FACILITY NAME: Turkey Point Section 12

REPORT NUMBER: 2009-302

FINAL ADMINISTRATIVE JPMS

CONTENTS:

- ☑ **Final ADMIN JPMs**
  - o **'As given' with changes made during administration annotated**

Location of Electronic Files:

_____

_____

_____

_____

Submitted By: Edwin Lee Jr Verified By: Mark J Riches

Facility:	Turkey Point	Task No:	
Task Title:	Calculate/Verify Number of Gallons of Primary Water Required to Raise Power from 60% to 100%	JPM No:	NRC-25-ADMIN-JPM-RA.1.1
K/A Reference:	2.1.43 Ability to use procedures to determine the effects on reactivity of plant changes, such as reactor coolant system temperature, secondary plant, fuel depletion, etc. 4.1/4.3		
Examinee:		NRC Examiner:	
Facility Evaluator:		Date:	
Method of testing:	Classroom		
Simulated Performance		Actual Performance	Yes
Classroom	Yes	Simulator	Plant

Read to the examinee:
I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:
1. Unit 4 Cycle: 24
2. Reactor Power: 60%
3. Rod Height: D-176
4. Boron Concentration: 770 ppm
5. Core Burnup: 10,000 MWD/MTU
6. Unit 4 has been at 60% Power for 96 hours.

Desired Conditions after Power Increase:

1. Reactor Power: 100
2. Rod Height: D-228

Task Standard:
RO: Calculate Number of Gallons of Primary Water Required to Raise Power from 60%-100%. Final value must fall between 3410 gallons and 5571 gallons.

Required Materials:
1. Unit 4 Cycle 24 Plant Curve Book
2. 0-OP-046, CVCS – BORON CONCENTRATION CONTROL, ATTACHMENT 5 – REACTIVITY WORKSHEET

General References:
1. 4-GOP-305, HOT STANDBY TO COLD SHUTDOWN
2. Unit 4 Cycle 24 Plant Curve Book
3. 0-OP-046, CVCS – BORON CONCENTRATION CONTROL

INITIATING CUE:
You have been directed to calculate the number of gallons of primary water required to raise reactor power from 60 to 100% using 0-OP-046, CVCS – BORON CONCENTRATION CONTROL, ATTACHMENT 5 – REACTIVITY WORKSHEET.

Desired Conditions after Power Increase:
1. Reactor Power: 100%
2. Rod Height: D-228

Time Critical Task: No

Validation Time: 20 minutes

HAND JPM BRIEFING SHEET TO EXAMINEE AT THIS TIME!

SIMULATOR SETUP

Reset to IC #

N/A

Load Lesson

N/A

Ensure Simulator Operator Checklist is complete

N/A

Denote critical steps with a check mark(√)

Start Time _____

STEP 1 :	Identifies and obtains materials and procedures necessary to perform task.	___ SAT ___ UNSAT
Standard:	Operator obtains copy of 0-OP-046, Attachment 5 and U4 Cycle 24 Plant Curve Book	
Cue	CUE: Provide a copy of 0-OP-046, Attachment 5 and the U4 Cycle 24 Plant Curve Book	
Comment		
NOTE:	*Evaluator may require the candidate to obtain procedure as part of this JPM.*	

STEP 2 : √	Operator enters appropriate values for Rod Worth from U4 Cycle 24 Plant Curve Book, Section 2, Figure 5 and performs computation. 1) **Rod Worth (A)** Plant Curve Book, Section 2, Figure 5 Withdrawal rods = plus (+) reactivity Insert rods = minus (-) reactivity Calculate change in rod worth as follows: [_____ pcm] - [_____ pcm] = (+/-) _____ pcm Present Rod Worth - Desired Rod Worth = (+/-) (A)	___ SAT ___ UNSAT
Standard:	**From U4 Cycle 24 Plant Curve Book, Section 2, Figure 5 for 10,000 MWD/MTU** **Determines 60% value (D-176) is 170 pcm for HFP.** **Determines 100% value (D-229) is 0 pcm.** **Appropriate values entered and answer of +170 pcm obtained.**	
Cue	None required.	
Comment		
NOTE:	Candidate may use either Hard Copy or Computer version of U4 Cycle 24 Plant Curve Book.	

STEP 3 : √	Operator enters appropriate values for Power Defect from U4 Cycle 24 Plant Curve Book, Section 2, Figure 6A and performs computation. 2) **Power Defect (B)** Plant Curve Book, Section 2, Figure 6A Raise Power = minus (-) reactivity Lower Power = plus (+) reactivity Calculate change in power defect as follows: [_____ pcm] - [_____ pcm] = (+/-) _____ pcm Present Pwr Defect - Desired Pwr Defect = (+/-) (B)	____ SAT ____ UNSAT
Standard:	**From U4 Cycle 24 Plant Curve Book, Section 2, Figure 6A for 10,000 MWD/MTU** **Determines 60% value (770 ppm) equal to 1204 ± 20 pcm.** **Determines 100% value (700 ppm-770ppm) equal to 1915 ± 20 pcm.** **Appropriate values entered and answer of 711 ± 40 pcm obtained.**	
Cue	None required.	
Comment		
NOTE:	Candidate may use either Hard Copy or Computer version of U4 Cycle 24 Plant Curve Book.	

STEP 4 : √	Operator calculates the desired change. 3) **Calculate the Desired Change in pcm (C)** [(+/-) _____ pcm] + [(+/-) _____ pcm] = (+/-) _____ pcm (A) (B) (C)	___ SAT ___ UNSAT
Standard:	**Determines value based on Δ rod worth = +170 pcm and Δ power defect =** **711 ± 40 pcm** **Operator enters the appropriate values from the previous two computations to derive an answer in the range of** **541 ± 40 pcm.**	
Cue	None required.	
Comment		
NOTE:	Candidate may use either Hard Copy or Computer version of U4 Cycle 24 Plant Curve Book.	

STEP 5 : √	Operator determines present boron worth from U4 Cycle 24 Plant Curve Book, Section 2, Figure 7A. 4) **Integral Boron Worth** Plant Curve Book, Section 2, Figure 7A (Do not interpolate between graphs.) Boration = minus (-) reactivity Dilution = plus (+) reactivity For power changes in Mode 1, use Hot Full Power numbers (equilibrium xenon.) For power changes in Mode 2, use Hot Zero Power numbers (no xenon.) Calculate Desired Boron Concentration (C_B) as follows: Check current boron concentration (C_B) = ppm [(-)_____ pcm] - [(+/-) _____ pcm] = (+/-) _____ pcm Present boron worth (C) = Desired boron worth from Sect 2, Fig 7A Determine desired C_B from Section 2, Figure 7A = _____ ppm	____ SAT ____ UNSAT
Standard:	**Operator correctly determines present boron worth from U4 Cycle 24 Plant Curve Book, Section 2, Figure 7A for 10000 MWD/MTU as** **7013 pcm.**	
Cue	None required.	
Comment		
NOTE:	Candidate may use either Hard Copy or Computer version of U4 Cycle 24 Plant Curve Book.	

STEP 6 : √	Operator calculates desired boron worth and concentration. 4) **Integral Boron Worth** Plant Curve Book, Section 2, Figure 7A (Do not interpolate between graphs.) Boration = minus (-) reactivity Dilution = plus (+) reactivity For power changes in Mode 1, use Hot Full Power numbers (equilibrium xenon.) For power changes in Mode 2, use Hot Zero Power numbers (no xenon.) Calculate Desired Boron Concentration (C_B) as follows: Check current boron concentration (C_B) = ppm [(-)_____ pcm] - [(+/-) _____ pcm] = (+/-) _____ pcm Present boron worth from Sect 2, Fig 7A (C) = Desired boron worth Determine desired C_B from Section 2, Figure 7A = _____ ppm	____ SAT ____ UNSAT
Standard:	**Determines value based on subtracting combined rod worth/power defect of -541 ± 40 pcm from integral boron worth of -7013 pcm to yield a desired integral boron worth in the range of** **- 6432 pcm to – 6512 pcm.** **Operator correctly calculates (by interpolating U4 Cycle 24 Plant Curve Book, Section 2, Figure 7A for 10,000 MWD/MTU) desired boron concentration.** **703-712 ppm**	
Cue	None required.	
Comment		
NOTE:	Candidate may use either Hard Copy or Computer version of U4 Cycle 24 Plant Curve Book.	

STEP 7 : √	Operator determines if boration or dilution is required.	___ SAT ___ UNSAT
Standard:	**Operator determines that dilution is required.**	
Cue	None required.	
Comment		
NOTE:	Candidate may use either Hard Copy or Computer version of U4 Cycle 24 Plant Curve Book.	

STEP 8 : √	Operator determines number of gallons required.	___ SAT ___ UNSAT
Standard:	**Determines value based on boron concentration in the range of 703 ppm to 712 ppm.** **Operator determines number of gallons of primary water required in the range of:** **50,790 x ln (770 ppm / 703 ppm) = 4623 gallons and** **50,790 x ln (770 ppm / 712 ppm) = 3977 gallons**	
Cue	None required.	
Comment		
NOTE:	Candidate may use either Hard Copy or Computer version of U4 Cycle 24 Plant Curve Book.	

Terminating Cue:	**The task is complete when the Examinee returns the cue sheet to the examiner.**	**STOP**

Stop Time _____

Verification of Completion

Job Performance Measure No. NRC-25-ADMIN-JPM-A1.1

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question Documentation:

Question:

_____

_____

_____

_____

_____

Response:

_____

_____

_____

_____

_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____ _____

JPM BRIEFING SHEET

The examiner will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

INITIAL CONDITIONS:

1. Unit 4 Cycle: 24
2. Reactor Power: 60
3. Rod Height: D-176
4. Boron Concentration: 770 ppm
5. Core Burnup: 10,000 MWD/MTU
6. Unit 4 has been at 60% Power for 96 hours.

Desired Conditions after Power Increase:

3. Reactor Power: 100
4. Rod Height: D-228

INITIATING CUE:

You have been directed to calculate the number of gallons of primary water required to raise reactor power from 60 to 100% using 0-OP-046, CVCS – BORON CONCENTRATION CONTROL, ATTACHMENT 5 – REACTIVITY WORKSHEET.

Acknowledge to the examiner when you are ready to begin.

HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

KEY RA.1.1 TRAINING USE ONLY

ATTACHMENT 5
(Page 1 of 3)

REACTIVITY WORKSHEET

NOTE

Boric Acid Thumb Rules are as follows:
10 pcm = 1 ppm
10 gallons = 1 ppm
1 gallon = 1 pcm

PART 1: Power Change Only

1) **Rod Worth (A)**

Plant Curve Book, Section 2, Figure 5
Withdrawal rods = plus (+) reactivity
Insert rods = minus (-) reactivity

Calculate change in rod worth as follows:

[170 pcm] - [0 pcm] = (+/-) 170 pcm
Present Rod Worth - Desired Rod Worth = (+/-) (A)

Performed by *Verified by*

2) **Power Defect (B)**

Plant Curve Book, Section 2, Figure 6A
Raise Power = minus (-) reactivity
Lower Power = plus (+) reactivity

Calculate change in power defect as follows:

1204 ± 20 1915 ± 20 711 ± 40
[_____ pcm] - [_____ pcm] = (+/-) _____ pcm
Present Pwr Defect - Desired Pwr Defect = (+/-) (B)

Performed by *Verified by*

3) **Calculate the Desired Change in pcm (C)**

[(+/-) 170 pcm] + [(+/-) 711 ± 40 pcm] = (+/-) 541 ± 40 pcm
(A) (B) (C)

Performed by *Verified by*

KEY A1.1

KEY A1.1

ATTACHMENT 5
(Page 2 of 3)

REACTIVITY WORKSHEET

4) **Integral Boron Worth**

Plant Curve Book, Section 2, Figure 7A (Do not interpolate between graphs.)
Boration = minus (-) reactivity
Dilution = plus (+) reactivity
For power changes in Mode 1, use Hot ~~Full~~ Power numbers (~~equilibrium~~ xenon.)
For power changes in Mode 2, use Hot Zero Power numbers (no xenon.)
Calculate Desired Boron Concentration (C_B) as follows:

Check current boron concentration (C_B) = ppm

[(-) 7013 pcm] - [(+)(-) 541 ± 40 pcm] = (+)(-) 6472 ± 40 pcm
Present boron worth from Sect 2, Fig 7A — (C) — = Desired boron worth

Determine desired C_B from Section 2, Figure 7A = 703 - 712 ppm

Performed By *Verified By*

NOTE

50,790 is the nominal volume of the RCS and the CVCS. BAST ppm is the most recent BAST concentration or a nominal value of 5664 ppm.

5) **IF** desired Boron Concentration is less than the current Boron Concentration, **THEN** calculate the dilution required as follows:

$$50{,}790 \times \ln\left[\frac{\text{Current } C_B \text{ in ppm}}{\text{Desired } C_B \text{ in ppm}}\right] = \text{Gallons of Primary Water}$$

$$50{,}790 \times \ln\left[\frac{770 \text{ ppm}}{703 - 712 \text{ ppm}}\right] = \frac{3977 - 4623 \text{ Gallons}}{\text{Gallons of Primary Water}}$$

Performed By *Verified By*

6) **IF** desired Boron Concentration is higher than the current Boron Concentration, **THEN** calculate the boration required as follows:

N/A

$$50{,}790 \times \ln\left[\frac{\text{[BAST ppm] - [Present RCS ppm]}}{\text{[BAST ppm] - [Desired RCS ppm]}}\right] = \text{Gal of Boric Acid}$$

$$50{,}790 \times \ln\left[\frac{[\text{N/A ppm}] - [\text{N/A RCS ppm}]}{[\text{N/A ppm}] - [\text{N/A RCS ppm}]}\right] = \frac{\text{N/A Gallons}}{\text{Gal of Boric Acid}}$$

Performed By *Verified By*

KEY A1.1

ATTACHMENT 5
(Page 3 of 3)

REACTIVITY WORKSHEET

PART 2: Temperature Change Only

1) **Temperature change requirements**

To raise temperature, refer to Plant Curve Book, Section 3, Figure 2B.
To lower temperature, refer to Plant Curve Book, Section 2, Figures 9 and 9A.

Determine desired temperature change: (+/-) N/A °F

To dilute: [N/A °F] x [N/A gal/°F] = N/A gal Water
Sect 3, Fig 2B

To borate: [N/A °F] x [N/A pcm/°F] = N/A pcm
Sect 2, Fig 9/9A

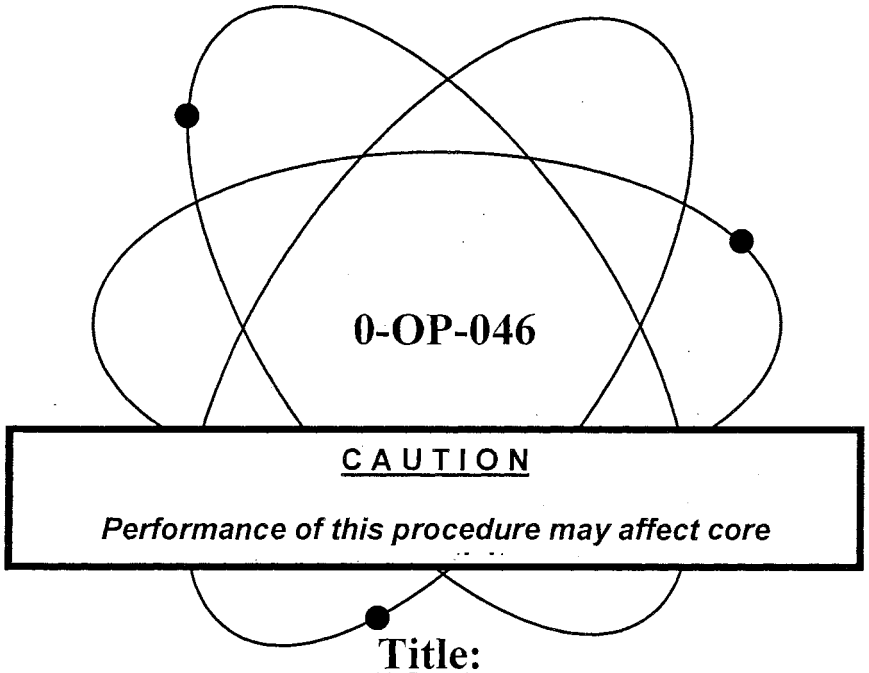
[N/A pcm] x [gal/pcm] = N/A gal of Boric Acid

Performed By *Verified By*

Florida Power & Light Company

Turkey Point Nuclear Plant

This procedure may be affected by an O.T.S.C. (On The Spot Change) verify information prior to use
Date verified 7-09-09 *Initials* [signature]



0-OP-046

CAUTION

Performance of this procedure may affect core

Title:

CVCS – Boron Concentration Control

(Continuous Use)

Safety Related Procedure

Responsible Department:	Operations
Revision Approval Date:	~~4/28/09~~

PCRs *08-1698, 08-3495, 08-5850, 08-5630, 09-0019*
RTSs *91-1196, 91-2565, 91-2855P, 92-1173, 92-2131P, 93-0835P, 94-1376, 95-0027, 95-0404P, 96-0086P, 96-0242, 96-0585, 96-0607P, 96-0647, 96-0853P, 96-0991, 96-1375P, 96-1409P, 96-1526P, 97-0232, 97-0843P, 97-0897P, 97-0577P, 98-0418, 00-0230, 01-0247, 01-0362, 01-0720, 01-0775, 02-0026P, 02-0736, 02-0662P, 03-0301, 03-0502, 03-0766, 04-0066, 04-0267P, 04-0318, 05-0334, 06-0101P, 06-0608, 07-0527, 07-0532, 07-0610, 07-0824, 07-1105*
OTSCs *0307-93, 0635-93, 0533-94, 0587-94, 0319-95, 0120-96, 0534-96, 0558-96, 0573-96, 0634-96, 0689-96, 0900-96, 0002-97, 0105-97, 0096-97, 0413-97, 0591-97, 0594-97, 0086-98, 0299-98, 0470-98, 0245-99, 0258-99, 0306-99, 0394-00, 0239-01, 0282-01, 0305-01, 0326-01, 0403-01, 0431-01, 0444-01, 0232-02, 0302-03, 0420-03, 0440-03, 0452-03, 0477-03, 0243-04, 0222-06, 0034-08*
PC/Ms *87-257, 87-258, 89-494, 90-440, 91-068, 90-423, 90-424, 91-092, 94-141, 95-040, 95-102, 95-140, 95-172, 95-081, 00-016*

TC 09-250

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27	12/29/08	63	06/27/08	99	06/27/08	135	12/10/08
28	06/27/08	64	06/27/08	100	06/27/08	136	06/27/08
29	06/27/08	65	06/27/08	101	06/27/08	137	06/27/08
30	06/27/08	66	06/27/08	102	06/27/08	138	~~06/27/08~~
31	06/27/08	67	06/27/08	103	06/27/08	139	06/27/08
32	06/27/08	68	06/27/08	104	06/27/08	140	06/27/08
33	06/27/08	69	06/27/08	105	06/27/08	141	06/27/08
34	06/27/08	70	06/27/08	106	06/27/08	142	06/27/08
35	06/27/08	71	06/27/08	107	06/27/08		
36	06/27/08	72	12/10/08	108	06/27/08		

TRAINING USE ONLY

ATTACHMENT 5
(Page 1 of 3)

REACTIVITY WORKSHEET

NOTE

Boric Acid Thumb Rules are as follows:
10 pcm = 1 ppm
10 gallons = 1 ppm
1 gallon = 1 pcm

PART 1: Power Change Only

1) **Rod Worth (A)**

Plant Curve Book, Section 2, Figure 5
Withdrawal rods = plus (+) reactivity
Insert rods = minus (-) reactivity

Calculate change in rod worth as follows:

[_____ pcm] - [_____ pcm] = (+/-) _____ pcm
Present Rod Worth - Desired Rod Worth = (+/-) (A)

_____ _____
Performed by *Verified by*

2) **Power Defect (B)**

Plant Curve Book, Section 2, Figure 6A
Raise Power = minus (-) reactivity
Lower Power = plus (+) reactivity

Calculate change in power defect as follows:

[_____ pcm] - [_____ pcm] = (+/-) _____ pcm
Present Pwr Defect - Desired Pwr Defect = (+/-) (B)

_____ _____
Performed by *Verified by*

3) **Calculate the Desired Change in pcm (C)**

[(+/-) _____ pcm] + [(+/-) _____ pcm] = (+/-) _____ pcm
(A) (B) (C)

_____ _____
Performed by *Verified by*

ATTACHMENT 5
(Page 2 of 3)

REACTIVITY WORKSHEET

4) **Integral Boron Worth**

Plant Curve Book, Section 2, Figure 7A (Do not interpolate between graphs.)
Boration = minus (-) reactivity
Dilution = plus (+) reactivity
For power changes in Mode 1, use Hot ~~Full~~ ZERO Power numbers (~~equilibrium~~ NO xenon.)
For power changes in Mode 2, use Hot Zero Power numbers (no xenon.)

Calculate Desired Boron Concentration (C_B) as follows:

Check current boron concentration (C_B) = ppm

[(-) _____ pcm] - [(+/-) _____ pcm] = (+/-) _____ pcm
Present boron worth (C) = Desired boron worth
from Sect 2, Fig 7A

Determine desired C_B from Section 2, Figure 7A = _____ ppm

_____ _____
Performed By *Verified By*

NOTE

50,790 is the nominal volume of the RCS and the CVCS. BAST ppm is the most recent BAST concentration or a nominal value of 5664 ppm.

