kane
FROM L. N. Harte

Inservice Inspection
September 21, 1987

UNIT 1 'C' STEAM GENERATOR PLUG LIST

The following plug list is provided for your approval.

Row	Column	Indication
4	3	DI ✓
4	6	PI
37	23	PI
9	27	TI
4	28	TI
4	29	TI
12	29	PI*
15	30	TI
5	31	TI
22	31	PI*
5	32	TI
9	32	TI
21	32	PI*
19	34	PI*
13	36	TI
20	38	TI
13	40	TI
12	41	TI
42	41	Restricted
11	43	TI
12	43	TI
13	43	TI
13	44	TI
14	44	TI
13	46	TI
13	47	TI
14	47	TI
24	47	PI*
32	47	PI
11	48	PI
13	48	TI
31	49	782
46	49	PI
2	54	Broken Probe
45	54	Restricted
16	71	DI


Approval for plugging
G. E. Kane

* Circumferential in nature, all in the tubesheet region, hot leg.

The following tubes are not properly supported by AVB or are adjacent to a plugged tube that is not properly supported by AVB. It is recommended that these tubes be mechanically plugged on the hot leg and plugged with a sentinel plug on the cold leg.

Row	Column
10	2
11	2
12	2
10	3
10	4
10	5
10	6
9	13
9	19
9	23
10	24
10	25
10	29
9	30
10	30
9	31
10	31
10	32
9	44
9	45
9	46
9	47
10	93
11	93
12	93

[Signature]
Approved for plugging
G. E. Kane

The following tubes have pluggable indications or require a sentinel plug but are not authorized for plugging until stabilization concern is answered.

Row	Column	Indication
8	30	Sentinel
9	30	Sentinel
10	30	Sentinel
8	31	Sentinel
8	32	Sentinel
9	32	Sentinel
10	32	Sentinel
9	31	Failed Tube - to be stabilized
10	31	378
11	31	378

Summary

33 Sentinel Plugs

20 TR's

11 PI's

2 DI's

2 Restricted Tubes

2 Clear Indications

1 Broken Probe

1 Failed Tube

71 Total