5) **IF** desired Boron Concentration is less than the current Boron Concentration, **THEN** calculate the dilution required as follows:

$$50{,}790 \times \ln\left[\frac{\text{Current } C_B \text{ in ppm}}{\text{Desired } C_B \text{ in ppm}}\right] = \text{Gallons of Primary Water}$$

$$50{,}790 \times \ln\left[\frac{\text{ppm}}{\text{ppm}}\right] = \frac{\_\_\_\_\_ \text{ Gallons}}{\text{Gallons of Primary Water}}$$

_____ _____
Performed By *Verified By*

6) **IF** desired Boron Concentration is higher than the current Boron Concentration, **THEN** calculate the boration required as follows:

$$50{,}790 \times \ln\left[\frac{\text{[BAST ppm] - [Present RCS ppm]}}{\text{[BAST ppm] - [Desired RCS ppm]}}\right] = \text{Gal of Boric Acid}$$

$$50{,}790 \times \ln\left[\frac{\text{[\_\_\_\_\_ ppm] - [\_\_\_\_\_ RCS ppm]}}{\text{[\_\_\_\_\_ ppm] - [\_\_\_\_\_ RCS ppm]}}\right] = \frac{\_\_\_\_\_ \text{ Gallons}}{\text{Gal of Boric Acid}}$$

_____ _____
Performed By *Verified By*

ATTACHMENT 5
(Page 3 of 3)

REACTIVITY WORKSHEET

PART 2: Temperature Change Only

1) **Temperature change requirements**

To raise temperature, refer to Plant Curve Book, Section 3, Figure 2B.
To lower temperature, refer to Plant Curve Book, Section 2, Figures 9 and 9A.

Determine desired temperature change: (+/-) _____ °F

To dilute: [_____ °F] x [_____ gal/°F] = _____ gal Water
Sect 3, Fig 2B

To borate: [_____ °F] x [_____ pcm/°F] = _____ pcm
Sect 2, Fig 9/9A

[_____ pcm] x [gal/pcm] = _____ gal of Boric Acid

_____ _____
Performed By *Verified By*

Facility:	Turkey Point	Task No:	
Task Title:	Verify Number of Gallons of Primary Water Required to Raise Power from 60% to 100%	JPM No:	NRC-25-ADMIN-JPM-SA.1.1
K/A Reference:	(2.1.37 Knowledge of procedures, guidelines, or limitations associated with reactivity management. (CFR: 41.1 / 43.6 / 45.6) IMPORTANCE RO 4.3 SRO 4.6		
Examinee:		NRC Examiner:	
Facility Evaluator:		Date:	
Method of testing:	Classroom		
Simulated Performance		Actual Performance	Yes
Classroom	Yes	Simulator	Plant

Read to the examinee:
I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:
1. Unit 4 Cycle: 24
2. Reactor Power: 60%
3. Rod Height: D-176
4. Boron Concentration: 770 ppm
5. Core Burnup: 10,000 MWD/MTU
6. Unit 4 has been at 60% Power for 96 hours.

Desired Conditions after Power Increase:
1. Reactor Power: 100
2. Rod Height: D-228

Task Standard:
1. SRO: verifies that 0-OP-046, CVCS – BORON CONCENTRATION CONTROL, ATTACHMENT 5 REACTIVITY WORKSHEET.
2. Determines that 0-OP-046, CVCS – BORON CONCENTRATION CONTROL, ATTACHMENT 5 REACTIVITY WORKSHEET is not correct.
3. Performs corrections to that 0-OP-046, CVCS – BORON CONCENTRATION CONTROL, ATTACHMENT 5 REACTIVITY WORKSHEET.

Required Materials:
1. Unit 4 Cycle 24 Plant Curve Book
2. Completed 0-OP-046, CVCS – BORON CONCENTRATION CONTROL, ATTACHMENT 5 – REACTIVITY WORKSHEET

General References:
1. 4-GOP-305, HOT STANDBY TO COLD SHUTDOWN
2. Unit 4 Cycle 24 Plant Curve Book
3. 0-OP-046, CVCS – BORON CONCENTRATION CONTROL

INITIATING CUE:

1. As the SRO: you are to verify that 0-OP-046, CVCS – BORON CONCENTRATION CONTROL, ATTACHMENT 5 REACTIVITY WORKSHEET has been completed correctly.
2. Identify and correct all errors, if any, by marking them on the worksheet.

Desired Conditions after Power Increase:

1. Reactor Power: 100%
2. Rod Height: D-228

Time Critical Task: No

Validation Time: 20 minutes

HAND JPM BRIEFING SHEET TO EXAMINEE AT THIS TIME!

SIMULATOR SETUP

Reset to IC #

N/A

Load Lesson

N/A

Ensure Simulator Operator Checklist is complete

N/A

Denote critical steps with a check mark(√)

Start Time _____

STEP 1 :	Identifies and obtains materials and procedures necessary to perform task.	___ SAT ___ UNSAT
Standard:	SRO is given a completed copy of 0-OP-046, Attachment 5 and U4 Cycle 24 Plant Curve Book	
Cue	CUE:Provide a completed copy of 0-OP-046, Attachment 5 and access to the U4 Cycle 24 Plant Curve Book	
Comment		
NOTE:	Candidate may use either Hard Copy or Computer version of U4 Cycle 24 Plant Curve Book.	

STEP 2 : √	SRO verifies values for Rod Worth from U4 Cycle 24 Plant Curve Book, Section 2, Figure 5. **PART 1: Power Change Only** 1) **Rod Worth (A)** Plant Curve Book, Section 2, Figure 5 Withdrawal rods = plus (+) reactivity Insert rods = minus (-) reactivity Calculate change in rod worth as follows: [_____ pcm] - [_____ pcm] = (+/-) _____ pcm Present Rod Worth - Desired Rod Worth = (+/-) (A) _____ _____ *Performed by* *Verified by*	___ SAT ___ UNSAT
Standard:	From U4 Cycle 24 Plant Curve Book, Section 2, Figure 5 for 10,000 MWD/MTU (ERROR):RO Determined 60% value (D-176) is 886 pcm for HFP. RO incorrectly used "C" Bank values for HFP instead of "D" Bank. RO Determines 100% value (D-229) is 0 pcm. **SRO identifies RO calculated INCORRECT value of +886 pcm.** **SRO identifies correct value of 170 pcm**	
Cue	None required.	
Comment		
NOTE:	Candidate may use either Hard Copy or Computer version of U4 Cycle 24 Plant Curve Book.	

STEP 3 : √	SRO verifies appropriate values for Power Defect from U4 Cycle 24 Plant Curve Book, Section 2, Figure 6A and performs computation. 2) **Power Defect (B)** Plant Curve Book, Section 2, Figure 6A Raise Power = minus (-) reactivity Lower Power = plus (+) reactivity Calculate change in power defect as follows: [_____ pcm] - [_____ pcm] = (+/-)_____ pcm Present Pwr Defect - Desired Pwr Defect = (+/-) (B) _____ *Performed by* _____ *Verified by*	____ SAT ____ UNSAT
Standard:	From U4 Cycle 24 Plant Curve Book, Section 2, Figure 6A for 10,000 MWD/MTU RO Determines 60% value (770 ppm) equal to 1204 ± 20 pcm. RO Determines 100% value (700 ppm-770ppm) equal to 1915 ± 20 pcm. RO enters answer of +711 pcm. **SRO determines that RO has used incorrect sign convention in accordance with instructions found under Step 2. The correct answer should be: -711 pcm.**	
Cue	None required.	
Comment		
NOTE:	Candidate may use either Hard Copy or Computer version of U4 Cycle 24 Plant Curve Book.	

STEP 4 : √	SRO checks and recalculates the desired change. 3) **Calculate the Desired Change in pcm (C)** [(+/-) _____ pcm] + [(+/-) _____ pcm] = (+/-) _____ pcm (A) (B) (C) _____ *Performed by* _____ *Verified by*	___ SAT ___ UNSAT
Standard:	SRO does not find an error in this section other than the original errors carried forward. **SRO corrects calculation for the following:** **Determines value based on Δ rod worth = +170 pcm and Δ power defect =** **711 ± 40 pcm** **Enters the appropriate values from the previous two computations to derive an answer in the range of** **541 ± 40 pcm.**	
Cue	None required.	
Comment		
NOTE:	Candidate may use either Hard Copy or Computer version of U4 Cycle 24 Plant Curve Book.	

STEP 5 :	Operator determines present boron worth from U4 Cycle 24 Plant Curve Book, Section 2, Figure 7A.	____ SAT ____ UNSAT
Standard:	SRO finds NO ERRORS Operator correctly determines present boron worth from U4 Cycle 24 Plant Curve Book, Section 2, Figure 7A for 10000 MWD/MTU as 7013 pcm.	
Cue	None required.	
Comment		
NOTE:	Candidate may use either Hard Copy or Computer version of U4 Cycle 24 Plant Curve Book.	

STEP 6 : √	Operator calculates desired boron worth and concentration. 4) **Integral Boron Worth** Plant Curve Book, Section 2, Figure 7A (Do not interpolate between graphs.) Boration = minus (-) reactivity Dilution = plus (+) reactivity For power changes in Mode 1, use Hot Full Power numbers (equilibrium xenon.) For power changes in Mode 2, use Hot Zero Power numbers (no xenon.) Calculate Desired Boron Concentration (C_B) as follows: Check current boron concentration (C_B) = ppm [(-)_____ pcm] - [(+/-) _____ pcm] = (+/-) _____ pcm Present boron worth (C) = Desired boron worth from Sect 2, Fig 7A Determine desired C_B from Section 2, Figure 7A = _____ ppm	___ SAT ___ UNSAT
Standard:	SRO determines NO ERROR in this step other than ERROR CARRIED FORWARD. **SRO corrects worksheet as follows:** **Determines value based on subtracting combined rod worth/power defect of -541 ± 40 pcm from integral boron worth of -7013 pcm to yield a desired integral boron worth in the range of** **- 6432 pcm to – 6512 pcm.** **Operator correctly calculates (by interpolating U4 Cycle 24 Plant Curve Book, Section 2, Figure 7A for 10,000 MWD/MTU) desired boron concentration.** **703-712 ppm**	
Cue	None required.	
Comment		
NOTE:	Candidate may use either Hard Copy or Computer version of U4 Cycle 24 Plant Curve Book.	

STEP 7 :	SRO determines if boration or dilution is required.	___ SAT ___ UNSAT
Standard:	SRO determines NO ERRORS in this decision. RO determined that dilution is required.	
Cue	None required.	
Comment		
NOTE:	Candidate may use either Hard Copy or Computer version of U4 Cycle 24 Plant Curve Book.	

STEP 8 : √	SRO determines number of gallons required.	___ SAT ___ UNSAT
Standard:	**SRO deter mines that RO has transposed numbers incorrectly in the calculation.** **SRO corrects Step 5 as follows:** **Determines value based on boron concentration in the range of 703 ppm to 712 ppm.** **Operator determines number of gallons of primary water required in the range of:** **50,790 x ln (770 ppm / 703 ppm) = 4623 gallons and** **50,790 x ln (770 ppm / 712 ppm) = 3977 gallons**	
Cue	None required.	
Comment		
NOTE:	Candidate may use either Hard Copy or Computer version of U4 Cycle 24 Plant Curve Book.	
Terminating Cue:	**The task is complete when the Examinee returns the cue sheet to the examiner.**	**STOP**

Stop Time _____

Verification of Completion

Job Performance Measure No. NRC-25-ADMIN-JPM-SA.1.1

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question Documentation:

Question:

_____

_____

_____

_____

_____

Response:

_____

_____

_____

_____

_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____ _____

JPM BRIEFING SHEET

The examiner will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

INITIAL CONDITIONS:

1. Unit 4 Cycle: 24
2. Reactor Power: 60
3. Rod Height: D-176
4. Boron Concentration: 770 ppm
5. Core Burnup: 10,000 MWD/MTU
6. Unit 4 has been at 60% Power for 96 hours.

Desired Conditions after Power Increase:

3. Reactor Power: 100
4. Rod Height: D-228

INITIATING CUE:

1. As the SRO: you are to verify that 0-OP-046, CVCS – BORON CONCENTRATION CONTROL, ATTACHMENT 5 REACTIVITY WORKSHEET has been completed correctly.
2. Identify and correct all errors, if any, by marking them on the worksheet.

Acknowledge to the examiner when you are ready to begin.

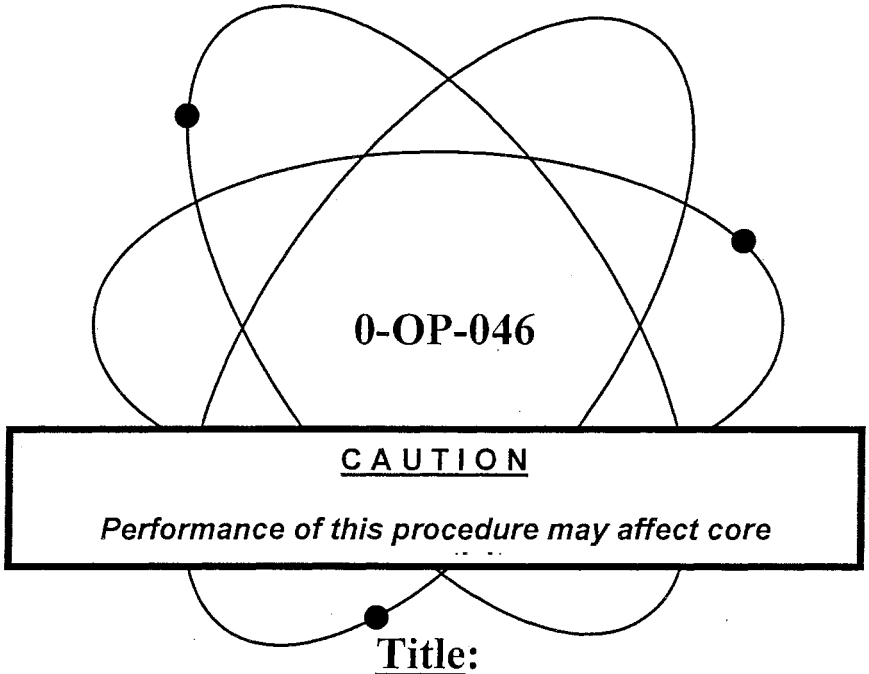
HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

NRC-25-ADMIN-JPM-SA1.1

Florida Power & Light Company

Turkey Point Nuclear Plant

This procedure may be affected by an O.T.S.C. (On The Spot Change) verify information prior to use
Date verified TODAY *Initials* [signature]



Title:

CVCS – Boron Concentration Control

(Continuous Use)

Safety Related Procedure

Responsible Department:	Operations
Revision Approval Date:	~~4/28/09~~

PCRs *08-1698, 08-3495, 08-5850, 08-5630, 09-0019*
RTSs *91-1196, 91-2565, 91-2855P, 92-1173, 92-2131P, 93-0835P, 94-1376, 95-0027, 95-0404P, 96-0086P, 96-0242, 96-0585, 96-0607P, 96-0647, 96-0853P, 96-0991, 96-1375P, 96-1409P, 96-1526P, 97-0232, 97-0843P, 97-0897P, 97-0577P, 98-0418, 00-0230, 01-0247, 01-0362, 01-0720, 01-0775, 02-0026P, 02-0736, 02-0662P, 03-0301, 03-0502, 03-0766, 04-0066, 04-0267P, 04-0318, 05-0334, 06-0101P, 06-0608, 07-0527, 07-0532, 07-0610, 07-0824, 07-1105*
OTSCs *0307-93, 0635-93, 0533-94, 0587-94, 0319-95, 0120-96, 0534-96, 0558-96, 0573-96, 0634-96, 0689-96, 0900-96, 0002-97, 0105-97, 0096-97, 0413-97, 0591-97, 0594-97, 0086-98, 0299-98, 0470-98, 0245-99, 0258-99, 0306-99, 0394-00, 0239-01, 0282-01, 0305-01, 0326-01, 0403-01, 0431-01, 0444-01, 0232-02, 0302-03, 0420-03, 0440-03, 0452-03, 0477-03, 0243-04, 0222-06, 0034-08*
PC/Ms *87-257, 87-258, 89-494, 90-440, 91-068, 90-423, 90-424, 91-092, 94-141, 95-040, 95-102, 95-140, 95-172, 95-081, 00-016*

TC 09-250

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10	06/27/08	46	06/27/08	82	06/27/08	118	06/27/08
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13	06/27/08	49	06/27/08	85	06/27/08	121	06/27/08
14	06/27/08	50	06/27/08	86	06/27/08	122	06/27/08
15	06/27/08	51	06/27/08	87	06/27/08	123	06/27/08
16	06/27/08	52	04/28/09	88	12/10/08	124	08/07/08
17	06/27/08	53	06/27/08	89	06/27/08	125	06/27/08
18	06/27/08	54	06/27/08	90	06/27/08	126	06/27/08
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20	06/27/08	56	06/27/08	92	06/27/08	128	06/27/08
21	12/29/08	57	06/27/08	93	06/27/08	129	06/27/08
22	06/27/08	58	06/27/08	94	06/27/08	130	06/27/08
23	06/27/08	59	06/27/08	95	04/28/09	131	06/27/08
24	06/27/08	60	06/27/08	96	04/28/09	132	06/27/08
25	06/27/08	61	06/27/08	97	04/28/09	133	06/27/08
26	06/27/08	62	06/27/08	98	04/28/09	134	06/27/08
27	12/29/08	63	06/27/08	99	06/27/08	135	12/10/08
28	06/27/08	64	06/27/08	100	06/27/08	136	06/27/08
29	06/27/08	65	06/27/08	101	06/27/08	137	06/27/08
30	06/27/08	66	06/27/08	102	06/27/08	138	~~06/27/08~~
31	06/27/08	67	06/27/08	103	06/27/08	139	06/27/08
32	06/27/08	68	06/27/08	104	06/27/08	140	06/27/08
33	06/27/08	69	06/27/08	105	06/27/08	141	06/27/08
34	06/27/08	70	06/27/08	106	06/27/08	142	06/27/08
35	06/27/08	71	06/27/08	107	06/27/08		
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TRAINING USE ONLY

ATTACHMENT 5
(Page 1 of 3)

REACTIVITY WORKSHEET

NOTE

Boric Acid Thumb Rules are as follows:
10 pcm = 1 ppm
10 gallons = 1 ppm
1 gallon = 1 pcm

PART 1: Power Change Only

1) **Rod Worth (A)**

Plant Curve Book, Section 2, Figure 5
Withdrawal rods = plus (+) reactivity
Insert rods = minus (-) reactivity

Calculate change in rod worth as follows:

[886 pcm] - [0 pcm] = (+) 886 pcm
Present Rod Worth - Desired Rod Worth = (+/-) (A)

R. Smith
Performed by

Verified by

2) **Power Defect (B)**

Plant Curve Book, Section 2, Figure 6A
Raise Power = minus (-) reactivity
Lower Power = plus (+) reactivity

Calculate change in power defect as follows:

[1204 pcm] - [1915 pcm] = (+) 711 pcm
Present Pwr Defect - Desired Pwr Defect = (+/-) (B)

R. Smith
Performed by

Verified by

3) **Calculate the Desired Change in pcm (C)**

[(+) 886 pcm] + [(+) 711 pcm] = (+) 1597 pcm
(A) (B) (C)

R. Smith
Performed by

Verified by

ATTACHMENT 5
(Page 2 of 3)

REACTIVITY WORKSHEET

4) **Integral Boron Worth**

Plant Curve Book, Section 2, Figure 7A (Do not interpolate between graphs.)
Boration = minus (-) reactivity
Dilution = plus (+) reactivity
For power changes in Mode 1, use Hot ~~Full~~ ZERO Power numbers (~~equilibrium~~ NO xenon.)
For power changes in Mode 2, use Hot Zero Power numbers (no xenon.)
Calculate Desired Boron Concentration (C_B) as follows:

Check current boron concentration (C_B) = ppm

[(-) 7013 pcm] - [(+/-) 1597 pcm] = (+/-) 5416 pcm
Present boron worth from Sect 2, Fig 7A — (C) — = Desired boron worth

Determine desired C_B from Section 2, Figure 7A = 588 ppm

R. Smith
Performed By *Verified By*

NOTE

50,790 is the nominal volume of the RCS and the CVCS. BAST ppm is the most recent BAST concentration or a nominal value of 5664 ppm.

5) **IF** desired Boron Concentration is less than the current Boron Concentration, **THEN** calculate the dilution required as follows:

$$50{,}790 \times \ln\left[\frac{\text{Current } C_B \text{ in ppm}}{\text{Desired } C_B \text{ in ppm}}\right] = \text{Gallons of Primary Water}$$

$$50{,}790 \times \ln\left[\frac{588 \text{ ppm}}{770 \text{ ppm}}\right] = \frac{420}{\text{Gallons of Primary Water}} \text{ Gallons}$$

R. Smith
Performed By *Verified By*

6) **IF** desired Boron Concentration is higher than the current Boron Concentration, **THEN** calculate the boration required as follows:

$$50{,}790 \times \ln\left[\frac{\text{[BAST ppm] - [Present RCS ppm]}}{\text{[BAST ppm] - [Desired RCS ppm]}}\right] = \text{Gal of Boric Acid}$$

N/A

$$50{,}790 \times \ln\left[\frac{\text{[\_\_\_\_ ppm] - [\_\_\_\_ RCS ppm]}}{\text{[\_\_\_\_ ppm] - [\_\_\_\_ RCS ppm]}}\right] = \frac{\text{\_\_\_\_}}{\text{Gal of Boric Acid}} \text{ Gallons}$$

N/A N/A
Performed By *Verified By*

ATTACHMENT 5
(Page 3 of 3)

REACTIVITY WORKSHEET

PART 2: Temperature Change Only

1) **Temperature change requirements**

To raise temperature, refer to Plant Curve Book, Section 3, Figure 2B.
To lower temperature, refer to Plant Curve Book, Section 2, Figures 9 and 9A.

Determine desired temperature change: (+/-) _____ °F

To dilute: [_____ °F] x [_____ gal/°F] = _____ gal Water
Sect 3, Fig 2B

To borate: [_____ °F] x [_____ pcm/°F] = _____ pcm
Sect 2, Fig 9/9A

[_____ pcm] x [gal/pcm] = _____ gal of Boric Acid

_____ _____
Performed By *Verified By*

KEY SA1.1

Procedure No.:	Procedure Title:	Page:
0-OP-046	CVCS – Boron Concentration Control	137
		Approval Date: 6/27/08

ATTACHMENT 5
(Page 1 of 3)

REACTIVITY WORKSHEET

NOTE

Boric Acid Thumb Rules are as follows:
10 pcm = 1 ppm
10 gallons = 1 ppm
1 gallon = 1 pcm

PART 1: Power Change Only

1) **Rod Worth (A)**

ERROR IN USING BANK 'C' VICE 'D'

Plant Curve Book, Section 2, Figure 5
Withdrawal rods = plus (+) reactivity
Insert rods = minus (-) reactivity

USED BANK C

Calculate change in rod worth as follows:

[886 pcm] - [0 pcm] = (+/-) 886 pcm
Present Rod Worth - Desired Rod Worth = (+/-) (A)

R. Smith
Performed by *Verified by*

2) **Power Defect (B)**

ERROR READ DIRECTIONS INCORRECTLY

Plant Curve Book, Section 2, Figure 6A
Raise Power = minus (-) reactivity
Lower Power = plus (+) reactivity

Calculate change in power defect as follows:

[1204 pcm] - [1915 pcm] = (+/-) 711 pcm
Present Pwr Defect - Desired Pwr Defect = (+/-) (B)

R. Smith
Performed by *Verified by*

3) **Calculate the Desired Change in pcm (C)**

(+/-) 886 pcm (A) ECF + [(+/-) 711 pcm (B)] = (+/-) 1597 pcm (C) ECF

R. Smith ECF
Performed by *Verified by*

ATTACHMENT 5
(Page 2 of 3)

REACTIVITY WORKSHEET

4) **Integral Boron Worth**

Plant Curve Book, Section 2, Figure 7A (Do not interpolate between graphs.)
Boration = minus (-) reactivity
Dilution = plus (+) reactivity
For power changes in Mode 1, use Hot ~~Full~~ Power numbers (~~equilibrium~~ xenon.) ZERO NO
For power changes in Mode 2, use Hot Zero Power numbers (no xenon.)
Calculate Desired Boron Concentration (C_B) as follows:

Check current boron concentration (C_B) = ppm

[(-) 7013 pcm] - [(+/-) 1597 pcm] = (+/-) 5416 pcm ← ECF
Present boron worth from Sect 2, Fig 7A (C) = Desired boron worth

Determine desired C_B from Section 2, Figure 7A = 588 ← ECF ppm

R. Smith
Performed By *Verified By*

NOTE

50,790 is the nominal volume of the RCS and the CVCS. BAST ppm is the most recent BAST concentration or a nominal value of 5664 ppm.

5) **IF** desired Boron Concentration is less than the current Boron Concentration, **THEN** calculate the dilution required as follows:

ERROR IN TRANSPOSING NUMBERS

50,790 x ln [Current C_B in ppm / Desired C_B in ppm] = Gallons of Primary Water

588 / 770 ppm = 420

R. Smith
Performed By *Verified By*

6) **IF** desired Boron Concentration is higher than the current Boron Concentration, **THEN** calculate the boration required as follows:

$$50{,}790 \times \ln \left[\frac{\text{[BAST ppm] - [Present RCS ppm]}}{\text{[BAST ppm] - [Desired RCS ppm]}} \right] = \text{Gal of Boric Acid}$$

50,790 x ln [[____ ppm] - [____ RCS ppm]] = ____ Gallons

N/A N/A
Performed By *Verified By*

Remove Time Criticals

Appendix C	Job Performance Measure Worksheet	Form ES-C-1

Facility:	Turkey Point	Task No:	
Task Title:	Perform Review of 0-OSP-205, Verification of Administratively Controlled Valves, Locks, and Switches	JPM No:	NRC-25-ADMIN-JPM-SA.1.2
K/A Reference:	2.1.29 Knowledge of how to conduct system lineups, such as valves, breakers, switches, etc. (CFR: 41.10 / 45.1 / 45.12) IMPORTANCE RO 4.1 SRO 4.0		
Examinee:		NRC Examiner:	
Facility Evaluator:		Date:	
Method of testing:			
Simulated Performance		Actual Performance	X
Classroom	X	Simulator	Plant

Read to the examinee:
I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

INITIAL CONDITIONS:

Unit 3 is in Mode 1 at 100% Power

0-OSP-205, Verification of Administratively Controlled Valves, Locks and Switches, and 3-OSP-053.4, Containment Integrity Penetration Alignment Verification are in progress.

Task Standard:

1. SRO determines that Containment Integrity is not satisfied on Penetration 16 and directs that it be restored within 1 hour.
2. SRO determines that unlocked valve on Penetration 35 must be locked.

Required Materials:

- 0-ADM-205, Administrative Control of Valves, Locks, and Switches
- 3-OSP-053.4, Containment Integrity Penetration Alignment
- Technical Specification: 4.6.1.1.a

General References:

- 0-ADM-205, Administrative Control of Valves, Locks, and Switches
- 3-OSP-053.4, Containment Integrity Penetration Alignment Verification
- Technical Specification: 4.6.1.1.a
- FSAR Chapter 6 Section 6

Initiating Cue:

The NPO provides a completed copy of ATTACHMENT 1 of 3-OSP-053.4, Containment Integrity Penetration Alignment Verification.

1. Determine Acceptance Criteria Results

2. Evaluate Unit Conditions and and determine ALL Administrative and/or Corrective Actions if any.

Time Critical Task: NO

Validation Time: 18 minutes

HAND JPM BRIEFING SHEET TO EXAMINEE AT THIS TIME!

SIMULATOR SETUP

Reset to IC #

N/A

Load Lesson

N/A

Ensure Simulator Operator Checklist is complete

N/A

Denote critical steps with a check mark(√)

Start Time _____

STEP 1 : √	Obtain and review marked up copy of 3-OSP-053.4, Containment Integrity Penetration Alignment Verification from.	___ SAT ___ UNSAT
Standard:	**Candidate reviews marked up copy of 3-OSP-053.4, Containment Integrity Penetration Alignment Verification from NPO and marks Attachment 1 of 3-OSP-053.4, Containment Integrity Penetration Alignment Verification** **UNSAT.**	
Cue	Provide marked up copy of 3-OSP-053.4, Containment Integrity Penetration Alignment Verification from NPO..	
Comment		
NOTE:		

STEP 2 : √	Determine Pen 16, HV-3-1, Post Accident Containment Vent and Sample System Isol Valve (RR) LOCKED OPEN does not meet the requirements of 3-OSP-053.4, Containment Integrity Penetration Alignment Verification, and 0-ADM-205, Administrative Control of Valves,Locks, and Switches	___ SAT ___ UNSAT
Standard:	**Determines Pen 16, HV-3-1, Post Accident Containment Vent and Sample System Isol Valve (RR) LOCKED OPEN does not meet the requirements of 3-OSP-053.4, Containment Integrity Penetration Alignment Verification, and 0-ADM-205, Administrative Control of Valves,Locks, and Switches**	
Cue	Provided by marked up copy of 3-OSP-053.4, Containment Integrity Penetration Alignment Verification from NPO..	
Comment		
NOTE:		

STEP 3 :	7.4 **IF** a component is NOT in the position specified in Attachments 1, 2, or 3, **THEN** list the component under Remarks in the applicable attachment **AND** notify the Shift Manager or Unit Supervisor.	___ SAT ___ UNSAT
Standard:	Informs Unit Supervisor/Shift Manager of deviation.	
Cue	Provided by marked up copy of 3-OSP-053.4, Containment Integrity Penetration Alignment Verification from NPO.. If candidate attempts communication with Unit Supervisor/Shift Manager, confirm communication and as Shift Manager direct Unit Supervisor to take any appropriate action(s) if any are required.	
Comment		
NOTE:		

STEP 4 : √	**3-OSP-053.4, Containment Integrity Penetration Alignment Verification Step 7.4.1** The SRO shall evaluate the configuration of the component and penetration to ensure that CONTAINMENT INTEGRITY requirements are satisfied.	___ SAT ___ UNSAT
Standard:	**SRO Candidate determines Containment Integrity is NOT satisfied.**	
Cue	Provided by marked up copy of 3-OSP-053.4, Containment Integrity Penetration Alignment Verification from NPO..	
Comment		
NOTE:	Uses any or all of the following to determine Containment Integrity: Technical Specification: 3/4.6 CONTAINMENT SYSTEMS 3/4.6.1 PRIMARY CONTAINMENT CONTAINMENT INTEGRITY LIMITING CONDITION FOR OPERATION 3.6.1.1 Primary CONTAINMENT INTEGRITY shall be maintained.* APPLICABILITY: MODES 1, 2, 3, and 4 . ACTION: Without primary CONTAINMENT INTEGRITY, restore CONTAINMENT INTEGRITY within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. SURVEILLANCE REQUIREMENTS 4.6.1.1 CONTAINMENT INTEGRITY shall be demonstrated: a. At least once per 31 days by verifying that all penetrations** not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic valves secured in their closed positions; FSAR Chapter 6 Section 6 : Manual and remote manual valves which do not receive an automatic actuation signal are administratively controlled to preserve containment integrity.	

STEP 5 : √	**3-OSP-053.4, Containment Integrity Penetration Alignment Verification Step 7.4.2** Enter 3-ONOP-053, Loss of Containment Integrity	___ SAT ___ UNSAT
Standard:	**3-ONOP-053, Loss of Containment Integrity entered and action ordered to Lock Closed HV-3-1, Post Accident Containment Vent and Sample System Isol Valve (RR) within 1 hour.** **-OR-** **Ordered to Lock Closed HV-3-1, Post Accident Containment Vent and Sample System Isol Valve (RR) within 1 hour based on required Technical Specifications requirement or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.**	
Cue	Provided by marked up copy of 3-OSP-053.4, Containment Integrity Penetration Alignment Verification from NPO..	
Comment		
NOTE:	**3-ONOP-053, Loss of Containment Integrity** 4.0 **IMMEDIATE ACTIONS** 4.1 **IF** in Modes 1, 2, 3, or 4, **THEN** restore containment integrity within one hour.	

STEP 6 : √	Determine Pen 35, 3-11-020, Purge Air Supply Line Test Connection, CLOSED and UNLOCKED does not meet the requirements of 3-OSP-053.4, Containment Integrity Penetration Alignment Verification, and 0-ADM-205, Administrative Control of Valves,Locks, and Switches	___ SAT ___ UNSAT
Standard:	**Candidate determines Pen 35, 3-11-020, Purge Air Supply Line Test Connection, CLOSED and UNLOCKED does not meet the requirements of 3-OSP-053.4, Containment Integrity Penetration Alignment Verification, and 0-ADM-205, Administrative Control of Valves,Locks, and Switches** .	
Cue	Provided by marked up copy of 3-OSP-053.4, Containment Integrity Penetration Alignment Verification from NPO..	
Comment		
NOTE:		

STEP 7 : √	SRO to direct Pen 35, 3-11-020, Purge Air Supply Line Test Connection, LOCKED in accordance with 3-OSP-053.4, Containment Integrity Penetration Alignment Verification, and 0-ADM-205, Verification of Administratively Controlled Valves, Locks, and Switches. 0-ADM-205, Administrative Control of Valves,Locks, and Switches 5.8.1.4: 4. If an administratively controlled valve, lock, or switch is found in a position other than the preferred position and not under administrative control of a plant procedure, equipment clearance order, or TSA, the Shift Manager shall be notified immediately so that an investigation can begin to determine the reason for the system misalignment. 5. Based on the findings of the investigation, required notifications shall be made and the valve, lock, or switch returned to its preferred position.	___ SAT ___ UNSAT
Standard:	**SRO notifies US/SM. And directs Pen 35, 3-11-020, Purge Air Supply Line Test Connection, LOCKED in accordance with 3-OSP-053.4, Containment Integrity Penetration Alignment Verification, and 0-ADM-205, Verification of Administratively Controlled Valves, Locks, and Switches.**	
Cue	Provided by marked up copy of 3-OSP-053.4, Containment Integrity Penetration Alignment Verification from NPO..	
Comment		
NOTE:		
Terminating Cue:	**The task is complete when the examinee returns the cue sheet to the examiner.**	**STOP**

Stop Time _____

Verification of Completion

Job Performance Measure No. NRC-25-ADMIN-JPM-SA.1.2

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question Documentation:

Question:

_____

_____

_____

_____

_____

Response:

_____

_____

_____

_____

_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____ _____

JPM BRIEFING SHEET

The examiner will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

INITIAL CONDITIONS:

Unit 3 is in Mode 1 at 100% Power

0-OSP-205, Verification of Administratively Controlled Valves, Locks and Switches, and 3-OSP-053.4, Containment Integrity Penetration Alignment Verification are in progress.

INITIATING CUE:

The NPO provides a completed copy of ATTACHMENT 1 of 3-OSP-053.4, Containment Integrity Penetration Alignment Verification.

1.Determine Acceptance Criteria Results

2.Evaluate Unit Conditions and and determine ALL Administrative and/or Corrective Actions if any.

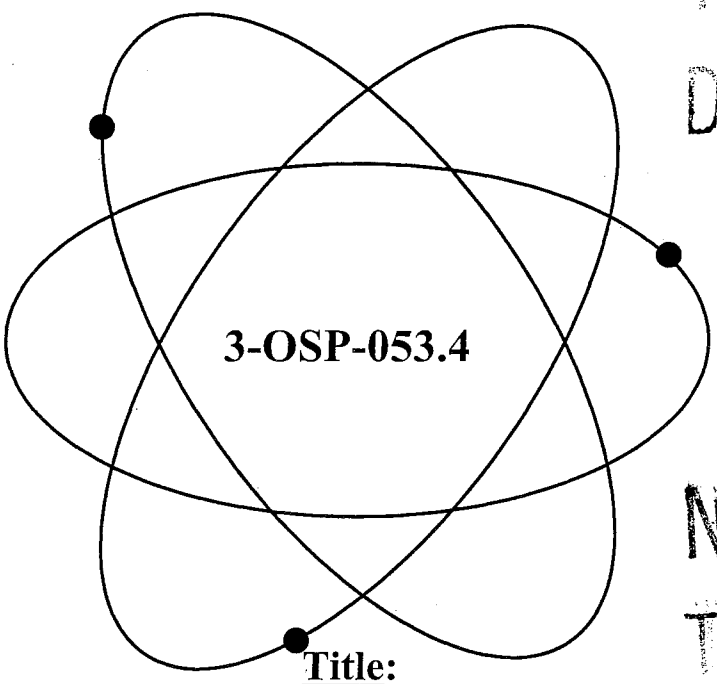
HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

Florida Power & Light Company

Turkey Point Nuclear Plant

Unit 3

This procedure may be affected by an O.T.S.C. (On The Spot Change) verify information prior to use.
Date verified _____ *Initials* _____



3-OSP-053.4

Title:

Containment Integrity Penetration Alignment Verification

NUCLEAR TRAINING DEPARTMENT

(Continuous Use)

Safety Related Procedure

Responsible Department:	Operations
Revision Approval Date:	4/3/09

PCRs *09-0930*
RTSs *91-0069, 91-1568, 92-1809P, 92-2076, 93-0835P, 93-1503, 94-0103P, 94-0319P, 95-0368P, 95-0369P, 96-0079P, 96-0784, 96-0816P, 96-1363P, 96-1180P, 97-0046P, 98-0707P, 98-0956P, 00-0032P, 00-249P, 00-0337P, 00-0769P, 01-0372P, 01-0528P, 02-0692P, 04-0070P, 04-0426P, 04-0719P, 06-0481P, 07-0937, 08-0021P*
OTSCs *5158, 5175, 5583, 8271, 10349, 10461, 11104, 0035-93, 0117-93, 0031-94, 0380-94, 0809-94, 0068-95, 0096-95, 0159-95, 0220-96, 0890-96, 0248-99, 0360-99, 0513-01, 0057-04*
PCMs *87-226, 88-453, 89-581 93-059, 95-012, 95-039, 95-168, 96-012, 97-003, 00-016, 01-014, 02-031, 08-067, 09-003*

LIST OF EFFECTIVE PAGES

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16	08/29/00	48	06/19/06	80	09/21/04		
17	08/29/00	49	08/29/00	81	09/21/04		
18	08/29/00C	50	08/29/00	82	09/21/04		
19	08/29/00	51	08/29/00	83	09/21/04		
20	08/29/00	52	08/29/00	84	09/21/04		
21	08/29/00	53	08/29/00C	85	08/29/00C		
22	08/29/04C	54	08/29/00	86	08/29/00C		
23	02/24/04C	55	02/24/04	87	08/29/00C		
24	02/24/04	56	04/03/09	88	08/29/00		
25	08/29/00C	57	04/03/09	89	03/03/03		
26	10/23/01C1	58	08/29/00	90	06/19/06		
27	9/11/01C1	59	04/03/09	91	08/29/00		
28	08/29/00	60	04/03/09	92	08/29/00C		
29	08/29/00	61	01/10/08	93	08/29/00C		
30	08/29/00	62	08/29/00C	94	08/29/00C		
31	08/29/00	63	08/29/00	95	08/29/00C		
32	08/29/00	64	08/29/00	96	08/29/00C		

TABLE OF CONTENTS

1.0 PURPOSE

1.1 The purpose of this procedure is to provide a containment integrity penetration alignment verification and containment isolation valve position indication channel check. This surveillance satisfies the requirements of References 2.1.2.3, and 2.1.2.4. Performance of this procedure also checks the locked valves listed in 0-OSP-205, Verification of Administratively Controlled Valves, Locks and Switches, Enclosure 1.

2.0 REFERENCES/RECORDS REQUIRED/COMMITMENT DOCUMENTS

2.1 References

2.1.1 10CFR Part 50, Appendix A GDC 55, 56, and 57

2.1.2 Technical Specifications

1. Section 1.7, Containment Integrity
2. Section 3/4.6.4, Containment Isolation Valves
3. Section 4.6.1.1.a, Primary Containment Integrity Surveillance Requirements
4. Table 4.3-4, Item 22, Containment Isolation Valve Position Indication

2.1.3 FSAR

1. Section 6.6, Containment Isolation
2. Section 14.2.4, Steam Generator Tube Rupture

2.1.4 Licensee Event Reports

1. LER 251-84-020, Containment Integrity
2. LER 251-86-024, Unit Shutdown Due to Missed Post Maintenance Testing of Containment Isolation Valve
3. LER 250-87-002, Unit 3 Changed Modes with a Phase A Containment Isolation Valve Out of Service

2.1.5 Plant Procedures

1. 0-ADM-205, Administrative Control of Valves, Locks and Switches
2. 0-ADM-215, Plant Surveillance Tracking Program
3. 0-OSP-200.1, Schedule of Plant Checks and Surveillances
4. 0-OSP-205, Verification of Administratively Controlled Valves, Locks and Switches.

2.1.6 Bechtel Job 5177-523, Evaluation of Containment Isolation Valve Configurations

2.1.7 JPN-PTN-SENS-92-044, Rev 1, Manual Override of MOV-*-626 During RCP Seal Failure

2.1.8 PTN-ENG-SENS-99-066, Secondary Barrier Containment Integrity Function for Penetrations 27A, 27B, and 27C

2.1.9 Miscellaneous Documents (i.e., PC/M, Correspondence)

1. PC/M 87-226, Unit 3 - PAHM Valve Installation
2. PC/M 88-453, Drawing Discrepancies
3. PC/M 89-581, Containment Isolation Features Design Basis Implementation
4. PC/M 95-012, Containment Isolation Barrier Test Enhancement
5. PC/M 95-039, Emergency Hatch Gauge Qualification
6. PC/M 95-168, Remove Time Delay for Blowdown Isolation Valves CV-3-6275A, B, C
7. PC/M 96-012, Unit 3 Boron Injection Tank Bypass Modification
8. PC/M 97-003, Thermal Overpressurization of Isolated Piping
9. PC/M 01-014, MOV 843 and 869, Equalizing Line and SJS Modifications
10. PC/M 02-031, Abandonment of H_2 Recombiner Exhaust Line to Containment and Replacement of 3-40-205
11. PC/M 08-067, GL 2008-01 Vent Valve Installation
12. PC/M 09-003, GL 2008-01 Vent Valve Installation Inside Containment Unit 3

NOTE

Additional drawings are referenced on the penetration sheets. Refer to Attachments 1 and 2 for additional references for each penetration.

2.1.10 Operating Diagrams

1. 5613-M-3013, Shts 1 and 7, Instrument Air System
2. 5613-M-3020, Sht 2, Primary Make-up Water System
3. 5613-M-3030, Shts 4 and 5, Component Cooling Water System
4. 5613-M-3032,Sht 1, Sample System - Secondary Feedwater
5. 5613-M-3036, Sht 1, Sample System - NSSS
6. 5613-M-3041, Shts 1, 2 and 3, Reactor Coolant System
7. 5613-M-3047, Shts, 1, 2 and 3, CVCS
8. 5613-M-3050, Sht 1, Residual Heat Removal System
9. 5613-M-3053, Sht 1, Containment Purge System and Penetration Cooling System
10. 5613-M-3061, Sht 1, Waste Disposal System
11. 5613-M-3062, Shts 1 and 2, Safety Injection System
12. 5613-M-3064, Sht 1, Safety Injection Accumulator - Inside Cont
13. 5610-M-3065, Sht 1, Nitrogen and Hydrogen System - N_2 Supply
14. 5613-M-3068, Sht 1, Containment Spray System
15. 5613-M-3072, Shts 1 and 2, Main Steam System
16. 5613-M-3074, Shts 3 and 4, Feedwater System
17. 5613-M-3075, Shts 1 and 2, Auxiliary Feedwater System
18. 5613-M-3078, Sht 1, Steam Generator Wet Lay-Up System
19. 5613-M-3094, Sht 1, Containment Post Accident Evaluation System
20. 5613-M-3101, Sht 1, Breathing Air System Distribution

2.2 Records Required

2.2.1 The time and section completed shall be entered in the Unit Narrative Log. Also, problems encountered while performing the procedure should be entered, i.e., malfunctioning equipment, delays due to changes in plant conditions, etc.

2.2.2 Completed copies of the below listed items document compliance with Technical Specification surveillance requirements and shall be transmitted to QA Records for retention in accordance with Quality Assurance Records Program requirements:

1. Attachment 1
2. Attachment 2
3. Attachment 3
4. Attachment 4

2.2.3 A copy of the completed procedure shall be filed and maintained by the Shift Manager until the next performance of the procedure.

2.2.4 Completed attachments listed below, that have the "TAG" column checked (√) shall be copied and transmitted to the Labeling Coordinator.

1. Attachment 1
2. Attachment 2
3. Attachment 3

2.3 Commitment Documents

2.3.1 LER 251-84-009, Definition of Containment Integrity

3.0 PREREQUISITES

3.1 Attachments 1 and 3 - the unit is in any Mode.

3.2 Attachment 2 - the unit is in Mode 5, 6, or Defueled.

3.3 All instruments and control devices are in service for the Containment Penetration System Operation with no surveillances required and no outstanding PWOs, Clearances, or Temporary System Alterations that affect system operability as per the following:

3.3.1 0-ADM-215, Plant Surveillance Tracking Program, and 0-OSP-200.1, Schedule of Plant Checks and Surveillances (No surveillances have exceeded the date required on the Surveillance Use of Grace Sheet)

3.3.2 Temporary System Alteration (TSA) Log

3.3.3 Clearance Log

3.3.4 Out-of-Service Log

4.0 PRECAUTIONS/LIMITATIONS

4.1 This procedure does not authorize the positioning of system valves. All valve manipulations shall be performed in accordance with an approved In-Plant Clearance Order or approved plant procedure, and only by qualified plant operators.

4.2 No adjustments or repairs to containment isolation valves shall be accomplished without the prior approval of the Shift Manager.

4.3 Penetrations 38, 48, 61A, and 61B are viewed as passive penetrations per CR 01-0747 and are not subject to single active failures. For this reason, they are not required to be checked as part of this surveillance.

4.4 The position of valves or components in the flowpath verification that are locked, sealed, or otherwise secured in position should be determined using alternate means, i.e., valve stem position, indicating lights, etc., and not manipulated.

5.0 SPECIAL TOOLS/EQUIPMENT

5.1 None

6.0 ACCEPTANCE CRITERIA

6.1 Each component is in the specified Normal Position. Any component not in the specified Normal Position shall be documented under Remarks in the applicable attachment and evaluated. The attachment is Satisfactory provided that a loss of CONTAINMENT INTEGRITY did not result from a component not being in the specified Normal Position.

6.2 For components requiring a position indication channel check, the component channel check is satisfactorily completed. Any component not satisfactorily channel checked shall be documented under Remarks in the applicable attachment and evaluated. The attachment is Satisfactory provided that inability to satisfactorily complete the channel check was not due to a failure of the associated Containment Isolation Valve Position Indication.

7.0 PROCEDURE

7.1 Obtain permission from the Shift Manager to perform this surveillance.

7.2 For valve Normal Position verification, complete Attachments 1, 2, and 3, as applicable, by performing the following:

7.2.1 Verify the valve positions by visual inspection at the valve location or by control indication at a remote location.

7.2.2 **WHEN** checking locked components, **THEN** verify that they are locked in such a manner that prevents inadvertent mispositioning.

7.2.3 Initial the **FUNCTIONALLY LOCKED COLUMN** after checking that the locking device is correctly installed in accordance with Section 4.0 of 0-ADM-205, Administrative Control of Valves, Locks and Switches.

7.3 For valve position indication channel check, the containment isolation valve position indications of valves listed in Attachment 1, as applicable, shall be qualitatively assessed by observation. This determination shall include, where possible, comparison of the channel indication or status with other indications or status derived from independent instrument channels evaluating the same parameter. (i.e., ERDADS channels, Phase A and B status lights, local position indication, corresponding pressure, temperature or flow, etc.)

7.4 **IF** a component is NOT in the position specified in Attachments 1, 2, or 3, **THEN** list the component under Remarks in the applicable attachment **AND** notify the Shift Manager or Unit Supervisor.

7.4.1 The Shift Manager or Unit Supervisor shall evaluate the configuration of the component and penetration to ensure that CONTAINMENT INTEGRITY requirements are satisfied.

7.4.2 **IF** the position of a component or components constitutes a loss of CONTAINMENT INTEGRITY, **THEN** go to 3-ONOP-053, Loss of Containment Integrity.

7.4.3 Document the results of the evaluation of Step 7.4.1 under Remarks in the applicable attachment.

7.5 **IF** the associated valve breaker is open or fuses are removed by procedure, clearance, or due to plant status, **THEN** record under Remarks in the applicable attachment.

7.6 Ensure log entries specified in Subsection 2.2 are recorded.

END OF TEXT

ENCLOSURE 1
(Page 1 of 1)

CLOSED SYSTEM

Closed systems used as containment isolation barriers shall be administratively controlled to meet the following criteria:

1. The closed system shall not communicate with the primary system or containment atmosphere if inside containment or not communicate with the outside atmosphere if outside containment.

2. Valves which define the boundary of a closed system barrier shall be administratively controlled.

3. Vents, drains, and test connections, while they provide an isolation function, are considered a passive extension of the process pressure boundary.

4. **WHEN** work is in progress on any portion of the closed system boundary which would affect a containment isolation barrier, **THEN** all clearances used to ensure the closed system boundary shall be recorded in the Remarks Section.

   Closed systems are credited as barriers either inside or outside containment for the following penetrations:

Penetration	In/Out	System
3	CSIC	Component Cooling Water
4	CSIC	Component Cooling Water
12	CSIC	Component Cooling Water
13	CSIC	Component Cooling Water
15	CSOC	CVCS
21	CSIC	Component Cooling Water
22	CSIC	Component Cooling Water
24	CSOC	CVCS RCP Seal Injection
26	CSIC	Main Steam
27	CSIC	Feedwater
28	CSIC	Steam Generator Blowdown
43	CSIC	Component Cooling Water
44	CSIC	Component Cooling Water
45	CSIC	Component Cooling Water
64	CSIC	S/G Blowdown Sample System

ATTACHMENT 1
(Page 1 of 56)

OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Acceptance Criteria: All components within this attachment meet the requirements of Section 6.0.

Results: ☐ SAT ☐ UNSAT

STP Record No. 567 signed off ☐ (Check when complete)

Check (√) tag column if tag is missing, mislabeled, illegible, or improperly secured.

REMARKS: List any component not in the Normal Position or which has not had a satisfactory containment isolation valve position indication Channel Check and note the reason. For component under clearance, provide clearance number.

Date/Time Started: TODAY / 0300 Date/Time Completed: TODAY / 2200

PERFORMED BY (Print)	INITIALS	PERFORMED BY (Print)	INITIALS
W. DEAN	WD	S. SULLIVAN	S
C. SMITH	C		
V. KELLY	VS		

I have reviewed this procedure and it has been satisfactorily performed. Any deviations or OTSCs used to perform this procedure are listed under Remarks.

REVIEWED BY: _____ DATE: _____
Shift Manager or Designee

ATTACHMENT 1
(Page 2 of 56)

OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:	
1	Residual Heat Removal Suction Header	
	Drawing No.: 5613-M-3050	Sheet No. 1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
MOV-3-751	Loop 3C RHR Suction Stop Valve	OPERABLE	√	WD
MOV-3-750	Loop 3C RHR Suction Stop Valve	OPERABLE	√	WD

Penetration No.:	Function:	
2	Residual Heat Removal Discharge Header	
	Drawing No.: 5613-M-3064	Sheet No. 1

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
MOV-3-744A	RHR Discharge to Cold Leg Isolation	OPERABLE	√	WD
MOV-3-744B	RHR Discharge to Cold Leg Isolation	OPERABLE	√	WD

ATTACHMENT 1
(Page 3 of 56)

OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
3	Component Cooling Water System Supply To The RCPs Thermal Barriers and Oil Coolers
	Drawing No.: 5613-M-3030 — Sheet No.: 5

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init	Channel Check Sat Init
MOV-3-716B	RCP CCW Inlet	OPERABLE	√	WO	* WO

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-716D	Penetration 3 Test Connection Valve on the CCW Line Downstream of MOV-3-716B	CLOSED & CAPPED	√	VS

Penetration No.:	Function:
4	RCPs Oil Coolers Return to the Component Cooling Water System
	Drawing No.: 5613-M-3030 — Sheet No.: 5

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init	Channel Check Sat Init
MOV-3-730	RCP Bearing CCW Outlet	OPERABLE	√	WO	* WO

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-730B	Penetration 4 Drain/Test Connection Valve on the CCW Line Upstream of MOV-3-730	CLOSED & CAPPED	√	VS

NOTE: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.

ATTACHMENT 1
(Page 4 of 56)

OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
5	Pressurizer Relief Tank to the Gas Analyzer
	Drawing No.: 5613-M-3041 — Sheet No.: 2

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init	Channel Check Sat Init
SV-3-6385	PRZ Relief Tank Gas Anal Isol (Position Indication Only)	OPERABLE	√	WD	* WD
CV-3-516	PRZ Relief Tank Gas Anal Isol	OPERABLE	√	WD	* WD

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-516A	PRT to Gas Analyzer Line Test Connection Upstream of SV-3-6385	CLOSED & CAPPED	√	√3
3-516C	PRT to Gas Analyzer Line Test Connection Downstream of SV-3-6385	CLOSED & CAPPED	√	√3

NOTE: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.

ATTACHMENT 1
(Page 5 of 56)

OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
7	Primary Water Supply to PRT and RCP Standpipes Drawing No.: 5613-M-3041 Sheet No. 3

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init	Channel Check Sat Init
CV-3-519A	Primary Water Containment Isol Vlv	OPERABLE	√	WD	* WD
CV-3-519B	PRT Primary Water Makeup	OPERABLE	√	WD	/////
CV-3-522A	3A RCP Standpipe Fill	OPERABLE	√	WD	/////
CV-3-522B	3B RCP Standpipe Fill	OPERABLE	√	WD	/////
CV-3-522C	3C RCP Standpipe Fill	OPERABLE	√	WD	/////

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-10-532	Primary Water Sply Hdr Drain/Test Connection Downstream of CV-3-519A	CLOSED & CAPPED	√	VS

NOTE: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.

ATTACHMENT 1
(Page 6 of 56)

OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
8	Pressurizer Steam Space Sample Line
	Drawing No.: 5613-M-3036 — Sheet No.: 1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init	Channel Check Sat Init
CV-3-956A	PRZ Steam Sample Isolation	OPERABLE	✓	WD	* NLO

Sample Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
CV-3-951	PRZ Steam Space Sample Line Isolation Valve Inside Containment	OPERABLE	✓	VS

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-991	PRZ Steam Sample Line Test Connection Valve Upstream of CV-3-956A	CLOSED & CAPPED	✓	VS

NOTE: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.

ATTACHMENT 1
(Page 7 of 56)

OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
9	Pressurizer Liquid Sample Line
	Drawing No.: 5613-M-3036 — Sheet No.: 1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init	Channel Check Sat Init
CV-3-956B	PRZ Liquid Sample Line Isolation	OPERABLE	√	WD	* WD

Sample Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
CV-3-953	PRZ Liquid Sample Line Isolation Valve Inside Containment	OPERABLE	√	VS

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-992	PRZ Liquid Space Line Test Connection Valve Upstream of CV-3-956B	CLOSED & CAPPED	√	VS

NOTE: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.

ATTACHMENT 1
(Page 8 of 56)

OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
10	Reactor Coolant Drain Tank Vent and Pressurizer Relief Tank Vent to/from Nitrogen Supply and Vent Header Drawing No.: 5610-M-3065, 5613-M-3061 Sheet No.: 1, 1

Waste Disposal - Boron Recycle Panel

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init	Channel Check Sat Init
CV-3-4658A	RCDT and PRT Vent Header to Plant Vent Isolation Valve	OPERABLE	√	JS	* JS
CV-3-4658B	RCDT and PRT Vent Header to Plant Vent Isolation Valve	OPERABLE	√	JS	* JS

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked (Initials) (√) Tag	Functionally Locked	Positioned Correctly
3-4656	N_2 Sply to Unit 3 RCDT Isol (P-10)	LOCKED CLOSED	√	JS	JS
3-4665B	N_2 Sply to RCDT Test Connection Isol Downstream of PCV-3-1014	CLOSED & CAPPED	√	N/A	JS
40-993	Inst Air to PCV 3-1014 Root	LOCKED CLOSED	√	JS	JS
PCV-3-1014	Pressure Control Valve for Nitrogen Supply to RCDT	CLOSED	√	N/A	JS
3-4666A	N_2 Sply to RCDT Test Connection Between CV-3-4658A and B	CLOSED & CAPPED	√	N/A	JS
3-4639	N_2 Supply Valve to RCDT Upstream of PCV-3-1014	LOCKED CLOSED	√	JS	JS
3-3449	N_2 to RCDT PCV-3-1014 Sense Line Isol Valve	LOCKED CLOSED	√	JS	JS

NOTES: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.

For locked or sealed components, the center column is initialed after verifying the locking device is functioning to prevent repositioning. The right hand column is initialed after verifying proper position of the component.

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
11	Alternate Low Head Safety Injection to the B and C Cold Legs Drawing No.: 5613-M-3050 Sheet No.: 1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
MOV-3-872	Alt Low Head Safety Inj	CLOSED	√	MO

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-940N	RHR to Alternate SI PI-3-6389 Root Valve	CLOSED & CAPPED	√	JS
3-876G	RHR to ALT SI PI-3-6389 Isol	CLOSED	√	JS

NOTE: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.

ATTACHMENT 1
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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
13	Excess Letdown Heat Exchanger Return to the Component Cooling Water System
	Drawing No.: 5613-M-3030 Sheet No.: 5

Control Room

Component No.	Component Description	Normal Position	Checked Tag &/Vlv Pos (√)	Checked Tag &/Vlv Pos Init	Channel Check Sat Init
CV-3-739	Excess L/D Hx CCW Outlet	OPERABLE	√	WD	* WD

NOTE: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:	
14	RCS Letdown to the Chemical and Volume Control System	
	Drawing No.:	Sheet No.
	5613-M-3047	1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos		Channel Check Sat
			(√)	Init	Init
CV-3-200A	45 gpm L/D Isolation Valve	OPERABLE	√	WD	* WD
CV-3-200B	60 gpm L/D Isolation Valve	OPERABLE	√	WD	* WD
CV-3-200C	60 gpm L/D Isolation Valve	OPERABLE	√	WD	* WD
CV-3-204	L/D from RHX Isol Valve	OPERABLE	√	WD	* WD

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos	
			(√)	Init
3-201D	L/D Isol CV-3-204 Inlet Drn (P-14)	CLOSED & CAPPED	√	√S

NOTE: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
15, 24A, 24B &24C	CVCS Charging Pump Discharge to A Cold Leg, C Hot Leg, and PZR Auxiliary Spray
	Drawing No.: 5613-M-3047 — Sheet No.: 2

SHIFT MANAGER VERIFICATION

In addition to the valves listed by this penetration alignment check section, containment isolation for this penetration relies on a closed system outside containment (see Enclosure 1 for additional information). The process components have been aligned using 3-OP-047, CVCS-CHARGING AND LETDOWN, and have been administratively controlled maintaining the closed system operable, thus maintaining containment integrity.

The CVCS System forming the Closed System Boundary is operable or administratively controlled to ensure containment integrity is being maintained. Clearances used to ensure Closed System Boundary are listed in the Remarks Section.

3-OP-047	Today	S. Wauwee
PROCEDURE NUMBER	*DATE PERFORMED*	*SHIFT MANAGER*

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-120A	CHG Line TO RHX HCV-3-121 Upstrm Drn	CLOSED & CAPPED	√	VS
3-120B	CHG Line to RHX HCV-3-121 Outlet Isol Downstream Drain	CLOSED & CAPPED	√	VS
3-285A	CVCS Seal Injection to RCP A Test Conn (P-24A)	CLOSED & CAPPED	√	VS
3-285B	CVCS Seal Injection to RCP B Test Conn (P-24B)	CLOSED & CAPPED	√	VS
3-285C	CVCS Seal Injection to RCP C Test Conn ((P-24C)	CLOSED & CAPPED	√	VS

ATTACHMENT 1
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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
15, 24A, 24B & 24C	CVCS Makeup to RWST and VCT Gas Space Sampling
	Drawing No.: / Sheet No. 5613-M-3047 / 2 5613-M-3036 / 1

Charging Pump Room

Component No.	Component Description	Normal Position	Checked (Initials)		
			(√) Tag	Functionally Locked	Positioned Correctly
3-365A	Blender Disch to RWST Stop Vlv	LOCKED CLOSED	√		√
3-276D	3A CHG Pump Disch Line Vent	CLOSED	√	N/A	√
3-276E	3B CHG Pump Disch Line Vent	CLOSED	√	N/A	√
3-276F	3C CHG Pump Disch Line Vent	CLOSED	√	N/A	√
3-1315	3A CHG Pump Recirc Line Isol	CLOSED	√	N/A	√
3-1316	3B CHG Pump Recirc Line Isol	CLOSED	√	N/A	√
3-1317	3C CHG Pump Recirc Line Isol	CLOSED	√	N/A	√
3-294A	Seal WTR INJ FLTR B VENT	CLOSED	√	N/A	√
3-294B	Seal WTR INJ FLTR A VENT	CLOSED	√	N/A	√
3-294C	Seal WTR INJ FLTR A DRAIN	CLOSED	√	N/A	√
3-294D	Seal WTR INJ FLTR B DRAIN	CLOSED	√	N/A	√
3-283D	3A CHG Pump RV-3-283A INLET TEST CONN	CLOSED	√	N/A	√
3-283E	3A CHG Pump RV-3-283A INLET TEST CONN	CLOSED & CAPPED	√	N/A	√
3-283F	3B CHG Pump RV-3-283B INLET TEST CONN	CLOSED	√	N/A	√
3-283G	3B CHG Pump RV-3-283B INLET TEST CONN	CLOSED & CAPPED	√	N/A	√
3-283H	3C CHG Pump RV-3-283C INLET TEST CONN	CLOSED	√	N/A	√
3-283J	3C CHG Pump RV-3-283C INLET TEST CONN	CLOSED & CAPPED	√	N/A	√
3-287B	3A CHG Pump Disch DRN	CLOSED & CAPPED	√	N/A	√
3-288B	3B CHG PUMP DISCH DRN	CLOSED & CAPPED	√	N/A	√
3-291B	3C CHG Pump Disch DRN	CLOSED & CAPPED	√	N/A	√
RV-3-283A	Chg PMP A Disch Relief Vlv	INSTALLED	√	N/A	√
RV-3-283B	Chg PMP B Disch Relief Vlv	INSTALLED	√	N/A	√
RV-3-283C	Chg PMP C Disch Relief Vlv	INSTALLED	√	N/A	√

NOTE: For locked or sealed components, the center column is initialed after verifying the locking device is functioning to prevent repositioning. The right hand column is initialed after verifying proper position of the component.

ATTACHMENT 1
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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:	
15, 24A, 24B & 24C	CVCS Makeup to RWST and VCT Gas Space Sampling	
	Drawing No.:	Sheet No.
	5613-M-3047	2
	5613-M-3036	1

Sample Room

Component No.	Component Description	Normal Position	Checked (Initials)		
			(√) Tag	Functionally Locked	Positioned Correctly
3-977	VCT Gas Space to Sample System	SEALED CLOSED	√	√S	√S

Penetration No.:	Function:	
16	Post Accident Containment Vent and Sample System	
	Drawing No.:	Sheet No.
	5613-M-3094	1

Aux Bldg North Hallway

Component No.	Component Description	Normal Position	Checked (Initials)		
			(√) Tag	Functionally Locked	Positioned Correctly
HV-3-1	Post Accident Containment Vent and Sample System Isol Valve (RR)	LOCKED CLOSED*	√	(1)	(1)
HV-3-2	PAC Vent and Sample System Isol Valve Downstream of HV-3-1 (RR)	LOCKED CLOSED*	√	A	A

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked (Initials)		
			(√) Tag	Functionally Locked	Positioned Correctly
PAHM-3-011A	PAHM Sample Line Test Connection	CLOSED & CAPPED	√	N/A	√S
HV-3-8	Penetration 16 Test Connection Valve Downstream of HV-3-1	LOCKED CLOSED & CAPPED	√	√S	√S

* Lock is attached to reach rod handwheel in the hallway outside the Pipe and Valve Room.

For locked or sealed components, the center column is initialed after verifying the locking device is functioning to prevent repositioning. The right hand column is initialed after verifying proper position of the components.

(1) FOUND LOCKED OPEN C. Kelly

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function: Safety Injection Test Line	
17	Drawing No.:	Sheet No.
	5613-M-3062	2
	5613-M-3064	1

Containment Spray Pump Room

Component No.	Component Description	Normal Position	Checked (Initials)		
			(√) Tag	Functionally Locked	Positioned Correctly
3-942E	SI Test Line Drain Upstream of 3-895V	CLOSED & CAPPED	√	N/A	C
3-895Y	SI Test Line Root Valve for PI-3-6387 Downstream of 3-942E	CLOSED	√	N/A	C
3-895V	SI Test Line Isolation (Tan*)	LOCKED CLOSED	√	C	C

* This component is part of a safety related system with a special series lock. The key to this color coded lock is the same color and is available only from the Shift Manager.

For locked or sealed components, the center column is initialed after verifying the locking device is functioning to prevent repositioning. The right hand column is initialed after verifying proper position of the components.

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:	Sheet No.
18	High Head Safety Injection to Loops A and B Hot Legs Drawing No.: 5613-M-3062 5613-M-3064	 1 1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
MOV-3-869	Safety Inj to Hot Leg Isol	CLOSED	√	WO
MOV-3-866A	Loop A Hot Leg Safety Injection	CLOSED	√	WO
MOV-3-866B	Loop B Hot Leg Safety Injection	CLOSED	√	WO
CV-3-851A	3A Accumulator Make-up	OPERABLE	√	WO
CV-3-851B	3B Accumulator Make-up	OPERABLE	√	WO
CV-3-851C	3C Accumulator Make-up	OPERABLE	√	WO

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-894D	HHSI to Loop A and B Hot Legs Drain Dwnstrm of MOV-3-869	CLOSED & CAPPED	√	VS
3-874F	PI-3-6423 Root Valve Downstream of 3-942G	CLOSED	√	VS

Penetration No.:	Function:	Sheet No.
19A	A Containment Spray Header Drawing No.: 5613-M-3068	 1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
MOV-3-880A	Contmt Spray Isolation	OPERABLE	√	WO

Containment Spray Pump Room

Component No.	Component Description	Normal Position	Checked (Initials) (√) Tag	Functionally Locked	Positioned Correctly
3-942W	CS Pump 3A Disch Hdr Drain	LOCKED CLOSED & CAPPED	√	√	C
3-6724	CS Pump 3A Disch Bonnett Equalization Isol Valve	CLOSED	√	N/A	C
3-896C	CS Pump 3A Disch Hdr Air Test Isol	CLOSED & BLIND FLANGE INSTALLED or TEST CONNECTION INSTALLED AND CAPPED	√	N/A	C
3-883M	CS Pump 3A Test Line Isol (**Tan)	LOCKED CLOSED	√	√	C
3-890A	CTMT Spray PMP A Disch Chk Vlv	INSTALLED	√	N/A	C

** This component is part of a safety related system with a special series lock. The key to this color coded lock is the same color and is available only from the Shift Manager.

NOTE: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure. For locked or sealed components, the center column is initialed after verifying the locking device is functioning to prevent repositioning. The right hand column is initialed after verifying proper position of the component.

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:	
19B	B Containment Spray Header	
	Drawing No.: 5613-M-3068	Sheet No.: 1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
MOV-3-880B	Control Spray Isolation	OPERABLE	√	MD

Containment Spray Pump Room

Component No.	Component Description	Normal Position	Checked (Initials) (√) Tag	Functionally Locked	Positioned Correctly
3-942V	CS Pump 3B Disch Hdr Drain	LOCKED CLOSED & CAPPED	√	√S	√S
3-896D	CS Pump 3B Disch Hdr Air Test Isol	CLOSED & BLIND FLANGE INSTALLED or TEST CONNECTION INSTALLED AND CAPPED	√	N/A	√S
3-6725	CS Pump 3B Disch Bonnett Equalization Isol Valve	CLOSED	√	N/A	√S
3-883N	CS Pump 3B Test Line Isol (**Tan)	LOCKED CLOSED	√	√S	√S
3-890B	CTMT Spray Pmp B Disch Chk Vlv	INSTALLED	√	N/A	√S

** This component is part of a safety related system with a special series lock. The key to this color coded lock is the same color and is available only from the Shift Manager.

For locked or sealed components, the center column is initialed after verifying the locking device is functioning to prevent repositioning. The right hand column is initialed after verifying proper position of the components.

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
20	Reactor Coolant Hot Legs Loop A and B Sample Line Drawing No.: 5613-M-3036 Sheet No.: 1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init	Channel Check Sat Init
SV-3-6428	Loop 3A and 3B Sample Isolation	OPERABLE	√	N/D	* N/D

Sample Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
SV-3-6427A	Loop A Sample Isolation Valve	OPERABLE	√	S
SV-3-6427B	Loop B Sample Isolation Valve	OPERABLE	√	S

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-993	Penetration 20 Test Connection Upstream of SV-3-6428	CLOSED & CAPPED	√	S

NOTE: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
21	Component Cooling Water Supply to Normal Containment Coolers and Rod Drive Coolers Drawing No.: 5613-M-3030 Sheet No.: 5

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init	Channel Check Sat Init
MOV-3-1417	CCW to Normal Containment Cooler	OPERABLE	√	WD	* WD

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-10-871	CCW Line to NCC Test Connection Valve Downstream of MOV-3-1417	CLOSED & CAPPED	√	S

Penetration No.:	Function:
22	Component Cooling Water Return from Normal Containment Coolers and Rod Drive Coolers Drawing No.: 5613-M-3030 Sheet No.: 5

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init	Channel Check Sat Init
MOV-3-1418	CCW from Normal Containment Cooler	OPERABLE	√	WD	* WD

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-10-872	CCW Line from NCC and CRDMs Penetration 22 Test Connection Valve Upstream of MOV-3-1418	CLOSED & CAPPED	√	S

NOTE: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function: Containment Sump Pump Discharge to WDS - Liquid Drawing No.:	Sheet No.
23	5613-M-3061	1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init	Channel Check Sat Init
CV-3-2821	Contmt Sump Pump Disch	OPERABLE	√	WD	* WD
CV-3-2822	Contmt Sump Pump Disch	OPERABLE	√	WD	* WD

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-4857	Sump Discharge Line Penetration 23 Test Conn Valve Between CV-3-2821 & 2822	CLOSED & CAPPED	√	S

NOTE: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.

ATTACHMENT 1
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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
25	RCP Seal Water Return and Excess Letdown Heat Exchanger Line to CVCS
	Drawing No.: 5613-M-3047 — Sheet No.: 3

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init	Channel Check Sat Init
MOV-3-381	Excess L/D and RCP Seal Return to VCT	OPERABLE	√	WD	* WD
MOV-3-6386	Excess LTDN and RCP Seal Return	OPERABLE	√	WD	* WD

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-384A	RCP Seal Wtr Rtn MOV-3-381 Upstrm Drn (P-25)	CLOSED & CAPPED	√	S

NOTE: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:	
26A	Main Steam Line "A"	
	Drawing No.:	Sheet No.
	5613-M-3078	1
	5613-M-3075	1
	5613-M-3072	1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos		Channel Check Sat
			(√)	Init	Init
CV-3-1606	A S/G Stm Dump to Atmosphere	OPERABLE	√	WD	/////
MOV-3-1400	3A Main Steam Stop Bypass	OPERABLE	√	WD	/////
POV-3-2604	3A Main Steam Isolation Valve	OPERABLE	√	WD	* WD
MOV-3-1403	3A Stm Supply to Aux Feedwater Pumps	OPERABLE	√	WD	/////

Main Steam Platform

Component No.	Component Description	Normal Position	Checked (Initials)		
			(√) Tag	Functionally Locked	Positioned Correctly
SGWL-3-022	PIC-3-6219A Sensing Line Root	LOCKED CLOSED	√	S	S
3-10-124	S/G A MS Line Code Safety Hdr Test Connection	CLOSED & CAPPED	√	N/A	S
RV-3-1400	Main Steam Line A STM Safety VLV	INSTALLED	√	N/A	S
RV-3-1401	Main Steam Line A STM Safety VLV	INSTALLED	√	N/A	S
RV-3-1402	Main Steam Line A STM Safety VLV	INSTALLED	√	N/A	S
RV-3-1403	Main Steam Line A STM Safety VLV	INSTALLED	√	N/A	S

NOTES: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.

For locked or sealed components, the center column is initialed after verifying the locking device is functioning to prevent repositioning. The right hand column is initialed after verifying proper position of the component.

ATTACHMENT 1
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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function: Main Steam Line **A**	
26A (Cont'd)	Drawing No.:	Sheet No.
	5613-M-3078	1
	5613-M-3075	1
	5613-M-3072	1

AFW Stm Sply MOV Platform

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-10-372	S/G A AFW Stm Supply Test Conn	CLOSED & CAPPED	√	S
3-10-1093	Upstream Drip Leg Cleanout Valve for ST-3-1411	CLOSED & CAPPED	√	S

Drain Traps

3-ST-1J	MS HDR A DRN ISOL	CLOSED	√	S
3-ST-1F	MS HDR A DRN	CLOSED	√	S
3-ST-1C	3-ST-1 BYP	CLOSED	√	S
3-10-1411C	ST-3-1411 BYPASS	CLOSED	√	S
3-10-1411D	ST-3-1411 DRAIN	CLOSED	√	S

Mezzanine Sample Station

3-10-1214	S/G 3A Sample Sink Isolation Valve	CLOSED	√	S

Penetration No.:	Function: Main Steam Line **B**	
26B	Drawing No.:	Sheet No.
	5613-M-3072	1
	5613-M-3075	1
	5613-M-3078	1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init	Channel Check Sat Init
CV-3-1607	B S/G Stm Dump to Atmosphere	OPERABLE	√	S	/////
MOV-3-1401	3B Main Steam Stop Bypass	OPERABLE	√	S	/////
POV-3-2605	3B Main Steam Isolation Valve	OPERABLE	√	S	* S
MOV-3-1404	3B Stm Supply to Aux Feedwater Pumps	OPERABLE	√	S	/////

NOTE: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function: Main Steam Line **B**	
26B (Cont'd)	Drawing No.:	Sheet No.
	5613-M-3072	1
	5613-M-3075	1
	5613-M-3078	1

Main Steam Platform

Component No.	Component Description	Normal Position	Checked (Initials)		
			(√) Tag	Functionally Locked	Positioned Correctly
SGWL-3-028	PIC-3-6219B Sensing Line Root	LOCKED CLOSED	√	S	S
RV-3-1405	Main Steam Line B STM Safety VLV	INSTALLED	√	N/A	S
RV-3-1406	Main Steam Line B STM Safety VLV	INSTALLED	√	N/A	S
RV-3-1407	Main Steam Line B STM Safety VLV	INSTALLED	√	N/A	S
RV-3-1408	Main Steam Line B STM Safety VLV	INSTALLED	√	N/A	S

AFW Stm Sply MOV Platform

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos	
			(√)	Init
3-10-373	S/G B AFW Stm Supply Test Conn	CLOSED & CAPPED	√	S
3-10-1094	Upstream Drip Leg Cleanout Valve for ST-3-1412	CLOSED & CAPPED	√	S

Drain Traps

3-ST-2J	MS HDR B DRN ISOL	CLOSED	√	S
3-ST-2F	MS HDR B DRN	CLOSED	√	S
3-ST-2C	3-ST-2 BYP	CLOSED	√	S
3-10-1412C	ST-3-1412 BYPASS	CLOSED	√	S
3-10-1412D	ST-3-1412 DRAIN	CLOSED	√	S

Mezzanine Sample Station

3-10-1215	S/G 3B Sample Sink Isolation Valve	CLOSED	√	S

For locked or sealed components, the center column is initialed after verifying the locking device is functioning to prevent repositioning. The right hand column is initialed after verifying proper position of the component.

ATTACHMENT 1
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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:	
26C	Main Steam Line **C**	
	Drawing No.:	Sheet No.
	5613-M-3072	1
	5613-M-3075	1
	5613-M-3078	1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init	Channel Check Sat Init
CV-3-1608	C S/G Stm Dump to Atmosphere	OPERABLE	√	WD	/////
MOV-3-1402	3C Main Steam Stop Bypass	OPERABLE	√	WD	/////
POV-3-2606	3C Main Steam Isolation Valve	OPERABLE	√	WD	* WD
MOV-3-1405	3C Stm Supply to Aux Feedwater Pumps	OPERABLE	√	WD	/////

Main Steam Platform

Component No.	Component Description	Normal Position	Checked (Initials) (√) Tag	Functionally Locked	Positioned Correctly
SGWL-3-046	PIC-3-6219C Sensing Line Root	LOCKED CLOSED	√	S	S
RV-3-1410	Main Steam Line C STM Safety VLV	INSTALLED	√	N/A	S
RV-3-1411	Main Steam Line C STM Safety VLV	INSTALLED	√	N/A	S
RV-3-1412	Main Steam Line C STM Safety VLV	INSTALLED	√	N/A	S
RV-3-1413	Main Steam Line C STM Safety VLV	INSTALLED	√	N/A	S

AFW Stm Sply MOV Platform

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-10-374	S/G C AFW Stm Supply Test Conn	CLOSED & CAPPED	√	S
3-10-1095	Upstream Drip Leg Cleanout Valve for ST-3-1413	CLOSED & CAPPED	√	S

Drain Traps

3-ST-3J	MS HDR C DRN ISOL	CLOSED	√	S
3-ST-3F	MS HDR C DRN	CLOSED	√	S
3-ST-3C	3-ST-3 BYP	CLOSED	√	S
3-10-1413C	ST-3-1413 BYPASS	CLOSED	√	S
3-10-1413D	ST-3-1413 DRAIN	CLOSED	√	S

Mezzanine Sample Station

3-10-1216	S/G 3C Sample Sink Isolation Valve	CLOSED	√	S

NOTES: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure. For locked or sealed components, the center column is initialed after verifying the locking device is functioning to prevent repositioning. The right hand column is initialed after verifying proper position of the component.

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:	
27A	Feedwater Supply to Steam Generator A	
	Drawing No.:	Sheet No.
	5613-M-3075	2
	5613-M-3074	3
	5613-M-3078	1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos	
			(√)	Init
CV-3-2816	Train 1 AFW Flow to 3A S/G	OPERABLE	√	
CV-3-2831	Train 2 AFW Flow to 3A S/G	OPERABLE	√	
FCV-3-478	A S/G FW Control Valve	OPERABLE	√	
FCV-3-479	A S/G FW Bypass	OPERABLE	√	

Main Feedwater Platform

Component No.	Component Description	Normal Position	Checked (Initials)		
			(√) Tag	Functionally Locked	Positioned Correctly
3-20-135	A S/G FW Chem Injection Line Drain Isol	CLOSED	√	N/A	
3-20-136	A S/G FW Chem Injection Line Drain Isol	CLOSED	√	N/A	
SGWL-3-007	A WLU Pump to FW Hdr Isol	LOCKED CLOSED	√		
3-20-137	Phosphate Injection to FW to S/G A Ck Vlv	INSTALLED	√	N/A	
3-20-706	A S/G FW CV-3-2900 Drn	CLOSED	√	N/A	
3-20-707	A S/G FW CV-3-2900 Drn Isol	CLOSED	√	N/A	

For locked or sealed components, the center column is initialed after verifying the locking device is functioning to prevent repositioning. The right hand column is initialed after verifying proper position of the component.

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:	
27B	Feedwater Supply to Steam Generator **B**	
	Drawing No.:	Sheet No.
	5613-M-3075	2
	5613-M-3074	3
	5613-M-3078	1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos	
			(√)	Init
CV-3-2817	Train 1 AFW Flow to 3B S/G	OPERABLE	√	WD
CV-3-2832	Train 2 AFW Flow to 3B S/G	OPERABLE	√	WD
FCV-3-488	B S/G FW Control Valve	OPERABLE	√	WD
FCV-3-489	B S/G FW Bypass	OPERABLE	√	WD

Main Feedwater Platform

Component No.	Component Description	Normal Position	Checked (Initials)		
			(√) Tag	Functionally Locked	Positioned Correctly
3-20-235	B S/G FW Chem Injection Line Drain Isol	CLOSED	√	N/A	S
3-20-236	B S/G FW Chem Injection Line Drain Isol	CLOSED	√	N/A	S
SGWL-3-025	B WLU Pump to FW Hdr Isol	LOCKED CLOSED	√	S	S
3-20-237	Phosphate Injection to FW to S/G B Ck Vlv	INSTALLED	√	N/A	S
3-20-708	B S/G FW CV-3-2901 Drn	CLOSED	√	N/A	S
3-20-709	B S/G FW CV-3-2901 Drn Isol	CLOSED	√	N/A	S

For locked or sealed components, the center column is initialed after verifying the locking device is functioning to prevent repositioning. The right hand column is initialed after verifying proper position of the component.

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function: Feedwater Supply to Steam Generator C	
27C	Drawing No.:	Sheet No.
	5613-M-3075	2
	5613-M-3074	3
	5613-M-3078	1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos	
			(√)	Init
CV-3-2818	Train 1 AFW Flow to 3C S/G	OPERABLE	√	JWO
CV-3-2833	Train 2 AFW Flow to 3C S/G	OPERABLE	√	JWO
FCV-3-498	C S/G FW Control Valve	OPERABLE	√	JWO
FCV-3-499	C S/G FW Bypass	OPERABLE	√	JWO

Main Feedwater Platform

Component No.	Component Description	Normal Position	Checked (Initials)		
			(√) Tag	Functionally Locked	Positioned Correctly
3-20-335	C S/G FW Chem Injection Line Drain Isol	CLOSED	√	N/A	S
3-20-336	C S/G FW Chem Injection Line Drain Isol	CLOSED	√	N/A	S
SGWL-3-042	C WLU Pump to FW Hdr Isol	LOCKED CLOSED	√	S	S
3-20-337	Phosphate Injection to FW to S/G C Ck Vlv	INSTALLED	√	N/A	S
3-20-710	C S/G FW CV-3-2902 Drn	CLOSED	√	N/A	S
3-20-711	C S/G FW CV-3-2902 Drn Isol	CLOSED	√	N/A	S

For locked or sealed components, the center column is initialed after verifying the locking device is functioning to prevent repositioning. The right hand column is initialed after verifying proper position of the component.

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:	
28A	Steam Generator A Blowdown Line	
	Drawing No.:	Sheet No.
	5613-M-3074	4
	5613-M-3078	1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos		Channel Check Sat
			(√)	Init	Init
CV-3-6275A	3A Blowdown Isol	OPERABLE	√	MM	* N/U

S/G Blowdown Area

Component No.	Component Description	Normal Position	Checked (Initials)		
			(√) Tag	Functionally Locked	Positioned Correctly
SGB-3-047	S/G A Bldn Line Test Conn Isol	CLOSED & CAPPED	√	N/A	S
SGWL-3-011	S/G A Bldn Line to SGWLU Isol	LOCKED CLOSED	√	S	S
SGB-3-044	S/G A Bldn Line Test Conn Isol	CLOSED & CAPPED	√	N/A	S
SGB-3-082A	3A Blowdown Bypass Isol	LOCKED CLOSED	√	S	S

NOTES: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.
For locked or sealed components, the center column is initialed after verifying the locking device is functioning to prevent repositioning. The right hand column is initialed after verifying proper position of the component.

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:	
28B	Steam Generator **B** Blowdown Line	
	Drawing No.:	Sheet No.
	5613-M-3078	1
	5613-M-3074	4

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos		Channel Check Sat
			(√)	Init	Init
CV-3-6275B	3B Blowdown Isol	OPERABLE	√	MJ	* N/A

S/G Blowdown Area

Component No.	Component Description	Normal Position	Checked (Initials)		
			(√) Tag	Functionally Locked	Positioned Correctly
SGB-3-048	S/G B Bldn Line Test Conn Isol	CLOSED & CAPPED	√	N/A	J
SGWL-3-031	S/G B Bldn Line to SGWLU Isol	LOCKED CLOSED	√	J	J
SGB-3-045	S/G B Bldn Line Test Conn Isol	CLOSED & CAPPED	√	N/A	J
SGB-3-082B	3B Blowdown Bypass Isol	LOCKED CLOSED	√	J	J

NOTES: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.
For locked or sealed components, the center column is initialed after verifying the locking device is functioning to prevent repositioning. The right hand column is initialed after verifying proper position of the component.

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:	
28C	Steam Generator C Blowdown Line	
	Drawing No.:	Sheet No.
	5613-M-3078	1
	5613-M-3074	4

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos		Channel Check Sat
			(√)	Init	Init
CV-3-6275C	3C Blowdown Isol	OPERABLE	√	JM/M	* JM/M

S/G Blowdown Area

Component No.	Component Description	Normal Position	Checked (Initials)		
			(√) Tag	Functionally Locked	Positioned Correctly
SGB-3-049	S/G C Bldn Line Test Conn Isol	CLOSED & CAPPED	√	N/A	S
SGWL-3-049	S/G C Bldn Line to SGWLU Isol	LOCKED CLOSED	√	S	S
SGB-3-046	S/G C Bldn Line Test Conn Isol	CLOSED & CAPPED	√	N/A	S
SGB-3-082C	3C Blowdown Bypass Isol	LOCKED CLOSED	√	S	S

NOTES: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.
For locked or sealed components, the center column is initialed after verifying the locking device is functioning to prevent repositioning. The right hand column is initialed after verifying proper position of the component.

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:	
30	Breathing Air	
	Drawing No.: 5613-M-3101	Sheet No. 1

S/G Blowdown Area

Component No.	Component Description	Normal Position	Checked (Initials)		
			(√) Tag	Functionally Locked	Positioned Correctly
CV-3-6165	Breathing Air Isolation Valve	LOCKED PINNED CLOSED	√	S	S
BA-3-114	Breathing Air to Containment Penetration 30 Test Connection Valve Downstream of CV-3-6165	CLOSED & CAPPED	√	N/A	S

Penetration No.:	Function:	
31	Reactor Coolant Drain Tank to Gas Analyzer	
	Drawing No.: 5613-M-3061	Sheet No. 1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos		Channel Check Sat
			(√)	Init	Init
CV-3-4659A	RCDT to Gas Analyzer Isolation	OPERABLE	√	u/n	* u/n
CV-3-4659B	RCDT to Gas Analyzer Isolation	OPERABLE	√	u/n	* u/n

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos	
			(√)	Init
3-4667A	RCDT to Gas Analyzer Pen 31 Test Connection Valve Between CV-3-4659A and CV-3-4659B	CLOSED & CAPPED	√	S

NOTES: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.
For locked or sealed components, the center column is initialed after verifying the locking device is functioning to prevent repositioning. The right hand column is initialed after verifying proper position of the component.

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
32	Containment Air Particulate and Gas Monitor Sample Return Drawing No.: 5613-M-3094 Sheet No. 1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init	Channel Check Sat Init
SV-3-2912	Containment Air Monitoring Isol	OPERABLE	√	N/O	* N/O

"C" CVCS Holdup Tank Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-11-011	Cntmt Rad Mon R-3-11 & 12 Line Test Connection	CLOSED & CAPPED	√	S
3-11-012	Cntmt Rad Mon R-3-11 & 12 Outlet Ln Test Connection	CLOSED & CAPPED	√	S

NOTES: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.
For locked or sealed components, the center column is initialed after verifying the locking device is functioning to prevent repositioning. The right hand column is initialed after verifying proper position of the component.

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function: Containment Air Particulate and Gas Monitor Sample Line
33	Drawing No.: 5613-M-3094 — Sheet No.: 1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init	Channel Check Sat Init
SV-3-2913	Containment Air Monitoring Isol	OPERABLE	√	MD	* MD
SV-3-2911	Containment Air Monitoring Isol	OPERABLE	√	MD	* MD

"C" CVCS Holdup Tank Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-11-014	Cntmt Rad Mon R-3-11 & 12 Inlet Line Test Connection	CLOSED & CAPPED	√	S
3-11-008	Cntmt Rad Mon R-3-11 & 12 Inlet Ln Test Connection	CLOSED & CAPPED	√	S

NOTE: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
34	Containment Air Particulate and Gas Monitor Sample Return
	Drawing No.: 5610-M-3013 — Sheet No.: 1

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-40-366	Service Air Hdr to Containment Pen 34 Test Connection Valve Downstream of 3-40-204	CLOSED & CAPPED	√	S

Aux Bldg Roof

Component No.	Component Description	Normal Position	Checked (Initials) (√) Tag	Functionally Locked	Positioned Correctly
3-40-204	Service Air to Containment Isol (RR)	LOCKED CLOSED	√	C	C

For locked or sealed components, the center column is initialed after verifying the locking device is functioning to prevent repositioning. The right hand column is initialed after verifying proper position of the component.

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:	Sheet No.
35	Containment Purge Supply Drawing No.: 5613-M-3053	1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init	Channel Check Sat Init
POV-3-2600	Contmt Purge Supply Isol (OC)	OPERABLE	√	WH	* WH
POV-3-2601	Contmt Purge Supply Isol (IC)	OPERABLE	√	WH	* WH

Aux Bldg Roof

Component No.	Component Description	Normal Position	Checked (Initials) (√) Tag	Functionally Locked	Positioned Correctly
3-11-020	Purge Air Supply Line Test Connection (Outside Cont)	LOCKED CLOSED	√	(1)	C
Test Connection	Test Connection between 3-11-020 and Pen. 35	CAPPED	√	N/A	C

Penetration No.:	Function:	Sheet No.
36	Containment Purge Exhaust to Plant Vent Drawing No.: 5613-M-3053	1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init	Channel Check Sat Init
POV-3-2602	Containment Purge Supply Isol (OC)	OPERABLE	√	WH	* WH
POV-3-2603	Containment Purge Supply Isol (IC)	OPERABLE	√	WH	* WH

Aux Bldg Roof

Component No.	Component Description	Normal Position	Checked (Initials) (√) Tag	Functionally Locked	Positioned Correctly
3-11-021	Purge Air Supply Line Test Connection (Outside Cont)	LOCKED CLOSED	√	C	C
Test Connection	Test Connection between 3-11-021 and Pen. 36	CAPPED	√	N/A	C

NOTES: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.
Fuses may be required to be installed in Mode 1 through 4 to obtain desired Phase A status lamp indication. Attachment 4 should be used if fuses require installing (Unit in Modes 1 through 4).
For locked or sealed components, the center column is initialed after verifying the locking device is functioning to prevent repositioning. The right hand column is initialed after verifying proper position of the component.

(1) LOCK MISSING

ATTACHMENT 1
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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:	Sheet No.
40	Equipment Hatch Drawing No.: N/A	

Equipment Hatch

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√) /	Init
"T"	Equipment Hatch 3/8 inch LLRT Test Connection	CAPPED	√	

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:	
41	Personnel Access Lock	
	Drawing No.: N/A	Sheet No. N/A

Personnel Access Hatch

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
NNA	Personnel Access Inside Door	LATCHED	√	S
3-S8A	Airlock to Atmosphere Valve	CLOSED	√	S
NNA	Personnel Access Outside Door	LATCHED	√	S
3-S8E	Outer Door Test and Vent Connection	CLOSED & CAPPED	√	S
3-S8D	Annulus Test Connection	CLOSED & CAPPED	√	S
3-S8C	Annulus Pressurization Valve	LOCKED CLOSED	√	S

Penetration No.:	Function:	
42	Nitrogen Supply to Accumulators and Flux Mapper Purge Regulator	
	Drawing No.: 5610-M-3065	Sheet No. 1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init	Channel Check Sat Init
CV-3-855	N_2 to Accum and Flux Mapper	OPERABLE	√	N/A	* N/A

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-940R	N_2 Supply to Accumulator and Flux Mapper Vent (P-42)	CLOSED & CAPPED	√	S

NOTE: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
43	Reactor Coolant Pump Thermal Barrier Return to the Component Cooling Water System
	Drawing No.: 5613-M-3030 — Sheet No.: 5

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init	Channel Check Sat Init
MOV-3-626	RCP Thermal Barrier CCW Outlet	OPERABLE	√	WO	* WO

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-626A	RCP Thermal Barrier to CCW Pen 43 Test Connection Valve Upstream of MOV-3-626	CLOSED & CAPPED	√	S

Penetration No.:	Function:
44A	Component Cooling Water Supply to the Emergency Containment Cooler "A"
	Drawing No.: 5613-M-3030 — Sheet No.: 4

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
CV-3-2905	3A Emerg Contmt Cooler Inlet	OPERABLE	√	WO

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-10-874	CCW to ECC Line Pen 44A Test Connection Valve Downstream of CV-3-2905	CLOSED & CAPPED	√	S

NOTE: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
44B	Component Cooling Water Supply to the Emergency Containment Cooler **B**
	Drawing No.: 5613-M-3030 — Sheet No.: 4

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
CV-3-2903	3B Emerg Contmt Cooler Inlet	OPERABLE	√	WM

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-10-875	CCW to ECC Line Pen 44B Test Connection Valve Downstream of CV-3-2903	CLOSED & CAPPED	√	S

Penetration No.:	Function:
44C	Component Cooling Water Supply to the Emergency Containment Cooler **C**
	Drawing No.: 5613-M-3030 — Sheet No.: 4

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
CV-3-2904	3C Emerg Contmt Cooler Inlet	OPERABLE	√	WM

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-10-876	CCW to ECC Line Pen 44C Test Connection Valve Downstream of CV-3-2904	CLOSED & CAPPED	√	S

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:	
45A	Emergency Cooler **A** Return to Component Cooling Water System	
	Drawing No.: 5613-M-3030	Sheet No. 4

Control Room

Component No.	Component Description	Normal Position	Checked Tag &, Vlv Pos (√)	Checked Tag &, Vlv Pos Init
CV-3-2908	3A Emerg Contmt Cooler Outlet	OPERABLE	√	WD
CV-3-2814	3A Emerg Contmt Cooler Bypass	OPERABLE	√	WD

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-10-861	CCW Return to CCW Pen 45A Test Connection Valve Upstream of CV-3-2908 and CV-3-2814	CLOSED & CAPPED	√	S

Penetration No.:	Function:	
45B	Emergency Cooler **B** Return to Component Cooling Water System	
	Drawing No.: 5613-M-3030	Sheet No. 4

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
CV-3-2906	3B Emerg Contmt Cooler Outlet	OPERABLE	√	WD
CV-3-2810	3B Emerg Contmt Cooler Bypass	OPERABLE	√	WD

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-10-863	CCW Return to CCW Pen 45B Test Connection Valve Upstream of CV-3-2906 and CV-3-2810	CLOSED & CAPPED	√	S

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:	
45C	Emergency Cooler **C** Return to Component Cooling Water System	
	Drawing No.: 5613-M-3030	Sheet No. 4

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
CV-3-2907	3C Emerg Contmt Cooler Outlet	OPERABLE	√	WD
CV-3-2812	3C Emerg Contmt Cooler Bypass	OPERABLE	√	WD

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-10-865	CCW Return to CCW Pen 45C Test Connection Valve Upstream of CV-3-2907 and CV-3-2812	CLOSED & CAPPED	√	S

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
47	Primary Water To Containment Service Connections
	Drawing No.: 5613-M-3020 — Sheet No.: 2

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-10-580	Primary Water to Containment Line Pen 47 Test Connection Valve Downstream of Check Valve 3-10-567	CLOSED & CAPPED	√	S
3-10-567	CNTMT Iso Check VLV for PW to CNTMT Service Conn	INSTALLED	√	S

Penetration No.:	Function:
49	Emergency Escape Hatch
	Drawing No.: N/A — Sheet No.:

Emergency Escape Hatch

Component No.	Component Description	Normal Position	Checked (Initials) (√) Tag	Functionally Locked	Positioned Correctly
NNA	Inside Door	LATCHED	√	N/A	VS
3-S9A	Airlock to Atmosphere Valve	CLOSED	√	N/A	VS
NNA	Outside Door	LATCHED	√	N/A	VS
3-S9C	Annulus Pressurization Valve	LOCKED & CLOSED	√	VS	VS
3-S9G	PI-3-866 Isol Valve	OPEN with PI-3-866 INSTALLED	√	N/A	VS

For locked or sealed components, the center column is initialed after verifying the locking device is functioning to prevent repositioning. The right hand column is initialed after verifying proper position of the component.

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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
52	Reactor Coolant Drain Tank Pump Disch
	Drawing No.: 5613-M-3061 — Sheet No.: 1

Waste Disposal - Boron Recycle Panel

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init	Channel Check Sat Init
CV-3-4668A	Reactor Coolant Drain Tank Pump Discharge Valve	OPERABLE	√	VS	* VS
CV-3-4668B	Reactor Coolant Drain Tank Pump Discharge Valve	OPERABLE	√	VS	* VS

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-4668C	RCDT Pump Discharge Line Pen 52 Test Connection Valve Between CV-3-4668A and B	CLOSED & CAPPED	√	VS

NOTE: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.

ATTACHMENT 1
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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
53	Post Accident Containment Vent and Sample System
	Drawing No.: 5613-M-3094 — Sheet No.: 1

Aux Bldg North Hallway (Near CSP Room Entrance)

Component No.	Component Description	Normal Position	Checked (Initials)		
			(√) Tag	Functionally Locked	Positioned Correctly
HV-3-3	Post Accident Containment Vent and Sample System Isolation Valve (RR)	LOCKED CLOSED*	√	S	S
HV-3-4	PAC Vent and Sample System Isolation Valve Downstream of HV-3-3 (RR)	LOCKED CLOSED*	√	S	S

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked (Initials)		
			(√) Tag	Functionally Locked	Positioned Correctly
PAHM-3-011B	PAHM Sample Line Test Connection	CLOSED & CAPPED	√	N/A	S
HV-3-7	PACV/PASS Pen 53 Test Connection Valve Downstream of HV-3-3	LOCKED CLOSED & CAPPED	√	S	S

* Lock is attached to Reach Rod Handwheel in the hallway outside the Pipe and Valve Room.

For locked or sealed components, the center column is initialed after verifying the locking device is functioning to prevent repositioning. The right hand column is initialed after verifying proper position of the component.

ATTACHMENT 1
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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:	
54A	South Containment Building Sump to **A** RHR Pump Suction	
	Drawing No.:	Sheet No.
	5613-M-3050	1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
MOV-3-860A	Contmt Recirc Sump Isol	CLOSED	√	MD
MOV-3-861A	Contmt Recirc Sump Isol	CLOSED	√	MD

RHR Pump Room A

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-899C	South Recirc Sump Supply Hdr Downstream Drain	CLOSED & BLIND FLANGE INSTALLED	√	S

RHR Hx Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-942N	South Recirc Sump Supply Hdr Drain	CLOSED & CAPPED	√	S
3-2052	Cntmt Spray Pump Suction Relief Line Ck Vlv to RHR Recirc (Located near MOV-3-860A)	INSTALLED	√	S
3-1490	South Recirc Sump Supply Hdr Downstream Vent	CLOSED & CAPPED	√	S

Containment Spray Pump Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-942M	CS Pump Suction Relief Line Drain	CLOSED & CAPPED	√	S
RV-3-871	Containment Spray Pump A Suction Relief Valve	INSTALLED	√	S

ATTACHMENT 1
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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
54B	North Containment Building Sump to **B** RHR Pump Suction
	Drawing No.: 5613-M-3050 — Sheet No.: 1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
MOV-3-860B	Contmt Recirc Sump Isol	CLOSED	✓	WJ
MOV-3-861B	Contmt Recirc Sump Isol	CLOSED	✓	WJ

RHR Pump Room B

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-899E	North Recirc Sump Supply Hdr Downstream Drain	CLOSED & CAPPED	✓	3

RHR Hx Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-1491	North Recirc Sump Supply Hdr Downstream Vent	CLOSED & CAPPED	✓	3

ATTACHMENT 1
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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
55	Accumulator A, B, and C Sample Line
	Drawing No.: 5613-M-3036 — Sheet No.: 1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init	Channel Check Sat Init
CV-3-956D	Accumulator Sample Isol	OPERABLE	√	WD	* WD

Sample Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
CV-3-955C	Accumulator A Sample Isol Valve	OPERABLE	√	S
CV-3-955D	Accumulator B Sample Isol Valve	OPERABLE	√	S
CV-3-955E	Accumulator C Sample Isol Valve	OPERABLE	√	S

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-994	Accum Sample Line Pen 55 Test Connection Valve Upstream of CV-3-956D	CLOSED & CAPPED	√	S

NOTE: Those valves identified with "*" are to be channel checked in accordance with Subsection 7.3 of this procedure.

ATTACHMENT 1
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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
58	High Head Safety Injection to Reactor Coolant Loop **A**
	Drawing No.: 5613-M-3062 — Sheet No.: 2

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
MOV-3-843A	HHSI Cold Leg Injection	CLOSED	√	[illegible]
MOV-3-843B	HHSI Cold Leg Injection	CLOSED	√	[illegible]

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-941E	HHSI to Loop A Cold Leg Drain Upstrm of Pen 58	CLOSED	√	S
3-1493	SI to Loop A Cold Leg Upstrm Vent Valve	CLOSED & CAPPED	√	S
Test Connection	Test Connection between 3-941E and 3-923	CAPPED	√	S
3-923	HHSI to Loop A Cold Leg Root Vlv for PI-3-6390 Dnstrm of 3-941E	CLOSED	√	S
Test Connection	Test Connection between 3-923 and PI-3-6390	CAPPED	√	S

Containment Spray Pump Room - Second Level

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-836D	Vent Valve on HHSI Pump Disch to Cold Leg Injection	CLOSED & CAPPED	√	S

Penetration No.:	Function:
59	High Head Safety Injection to Reactor Coolant Loop **B**
	Drawing No.: 5613-M-3062 — Sheet No.: 1 & 2

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
MOV-3-843A	HHSI Cold Leg Injection	CLOSED	√	[illegible]
MOV-3-843B	HHSI Cold Leg Injection	CLOSED	√	[illegible]

ATTACHMENT 1
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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-941F	HHSI to Loop B Cold Leg Drain	CLOSED & CAPPED	√	S
3-1492	SI to Loop B Cold Leg Upstrm Vent Valve	CLOSED & CAPPED	√	S

Containment Spray Pump Room - Second Level

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-836D	Vent Valve on HHSI Pump Disch to Cold Leg Injection	CLOSED & CAPPED	√	S

Penetration No.:	Function:
60	High Head Safety Injection to Reactor Coolant Loop **C**
	Drawing No.: 5613-M-3062 — Sheet No.: 1 & 2

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
MOV-3-843A	HHSI Cold Leg Injection	CLOSED	√	N/D
MOV-3-843B	HHSI Cold Leg Injection	CLOSED	√	N/D

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-941G	HHSI to Loop C Cold Leg Drain	CLOSED & CAPPED	√	S
3-1494	SI to Loop C Cold Leg Upstrm Vent Valve	CLOSED & CAPPED	√	S

Containment Spray Pump Room - Second Level

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-836D	Vent Valve on HHSI Pump Disch to Cold Leg Injection	CLOSED & CAPPED	√	S

ATTACHMENT 1
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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
62A	Containment Pressure Instrumentation
	Drawing No.: 5613-M-3094 — Sheet No.: 1

South Electrical Penetration Room

Component No.	Component Description	Normal Position	Checked (Initials)		
			(√) Tag	Functionally Locked	Positioned Correctly
3-2054	Penetration 62A Containment Pressure Instrument Root Valve	LOCKED OPEN	√	S	S
3-2055	Penetration 62A Containment Pressure Instrument PT-3-6306B and PT-3-6425B Isol Valve	OPEN	√	N/A	S
3-2056	Penetration 62A Containment Pressure Instrument Sense Line Test Connection Valve	CLOSED & CAPPED	√	N/A	S
3-2057	Penetration 62A Containment Pressure Instrument PT-3-6425B Isol Valve	OPEN	√	N/A	S
"T"	Test "T" between 3-2054 and PS-3-2008	BLIND FLANGE INSTALLED	N/A	N/A	S
"T"	Test "T" between 3-2057 and PY-3-6425B	CAPPED	N/A	N/A	S
"T"	Test "T" downstream of PS-3-2057	CAPPED	N/A	N/A	S

Penetration No.:	Function:
62B	Containment Pressure Instrumentation
	Drawing No.: 5613-M-3094 — Sheet No.: 1

South Electrical Penetration Room

Component No.	Component Description	Normal Position	Checked (Initials)		
			(√) Tag	Functionally Locked	Positioned Correctly
3-2059	Penetration 62B Containment Pressure Instrument PS-3-2009 and PS-3-2058 Root Valve	LOCKED OPEN	√	S	S
3-2058	Penetration 62B Containment Pressure Instrument Sense Line Test Connection Valve	CLOSED & CAPPED	√	N/A	S

For locked or sealed components, the center column is initialed after verifying the locking device is functioning to prevent repositioning. The right hand column is initialed after verifying proper position of the component.

ATTACHMENT 1
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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
62C	Containment Pressure Instrumentation
	Drawing No.: 5613-M-3094 — Sheet No.: 1

South Electrical Penetration Room

Component No.	Component Description	Normal Position	Checked (Initials)		
			(√) Tag	Functionally Locked	Positioned Correctly
3-2063	Penetration 62C Containment Pressure Instruments Root Valve	LOCKED OPEN	✓	S	S
3-2061	Penetration 62C Containment Pressure Instrument PT-3-6306A and PT-3-6425A Isol Valve	OPEN	✓	N/A	S
3-2062	Penetration 62C Containment Pressure Instrument Sense Line Test Connection Valve	CLOSED & CAPPED	✓	N/A	S
3-2065	Penetration 62C Containment Pressure Instrument PT-3-6425A Isol Valve	OPEN	✓	N/A	S
"T"	Test "T" between 3-2063 and PS-3-2056	CAPPED	N/A	N/A	S
"T"	Test "T" between 3-2065 and PT-3-6425A	CAPPED	N/A	N/A	S
"T"	Test "T" downstream of PS-3-2007	CAPPED	N/A	N/A	S

For locked or sealed components, the center column is initialed after verifying the locking device is functioning to prevent repositioning. The right hand column is initialed after verifying proper position of the component.

ATTACHMENT 1
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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:	
63	Instrument Air Bleed to the Plant Stack	
	Drawing No.: 5613-M-3053	Sheet No. 1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init	Channel Check Sat Init
CV-3-2826	Contmt Instr Air Bleed (OC)	OPERABLE	√	WD	* WD
CV-3-2819	Contmt Instr Air Bleed (IC)	OPERABLE	√	WD	* WD

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-11-017	Penetration 63 Instrument Air Bleed Line Test Connection Valve	CLOSED & CAPPED	√	3

Penetration No.:	Function:	
64A	Steam Generator "A" Sample Line	
	Drawing No.: 5613-M-3032	Sheet No. 1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init	Channel Check Sat Init
MOV-3-1427	3A Stm Gen Liquid Sample	OPERABLE	√	WD	* WD

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-20-308	A S/G Blowdown Sample Line Test Connection Valve Between 3-20-305 and MOV-3-1427	CLOSED & CAPPED	√	3

NOTE: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.

ATTACHMENT 1
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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
64B	Steam Generator **B** Sample Line
	Drawing No.: 5613-M-3032 — Sheet No.: 1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init	Channel Check Sat Init
MOV-3-1426	3B Stm Gen Liquid Sample	OPERABLE	√	WB	* WB

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-20-311	B S/G Blowdown Sample Line Test Connection Valve Between 3-20-306 and MOV-3-1426	CLOSED & CAPPED	√	S

Penetration No.:	Function:
64C	Steam Generator **C** Sample Line
	Drawing No.: 5613-M-3032 — Sheet No.: 1

Control Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init	Channel Check Sat Init
MOV-3-1425	3C Stm Gen Liquid Sample	OPERABLE	√	WB	* WB

Pipe and Valve Room

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-20-314	C S/G Blowdown Sample Line Test Connection Valve Between 3-20-307 and MOV-3-1425	CLOSED & CAPPED	√	S

NOTE: Those valves identified with * are to be channel checked in accordance with Subsection 7.3 of this procedure.

ATTACHMENT 1
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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
65A	Integrated Leak Rate Test Penetration
	Drawing No.: 5613-M-3053 — Sheet No.: 1

S/G Blowdown Area

Component No.	Component Description	Normal Position	Checked Tag & Vlv Pos (√)	Checked Tag & Vlv Pos Init
3-2014	ILRT Line Test Connection Valve (Pen 65A)	CLOSED & CAPPED	√	S
NNA	Penetration 65A Blind Flange	INSTALLED	N/A	S

Penetration No.:	Function:
65B	Integrated Leak Rate Test Penetration
	Drawing No.: 5613-M-3053 — Sheet No.: 1

S/G Blowdown Area

Component No.	Component Description	Normal Position	Checked (Initials) (√) Tag,	Functionally Locked	Positioned Correctly
3-2015	ILRT Line Test Connection Valve (Pen 65B)	CLOSED & CAPPED	√	N/A	S
3-2025	ILRT Line Isolation Valve (Pen 65B)	LOCKED CLOSED	√	S	S

ATTACHMENT 1
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OUTSIDE CONTAINMENT INTEGRITY VERIFICATION

Penetration No.:	Function:
65C	Integrated Leak Rate Test Penetration
	Drawing No.: 5613-M-3053 — Sheet No.: 1

S/G Blowdown Area

Component No.	Component Description	Normal Position	Checked (Initials)		
			(√) Tag	Functionally Locked	Positioned Correctly
3-2016	ILRT Line Test Connection Valve (Pen 65C)	CLOSED & CAPPED	√	N/A	S
3-2026	ILRT Line Isolation Valve (Pen 65C)	LOCKED CLOSED	√	S	S

Facility:	Turkey Point	Task No:	
Task Title:	SRO/RO:Perform A QPTR Calculation. SRO:Determine Corrective Actions	JPM No:	NRC-25-ADMIN-JPM-A.2
K/A Reference:	2.2.12 Knowledge of surveillance procedures. 3.7 / 4.1		
Examinee:		NRC Examiner:	
Facility Evaluator:		Date:	

Method of testing: _____

Simulated Performance _____ Actual Performance _____

Classroom _____ Simulator _____ Plant _____

Read to the examinee:
I will explain the initial conditionsand provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:
Unit 3 is in Mode 1 operating at 100% power.

Detector currents for all in service power range nuclear instrumentation channels are as follows:

N-41 Top:	179.8	N-41 Bottom:	153.0
N-42 Top:	142.0	N-42 Bottom:	142.2
N-43 Top:	151.3	N-43 Bottom:	127.1
N-44 Top:	183.1	N-44 Bottom:	160.6

Task Standard:

RO Candidate:
Performs 3-OSP-059.10, DETERMINATION OF QUADRANT POWER TILT RATIO Attachment 1 Steps 1 through 6.
SRO Candidate:
1. Performs 3-OSP-059.10, DETERMINATION OF QUADRANT POWER TILT RATIO
2. Determines QPTR is outside of acceptable range.
3. Applies Tech Spec 3.2.4

Required Materials:
1. Calculator
2. 3-OSP-059.10, DETERMINATION OF QUADRANT POWER TILT RATIO
3. Technical Specifications Section 3.2.4
4. Unit 3 Cycle 24 Plant Curve Book

General References:
1. 3-OSP-059.10, DETERMINATION OF QUADRANT POWER TILT RATIO
2. Technical Specifications Section 3.2.4
3. Unit 3 Cycle 24 Plant Curve Book

Initiating Cue:

RO:

1. Perform 3-OSP-059.10, DETERMINATION OF NIS QPTR USING EXCORE DETECTOR CURRENTS
2. Calculate NIS QPTR using excore detector currents. Using ATTACHMENT 1 of 3-OSP-059.10, DETERMINATION OF NIS QPTR USING EXCORE DETECTOR CURRENTS Steps 1 through 6.

SRO:

1. Perform 3-OSP-059.10, DETERMINATION OF NIS QPTR USING EXCORE DETECTOR CURRENTS
2. Determine Acceptance Criteria.
3. Determine ALL necessary Technical Specification actions, IF ANY, that must be completed.

Time Critical Task: No

Validation Time: ROs: 15 minutes
SROs: 20 minutes

HAND JPM BRIEFING SHEET TO EXAMINEE AT THIS TIME!

SIMULATOR SETUP

Reset to IC #

N/A

Load Lesson

N/A

Ensure Simulator Operator Checklist is complete

N/A

Denote critical steps with a check mark(√)

Start Time _____

STEP 1 :	Obtain copy of procedure.	___ SAT ___ UNSAT
Standard:	Obtains copy of 3-OSP-059.10.	
Cue	**1.** Provide copy/access 3-OSP-059.10, DETERMINATION OF QUADRANT POWER TILT RATIO **2.** Provide copy/access to Technical Specifications **3.** Provide copy/access to Unit 3 Cycle 24 Plant Curve Book	
Comment		
NOTE:	Evaluator may require the candidate to obtain the procedure.	

STEP 2 :	Record date, time and initials on page 1 of Attachment 1.	___ SAT ___ UNSAT
Standard:	Records date and time and initials.	
Cue	Provided by Initial Conditions.	
Comment		
NOTE:		

STEP 3 :	7.1.1 Read and record on Attachment 1 the top and bottom detector current for all in service power range nuclear instrumentation channels (meter face).	___ SAT ___ UNSAT
Standard:	Records detector currents for all in service power range nuclear instrumentation channels: N-41 Top: 179.8 N-41 Bottom: 153.0 N-42 Top: 142.0 N-42 Bottom: 142.2 N-43 Top: 151.3 N-43 Bottom: 127.1 N-44 Top: 183.1 N-44 Bottom: 160.6	
Cue	Provided by Initial Conditions.	
Comment		
NOTE:	7.0 **PROCEDURE** **NOTE** Attachments 1, 2, and 3 may be performed without interim rounding. For example, when using a calculator that has storage capabilities, after performance of a calculation and the stored results are added, the final result may not be the same as if each individual calculated value is rounded and then added [CR 99-0993].	

STEP 4 : √	7.1.2 Record the 100 percent power current values (from U3 Cycle 24 Sec. 5 Figure 5 PCB) on Attachment 1 for each in service power range nuclear instrumentation detector. UNIT 3 CYCLE 24 EXCORE NIS CALIBRATION FACTORS AND SETPOINTS	___ SAT ___ UNSAT

	POWER RANGE CURRENTS (100% power)		POWER RANGE NORMALIZATION FACTORS	
DETECTOR	TOP (micro-amps)	BOTTOM (micro-amps)	K constants for ERDADS	G constants for Eagle-21
N-41	189.8	162.3	1.975	3.950
N-42	140.6	142.4	1.975	3.950
N-43	156.4	135.6	1.975	3.950
N-44	180.3	159.6	1.975	3.950

Standard:	**Candidate locates and records values (from U3 Cycle 24 Sec. 5 Figure 5 PCB) in appropriate blocks on page 1 of Attachment 1.** **N-41 Top: 189.8 N-41 Bottom: 162.3** **N-42 Top: 140.6 N-42 Bottom: 142.4** **N-43 Top: 156.4 N-43 Bottom: 135.6** **N-44 Top: 180.3 N-44 Bottom: 159.6**	
Cue	Provided by Initial Conditions.	
Comment		
NOTE:		

STEP 5 : √	7.1.3 Complete calculations of Attachment 1. 1. Determination normalized detector currents.	___ SAT ___ UNSAT
Standard:	**Evaluator may use provided KEY to evaluate this STEP.** 1. Calculates normalized detector currents. N-41 Top: 179.8/189.8 = **0.94 to 0.95** N-42 Top: 142.0/140.6 = **1.00 to 1.01** N-43 Top: 151.3/156.4 = **0.96 to 0.97** N-44 Top: 183.1/180.3 = **1.01 to1.02** Upper Section Normalized Current Total = **3.91 to 3.95** N-41 Bottom: 153.0/162.3 = **0.94 to 0.94** N-42 Bottom: 142.2/142.4 = **0.99 to1.00** N-43 Bottom: 127.1/135.6 = **0.93 to 0.94** N-44 Bottom: 160.6/159.6 = **1.00 to 1.01** Lower Section Normalized Current Total = **3.86 to 3.89**	
Cue	Provided by Initial Conditions.	
Comment		
NOTE:		

STEP 6 : √	7.1.3 Complete calculations of Attachment 1. 2. Determination average normalized power.	___ SAT ___ UNSAT
Standard:	**Evaluator may use provided KEY to evaluate this STEP.** 2. Calculates average normalized power. Average Upper Section Normalized Power = (3.91/4) to (3.95/4) = **0.97 to 0.99** Average Lower Section Normalized Power = (3.86/4) to (3.89/4) = **0.96 to 0.98**	
Cue	Provided by Initial Conditions.	
Comment		
NOTE:		

STEP 7 : √	7.1.3 Complete calculations of Attachment 1. 3. Determine QPTR	___ SAT ___ UNSAT
Standard:	**Evaluator may use provided KEY to evaluate this STEP.** 3. Calculates QPTR. Upper Section Tilt Ratio = (1.02/0.97) to (1.02/.99) = **1.03 to 1.05** Lower Section Tilt Ratio = (1.01/0.96) to (1.01/0.98)= **1.03 to 1.05**	
Cue	Provided by Initial Conditions.	
Comment		
NOTE:		

STEP 8 : √	7.1.3 Complete calculations of Attachment 1. 4. Determine NIS QPTR.	___ SAT ___ UNSAT
Standard:	**Evaluator may use provided KEY to evaluate this STEP.** 4. Determines NIS QPTR. NIS QPTR = Highest Section Tilt Ratio = **1.03-1.05**	
Cue	Provided by Initial Conditions.	
Comment		
NOTE:		

STEP 9 : √	7.1.3 Complete calculations of Attachment 1. 5. Determine if NIS QPTR is < or = 1.02 (2.0%). 6. If QPTR is less than or equal to 1.02 (2.0 percent) [T.S. 3.2.4] (Circle one): No YES	___ SAT ___ UNSAT
Standard:	**Evaluator may use provided KEY to evaluate this STEP.** **Candidate:** **Tilt ratio = Acceptable range: 1.03 to 1.05)** **Determines QPTR is > 1.02** **Circles NO on Step 6 of ATT. 1**	
Cue	Provided by Initial Conditions.	
Comment		
NOTE:	**Precautions and Limitations** 4.2.3 With QPTR greater than 1.02 (2.0 percent), QPTR determination is required at least once per hour (Tech Spec 3/4.2.4).	
Terminating Cue:	**The task is complete for RO candidates when Attachment 1 has been completed.**	STOP

Stop Time _____

STEP 10 :	7.1.4 **IF** QPTR is greater than 1.02 (2.0 percent) **OR** Attachment 1 yields suspect QPTR results, **THEN** perform Subsection 7.2. 7.2.5 **IF** QPTR is greater than 1.02 (2.0 percent), **THEN** refer to Subsection 7.4 for additional actions while continuing with this section of the procedure.	____ SAT ____ UNSAT
Standard:	Candidate reads step and determines that Step 7.2 must be completed by I&C.	
Cue	If necessary inform applicant that Instrument and Control personnel will perform Step 7.2.	
Comment		
NOTE:		

STEP 11 :	7.3 Determine QPTR using at least one of the following five methods: Performed by RX Engineering	___ SAT ___ UNSAT
Standard:	Candidate reads step and determines that Step 7.3 must be completed by RX Engineering.	
Cue	If Candidate requests RX Engineering assistance tell candidate that RX Engineering will perform Step 7.3.	
Comment		
NOTE:		

STEP 7 : √	**FOR SROs:** Determines that TS 3.2.4 applies.	___ SAT ___ UNSAT
Standard:	**1. Calculate the QUADRANT POWER TILT RATIO at least once per hour** **2. Determines QUADRANT POWER TILT RATIO must be calculated at least once per hour until either:** **a) The QUADRANT POWER TILT RATIO is reduced to within its limit, or** **b) THERMAL POWER is reduced to less than 50% of RATED THERMAL POWER.** **3. Power Reduced to:** **91%for QPTR=1.03 or 85% for QPTR=1.05** **4. High Flux Trip Setpoint Reduced to:** **99% for QPTR=1.03 or 93%for QPTR=1.05** **STOP**	
Cue	None required	
Comment		
NOTE:	7.4 **IF** the actual QPTR is greater than 1.02 (2.0 percent) **OR** Subsection 7.3 can NOT be performed within 12 hours, **THEN** go to 3-ONOP-059.9, EXCESSIVE QUADRANT POWER TILT RATIO, **AND** notify Rx Engineering. Per TS 3.2.4, applicant identifies the following requirements: ACTION: a. With the QUADRANT POWER TILT RATIO determined to exceed 1.02 but less than or equal to 1.09: 1. Calculate the QUADRANT POWER TILT RATIO at least once per hour until either: a) The QUADRANT POWER TILT RATIO is reduced to within its limit, or b) THERMAL POWER is reduced to less than 50% of RATED THERMAL POWER. 2. Within 2 hours either: a) Reduce the QUADRANT POWER TILT RATIO to within its limit, or b) Reduce THERMAL POWER at least 3% from RATED THERMAL POWER for each 1% of indicated QUADRANT POWER TILT RATIO in excess of 1 and similarly reduce the Power Range Neutron Flux-High Trip Setpoints within the next 4 hours.	

Terminating Cue:	*The task is complete when the Examinee returns the cue sheet to the examiner.*	STOP

Stop Time _____

Verification of Completion

Job Performance Measure No. NRC-25-ADMIN-JPM-A.2

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question Documentation:

Question:

_____

_____

_____

_____

_____

Response:

_____

_____

_____

_____

_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____ _____

JPM BRIEFING SHEET

The examiner will explain the initial conditionsand provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

INITIAL CONDITIONS:

The plant is operating at 100% power.

Detector currents for all in service power range nuclear instrumentation channels are as follows:

N-41 Top:	179.8	N-41 Bottom:	153.0
N-42 Top:	142.0	N-42 Bottom:	142.2
N-43 Top:	151.3	N-43 Bottom:	127.1
N-44 Top:	183.1	N-44 Bottom:	160.6

Initiating Cue:

RO:

- Perform 3-OSP-059.10, DETERMINATION OF NIS QPTR USING EXCORE DETECTOR CURRENTS
- Calculate NIS QPTR using excore detector currents. Using ATTACHMENT 1 of 3-OSP-059.10, DETERMINATION OF NIS QPTR USING EXCORE DETECTOR CURRENTS Steps 1 through 6.

SRO:

- Perform 3-OSP-059.10, DETERMINATION OF NIS QPTR USING EXCORE DETECTOR CURRENTS
- Determine Acceptance Criteria.
- Determine ALL necessary Technical Specification actions, IF ANY, that must be completed.

TERMINATION CUE:

WHEN YOU HAVE COMPLETED THE ASSIGNED TASK, HAND YOUR JPM BRIEFING SHEET BACK TO EVALUATOR.

Acknowledge to the examiner when you are ready to begin.

HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

A2 KEY

ATTACHMENT 1
(Page 1 of 2)

DETERMINATION OF NIS QPTR USING EXCORE DETECTOR CURRENTS

1. Date: TODAY Time XXXX Initials: [signature]

2. Determination normalized detector currents:

Upper Section Normalized Detector Currents				
N41 Top Current / 100 Percent Top Current	=	179.8 micro amps / 189.8 micro amps	=	0.94-0.95
N42 Top Current / 100 Percent Top Current	=	142.0 micro amps / 140.6 micro amps	=	1.00-1.01
N43 Top Current / 100 Percent Top Current	=	151.3 micro amps / 156.4 micro amps	=	0.96-0.97
N44 Top Current / 100 Percent Top Current	=	183.1 micro amps / 180.3 micro amps	=	1.01-1.02
Upper Section Normalized Current Total			=	3.91-3.95

Lower Section Normalized Detector Currents				
N41 Bottom Current / 100 Percent Bottom Current	=	153.0 micro amps / 162.3 micro amps	=	0.94-0.94
N42 Bottom Current / 100 Percent Bottom Current	=	142.2 micro amps / 142.4 micro amps	=	0.99-1.00
N43 Bottom Current / 100 Percent Bottom Current	=	127.1 micro amps / 135.6 micro amps	=	0.93-0.94
N44 Bottom Current / 100 Percent Bottom Current	=	160.6 micro amps / 159.6 micro amps	=	1.00-1.01
Lower Section Normalized Current Total			=	3.86-3.89

ATTACHMENT 1
(Page 2 of 2)

DETERMINATION OF NIS QPTR USING EXCORE DETECTOR CURRENTS

3. Determination average normalized power:

Average Upper Section Normalized Power			
Upper Section Normalized Current Total / Upper detectors used (3 or 4)	=	3.91 3.95 / 4	= 0.97 – 0.99

Average Lower Section Normalized Power			
Lower Section Normalized Current Total / Lower detectors used (3 or 4)	=	3.86 3.89	= 0.96 – 0.98

4. Determine QPTR:

Upper Section Tilt Ratio			
Largest Upper Section Normalized Detector Current / Average Upper Section Normalized Power	=	1.02 / 0.97 0.99	= 1.05 – 1.03

Lower Section Tilt Ratio			
Largest Lower Section Normalized Detector Current / Average Lower Section Normalized Power	=	1.01 / 0.96 0.98	= 1.05 – 1.03

5. NIS QPTR = highest Section QPTR = 1.03 – 1.05

6. NIS QPTR is less than or equal to 1.02 (2.0 percent) [TS 3.2.4] (Circle one): (NO) YES

7. **IF** QPTR results are suspect or the above step is circled NO, **THEN** return to procedure Subsection 7.2 for additional guidance.

Performed by: _____ Date: _____ Time: _____

Reviewed by: _____ Date: _____

Approved by: _____ Date: _____
(Shift Manager or Unit Supervisor)

Facility:	Turkey Point	Task No:	
Task Title:	Determine Allowable Stay Time & Determine Radiological Requirements	JPM No:	NRC-25-ADMIN-JPM-A.3
K/A Reference:	2.3.7 Ability to comply with radiation work permit requirements during normal or abnormal conditions. 3.5/3.6		
Examinee:		NRC Examiner:	
Facility Evaluator:		Date:	

Method of testing:

Simulated Performance X Actual Performance

Classroom X Simulator Plant

Read to the examinee:
I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:

- Unit 4 RHR is being placed in Operation for Cooldown.
- Fail safe test of HCV-4-758 is required to be performed
- The surveillance involved will require valve manipulations in the vicinity of HCV-4-758
- The SNPO has received a whole body dose of 380 mrem TEDE for the current year.
- You are the the Field Supervisor (Admin RO)or Unit Supervisor and are holding a pre-job brief with the SNPO.
- You are discussing RWP requirements and ALARA concerns prior to commencing the task.

Task Standard:

- ALL questions from the Initiating Cue are answered correctly.

Required Materials:

- Radiation Work Permit 09-001, Routine Operations and Surveillances Tasks 1-4
- PTN Unit 4, Residual Heat Removal "A" Pump Room Monthly Survey Map
- PTN Unit 4, Residual Heat Removal "B" Pump Room Monthly Survey Map
- PTN Unit 4, Residual Heat Removal Heat Exchangers Room Monthly Survey Map
- PTN Unit 4, 10 foot Elevation (Access to RHR Pits) Room Monthly Survey Map
- Radiation Controlled Area Valve Locator Zones 102,103,104, and 105

General References:

1. 0-HPS-025.1, "General Posting Requirements for Radiological Hazards"
2. 0-ADM-600, "Radiation Protection Manual"
3. 0-ADM-604, "Radiological Protection Guidelines and Practices"
4. 0-HPS-020, "Radiation Surveys"
5. 0-HPS-021, "Surface Contamination Surveys"
6. 4-OP-050, Residual Heat Removal System

Initiating Cue:

Using the initial conditions and required references determine the following:

1. What is the maximum stay time based on the radiological conditions in the room without exceeding any RWP dose limits?
2. What is the minimum required dosimetry required for entry into the room?
3. Where is the lowest dose location in the Contaminated Area where the operator should stand in the event that he/she is required to wait there?

Time Critical Task: No

Validation Time: 15 minutes

HAND JPM BRIEFING SHEET TO EXAMINEE AT THIS TIME!

SIMULATOR SETUP

Reset to IC #

N/A

Denote critical steps with a check mark(!)

Start Time _____

STEP 1 :	Obtain a copy of Radiation Work Permit 09-001, Routine Operations and Surveillances and PTN Unit 4 Room Monthly RHR Survey Maps	___ SAT ___ UNSAT
Standard:	Copy of the RWP and Survey Maps are obtained.	
Cue	Provide a copy of the following: • Radiation Work Permit 09-001, Routine Operations and Surveillances • PTN Unit 4, Residual Heat Removal "A" Pump Room Monthly Survey Map • PTN Unit 4, Residual Heat Removal "B" Pump Room Monthly Survey Map • PTN Unit 4, Residual Heat Removal Heat Exchangers Room Monthly Survey Map • PTN Unit 4, 10 foot Elevation (Access to RHR Pits) Room Monthly Survey Map • Radiation Controlled Area Valve Locator Zones 102,103,104, and 105	
Comment		
EXAMINER NOTE:	The examinee needs to differentiate between the Survey Maps and Valve Locator Zones to get the correct results. **ALL** correct answers are provided on the JPM ANSWER KEY	

STEP 2 :	Use Radiation Controlled Area Valve Locator to determine location of HCV-4-758	___ SAT ___ UNSAT
Standard:	Determined Zone 105 location #30 is the location of HCV-4-758.	
Cue		
Comment		
NOTE:	*Candidate needs to determine correct Zone and Location from Zones 102-105 provided.*	

STEP 3 : √	What is the maximum stay time based on the radiological conditions in the room without exceeding any dose limits?	___ SAT ___ UNSAT
Standard:	**The examinee determines the maximum stay time is 1.0 hour by interpreting the RWP 25 mrem requirements and the PTN Unit 4, 10 foot Elevation (Access to RHR Pits) Room Monthly Survey Map data.**	
Comment		
EXAMINER NOTE:	The maximum stay time allowed under this RWP based on PTN Unit 4, 10 foot Elevation (Access to RHR Pits) Room highest general area dose rates is 1.0 hour. 25 mrem is the maximum dose allowed by RWP 09-0001 25 mrem/hr (from the highest general area dose rate in the Unit Room 25 mrem divided by 25 mrem per hour = 1.0 hr.	

STEP 5 : √	What is the minimum required dosimetry required for entry into the area?	___ SAT ___ UNSAT
Standard:	The examinee determines the following dosimetry is required by interpreting the RWP 09-0001 and the PTN Unit 4, 10 foot Elevation (Access to RHR Pits) Room **TLD and Electronic Dosimeter** **AND** **PAM or Telemetric Dosimeter for working in a High Noise Area**	
Comment		
EXAMINER NOTE:	RWP 09-001 specifies that Operators are required to wear a PAM or Telemetric Dosimeter for working in a High Noise Area.	

STEP 7 : √	Where is the lowest dose location in the area where the operator should stand in the event that he/she is required to wait there?	___ SAT ___ UNSAT
Standard:	**The examinee determines the lowest dose area in the PTN Unit 4, 10 foot Elevation (Access to RHR Pits) Room is near the Stairways Area near swipe 13 by interpreting the PTN Unit 4, 10 foot Elevation (Access to RHR Pits) Room survey map data.**	
Comment		

Terminating Cue:	**The task is complete when the Examinee returns the cue sheet to the examiner.**	**STOP**

Stop Time _____

Verification of Completion

Job Performance Measure No. NRC-25-ADMIN-JPM-A.3

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question Documentation:

Question:

_____

_____

_____

_____

_____

Response:

_____

_____

_____

_____

_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____ _____

JPM BRIEFING SHEET

The examiner will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

INITIAL CONDITIONS:

- Unit 4 RHR is being placed in Operation for Cooldown.
- Fail safe test of HCV-4-758 is required to be performed
- The surveillance involved will require valve manipulations in the vicinity of HCV-4-758
- The SNPO has received a whole body dose of 380 mrem TEDE for the current year.
- You are the the Field Supervisor (Admin RO)or Unit Supervisor and are holding a pre-job brief with the SNPO.
- You are discussing RWP requirements and ALARA concerns prior to commencing the task.

INITIATING CUE:

Using the initial conditions and required references determine the following:

1. What is the maximum stay time based on the radiological conditions in the room without exceeding any RWP dose limits?

2. What is the minimum required dosimetry required for entry into the room?

3. Where is the lowest dose location in the Contaminated Area where the operator should stand in the event that he/she is required to wait there?

Acknowledge to the examiner when you are ready to begin.

HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU HAVE SATISFACTORILY ANSWERED ALL THE QUESTIONS.

JPM ANSWER KEY

1. WHAT IS THE MAXIMUM STAY TIME BASED ON THE HIGHEST GENERAL AREA RADIATION IN THE ROOM?

   ANSWER: The maximum stay time allowed under this RWP based on Unit 4 10' Elevation Access to RHR Pits highest general area dose rates near HVC-4-758 is 60 min (1 hour)

   BASES: 25 mrem is the maximum dose allowed by RWP 09-0001.

   25 mrem / 25 mrem/hr (from the highest general area dose rate in the Unit _____ Room

   25 mrem divided by 25 mrem per hour = 1 hr.

2. WHAT IS THE MINIMUM REQUIRED DOSIMETRY REQUIRED FOR ENTRY INTO THE AREA?

   ANSWER: The following dosimetry is required:

   - TLD

   AND

   - PAM or PEA

3. WHERE IS THE LOWEST DOSE LOCATION IN THE CONTAMINATED AREA WHERE THE OPERATOR SHOULD STAND IN THE EVENT THAT HE/SHE IS REQUIRED TO WAIT THERE?

ANSWER: THE EXAMINEE DETERMINES THE LOWEST DOSE AREA IN THE PTN UNIT 4, 10 FOOT ELEVATION (ACCESS TO RHR PITS) ROOM IS NEAR THE STAIRWAYS AREA NEAR SWIPE # 13 BY INTERPRETING THE PTN UNIT 4, 10 FOOT ELEVATION (ACCESS TO RHR PITS) ROOM SURVEY MAP DATA..

Turkey Point Nuclear Plant

RADIATION WORK PERMIT

FPL
Nuclear Division
COPY

RWP Title: Routine Operations and Surveillances			RWP Number: 09-0001 Rev. 03
			09-0001
RWP Type: JOB SPECIFIC	RWP Status: ACTIVE	Begin Date: 1/16/2009	Close on Date:
ALARA ID:			
Estimated Dose: 2755 mrem	Estimated Hours: 79000	Actual Dose:	Actual Hours:

Locations

Buildings	Elevations	Rooms
Auxiliary Building - Common	ALL	General Area
Radwaste Building	ALL	General Area
RCA Yard - Common Areas	ALL	General Area

Radiological Conditions

Description	Value	Unit
Auxiliary Building G/A Gamma	<1 -80	mrem/hr
Auxiliary Building G/A Contamination	<1000	dpm/100cm2
Auxiliary Building G/A Airborne	<.30	DAC
RWB G/A Gamma	<1 - 70	mrem/hr
RWB G/A Contamination	<1000	dpm/100cm2
RWB G/A Airborne	<.30	DAC
RCA Yard/DSW/RWST	<1 - 10	mrem/hr

Tasks

Task	Description	Status
1	Radiation Protection Routine Activities	Active
2	Operations Department Routine Activities	Active
3	Chemistry Department Routine Activities	Active
4	Firewatch Personnel Routine Activities	Active

Additional Instructions

General Instructions:
A TLD and Electronic Dosimeter are required to enter the RCA.
A PAM or Telemetric Dosimeter is required for working in a high noise area.
Review current survey data prior to entering the work area.
Notify the work area RP Technician prior to entering overhead areas.
RP Coverage is required to remove material, tools or equipment from a Contaminated Area.

Approvals

Approver Title	Name	Date
SUPERVISOR	CARBERRY, BRIAN J	1/16/2009

Turkey Point Nuclear Plant

RADIATION WORK PERMIT

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Task Number: 1			**RWP Number:** 09-0001 Rev. 03
Task Description: Radiation Protection Routine Activities			**Task Status:** Active
ALARA ID:	**Stay Time Alarm (HH:MM):** 18:00		
Estimate Dose: 900 mrem	**Estimate Hours:** 32000		
Locked High-Rad: No	**High-Rad:** Yes	**High-Contamination:** Yes	**Hot-Particle:** Yes

Alarm Settings

	High Gamma Dose	High Gamma Rate	
	25 mrem	350 mrem/hr	

Requirements

Requirement Groups	Requirement Descriptions
Authorized Access	- Neutron Area access is authorized - Airborne Radioactivity Area access is authorized
Briefings Required	- A shiftly High Radiation Area briefing is required for HRA access
Contamination Control	- To work in a High Contamination Area one or more of the following may be required: A) Decontaminate area/equipment to <100,000 dpm/100cm2 (Decontamination shall be performed as directed by RP), B) Use HEPA ventilation / vacuum, C) Keep area/equipment wet during repairs, D) Cover or contain area/equipment
Dosimetry	- PAM or Telemetric Dosimeter is required for working in a high noise area and/or a High Radiation Area
Protective Clothing	- Shoe covers and gloves are the minimum protective clothing required for entry into a Contaminated Area. (A lab coat is required in tight areas) - A full set of protective clothing is required for kneeling or crawling in a Contaminated Area - Extra protective clothing is required to work with Highly Contaminated materials. The minimum dress requirement is a full set of protective clothing, extra gloves and/or shoe covers. A face shield may be required - In a Hot Particle Area, the minimum dress requirement is a full set of protective clothing, disposable outer coveralls, extra gloves, extra shoe covers and a face shield - Water resistant outer protective clothing is required to work in a wet Contamination Area
Respiratory Protection	- Respirator requirements to be determined on a case by case basis. A TEDE ALARA evaluation is required prior to respirator use

Additional Instructions

General Instructions:

Worker Instructions:

RP Instructions:

HRA Briefing is not required for RPT's when a survey meter is used for entry into a High Rad Area.
Comply with Hot Particle Controls as specified in 0-HPS-027.1.
CRF/Issues Warehouse RAM packages with dose rates >2.0 mrem/hr shall be transferred by the RP Tech to the RCA. Notify RPSS if any loose surface activity is found. All personnel shall wear TLD's when handling RAM with dose rate >2.0 mrem/hr and when entering an area of >0.5 mrem/hr. RP shall post all areas where TLD's are required.
Instruments shall be surveyed for loose contamination prior to disassembly.
Eye protection is required for personnel performing instrument checks with source wheel. Transporting of source wheel shall be performed by RP personnel only and shall remain in control of RP Personnel at all times when not inside the designated locked area.

Turkey Point Nuclear Plant

RADIATION WORK PERMIT

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Task Number: 2			RWP Number: 09-0001 Rev. 03
Task Description: Operations Department Routine Activities			Task Status: Active
ALARA ID:	Stay Time Alarm (HH:MM): 18:00		
Estimate Dose: 1800 mrem	Estimate Hours: 20000		
Locked High-Rad: No	High-Rad: Yes	High-Contamination: Yes	Hot-Particle: Yes

Alarm Settings

	High Gamma Dose	High Gamma Rate	
	25 mrem	350 mrem/hr	

Requirements

Requirement Groups	Requirement Descriptions
Authorized Access	- Neutron Area access is not authorized - Airborne Radioactivity Area access is limited to areas posted due to Noble Gas
Briefings Required	- A shiftly High Radiation Area briefing is required for HRA access
Contamination Control	- To work in a High Contamination Area one or more of the following may be required: A) Decontaminate area/equipment to <100,000 dpm/100cm2 (Decontamination shall be performed as directed by RP), B) Use HEPA ventilation / vacuum, C) Keep area/equipment wet during repairs, D) Cover or contain area/equipment - Notify RP prior to start of work with Highly Contaminated materials - Poly bags with absorbent material should be used to contain liquids when opening radioactive systems
Dosimetry	- PAM or Telemetric Dosimeter is required for working in a high noise area and/or a High Radiation Area
Exposure Control	- Notify ALARA if temporary shielding needs to be moved or modified - Use the Valve Locator Book to locate the valve. Use the book not your dose.
Job Coverage	- In Hot Particle Areas, RP Coverage is required. Worker shall receive a Hot Particle survey at least once every two hours and upon exit from the Hot Particle Area. Prior to work contact RP to discuss specific Hot Particle controls as specified in 0-HPS-027.1 - Continuous RP coverage is required for opening any portion of the resin fill piping - RP coverage is required to remove material, tools or equipment from a Contaminated Area.
Protective Clothing	- Shoe covers and gloves are the minimum protective clothing required for entry into a Contaminated Area. (A lab coat is required in tight areas) - Extra protective clothing is required to work with Highly Contaminated materials. The minimum dress requirement is a full set of protective clothing, extra gloves and/or shoe covers. A face shield may be required - In a Hot Particle Area, the minimum dress requirement is a full set of protective clothing, disposable outer coveralls, extra gloves, extra shoe covers and a face shield - Water resistant outer protective clothing is required to work in a wet Contamination Area - The minimum Protective clothing required for opening resin loading system and or venting/opening any radioactive system is a lab coat and gloves - When operating valves across contaminated boundaries, Operators shall remove gloves and discard them into the trash receptacle located in the area and proceed directly to a frisking station and perform a frisk. A full set of protective clothing is required for kneeling or crawling in a Contaminated Area

Additional Instructions

General Instructions:
Worker Instructions:
RP Instructions:

Turkey Point Nuclear Plant

RADIATION WORK PERMIT

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Nuclear Division
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Task Number: 3			**RWP Number:** 09-0001 Rev. 03
Task Description: Chemistry Department Routine Activities			**Task Status:** Active
ALARA ID:	**Stay Time Alarm (HH:MM):** 18:00		
Estimate Dose: 40 mrem	**Estimate Hours:** 17000		
Locked High-Rad: No	**High-Rad:** Yes	**High-Contamination:** Yes	**Hot-Particle:** No

Alarm Settings

	High Gamma Dose	High Gamma Rate	
	20 mrem	200 mrem/hr	

Requirements

Requirement Groups	Requirement Descriptions
Authorized Access	- Neutron Area access is not authorized - Airborne Radioactivity Area access is limited to areas posted due to Noble Gas - High Contamination Area access is limited to Sample Sinks
Briefings Required	- A shiftly High Radiation Area briefing is required for HRA access
Dosimetry	- PAM or Telemetric Dosimeter is required for working in a high noise area and/or a High Radiation Area
Protective Clothing	- A lab coat, shoe covers, and gloves are the minimum protective clothing required for entry into a Contaminated Area. A full set of protective clothing is required for kneeling or crawling in a Contaminated Area - Water resistant outer protective clothing is required to work in a wet Contamination Area - The minimum protective clothing required for making hand entries into a Contaminated Area is a lab coat and gloves

Additional Instructions

General Instructions:
No resin processing activities are authorized on this task.
Chemistry Techs may transfer samples and sampling equipment between contaminated areas without the assistance of RP.

Worker Instructions:
Notify RP prior to venting VCT's or Gas Decay Tanks.
Notify RP prior to sampling radioactive systems.
After sampling radioactive systems rinse sample sink with clean water to reduce contamination levels.

RP Instructions:
Prior to sampling U3 VCT: restrict access to the Aux Bldg 4' elev. and Hot Chem Lab to preclude exposure where Noble gases are known to be present and post these areas in accordance with station procedures.
Upon completion of U3 VCT sampling, de-post these areas appropriately.

Turkey Point Nuclear Plant

RADIATION WORK PERMIT

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Task Number: 4			RWP Number: 09-0001 Rev. 03
Task Description: Firewatch Personnel Routine Activities			Task Status: Active
ALARA ID:	Stay Time Alarm (HH:MM): 18:00		
Estimate Dose: 15 mrem	Estimate Hours: 10000		
Locked High-Rad: No	High-Rad: Yes	High-Contamination: Yes	Hot-Particle: Yes

Alarm Settings

	High Gamma Dose	High Gamma Rate	
	5 mrem	80 mrem/hr	

Requirements

Requirement Groups	Requirement Descriptions
Authorized Access	- Airborne Radioactivity Area access is limited to areas posted due to Noble Gas - Containment Building access is not authorized
Briefings Required	- A shiftly High Radiation Area briefing is required for HRA access
Contamination Control	- To work in a High Contamination Area one or more of the following may be required: A) Decontaminate area/equipment to <100,000 dpm/100cm2 (Decontamination shall be performed as directed by RP), B) Use HEPA ventilation / vacuum, C) Keep area/equipment wet during repairs, D) Cover or contain area/equipment - Notify RP prior to start of work with Highly Contaminated materials
Dosimetry	- PAM or Telemetric Dosimeter is required for working in a high noise area and/or a High Radiation Area
Protective Clothing	- A lab coat, shoe covers, and gloves are the minimum protective clothing required for entry into a Contaminated Area. A full set of protective clothing is required for kneeling or crawling in a Contaminated Area - Extra protective clothing is required to work with Highly Contaminated materials. The minimum dress requirement is a full set of protective clothing, extra gloves and/or shoe covers. A face shield may be required - In a Hot Particle Area, the minimum dress requirement is a full set of protective clothing, disposable outer coveralls, extra gloves, extra shoe covers and a face shield - Water resistant outer protective clothing is required to work in a wet Contamination Area

Additional Instructions

General Instructions:
Worker Instructions:
RP Instructions:

REV. 5/14/07

FLORIDA POWER & LIGHT - PTN

HP-44:30A

LOCATION: UNIT 4 RESIDUAL HEAT REMOVAL "A" Pump Room

LOG# 09-0361

DATE: 1-28-09

TIME: 1320

TECH.: DANIELS

PID#: 209

SIGNATURE: [signature]

RWP #: 1-1

Instrument	HPI #
RO-20	1225
LD2200	1193
LD2200	1195
RM-25	1247

β MDA= 129/113 dpm

α MDA= N/A dpm

(A) AIRBORNE AREA
(B) RESPIRATORY PROTECTION
(C) CONTAMINATED AREA
(D) HIGHLY CONTAMINATED AREA
(E) EXCLUSION AREA
(F) HOT PARTICLE AREA
(H) HIGH RADIATION AREA
(K) KEEP OUT
(L) LOCKED HIGH RAD AREA
(M) RADIOACTIVE MATERIAL
(N) NOTIFY HP PRIOR TO ENTRY
(R) RADIATION AREA
(S) SURVEY METER REQUIRED
(T) H.P. COVERAGE REQUIRED
( ) N
( )

REFER TO LOCAL AREA POSTINGS FOR ADDITIONAL INFORMATION

DOSE RATES IN MREM/HR UNLESS OTHERWISE NOTED

— = GENERAL AREA DOSE RATE
★ = CONTACT DOSE RATE
○ = SMEAR LOCATION
△ = NEUTRON DOSE RATE
□ = BETA DOSE RATE
-0-0-0- = CONTAMINATED BOUNDARY
- - - - - - = RAD BOUNDARY

Remarks: Quarterly

SMEARS dpm/100cm² (COUNT AT LEAST ONE SMEAR ≥ 60,000 DPM FOR ALPHA)

1 <MDA	6 207	11 <MDA	16 N/A	21 N/A	26 N/A
2	7 <MDA	12	17	22	27
3	8	13 <MDA	18	23	28
4	9	14 N/A	19	24	29
5 <MDA	10 <MDA	15 N/A	20 N/A	25 N/A	30 N/A

SMEAR NO.: N/A

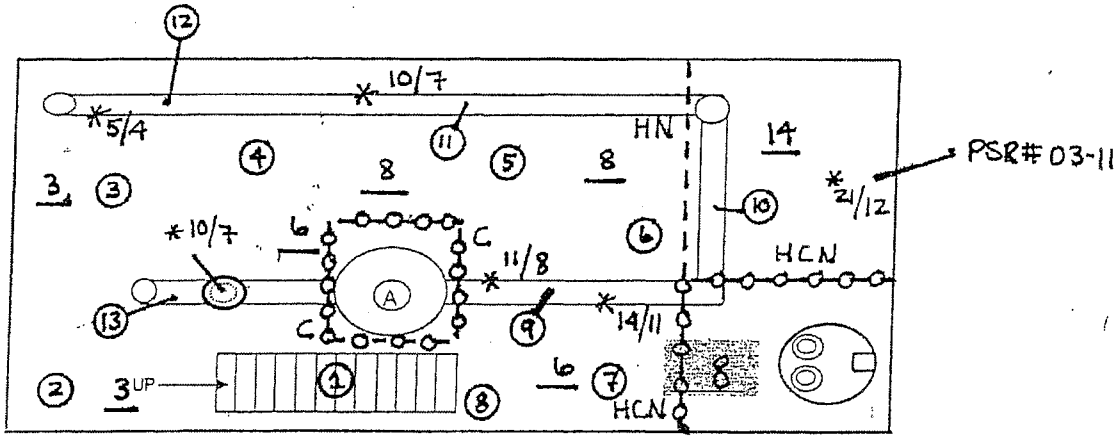
BETA/GAMMA:

ALPHA: N/A

REVIEWED BY:

PRINT: _____ SIGN: _____ DATE: _____

= SURVEY POINTS



LARGE AREA SMEARS All <1000 dpm/grass-wipe, beta-gam

COPY

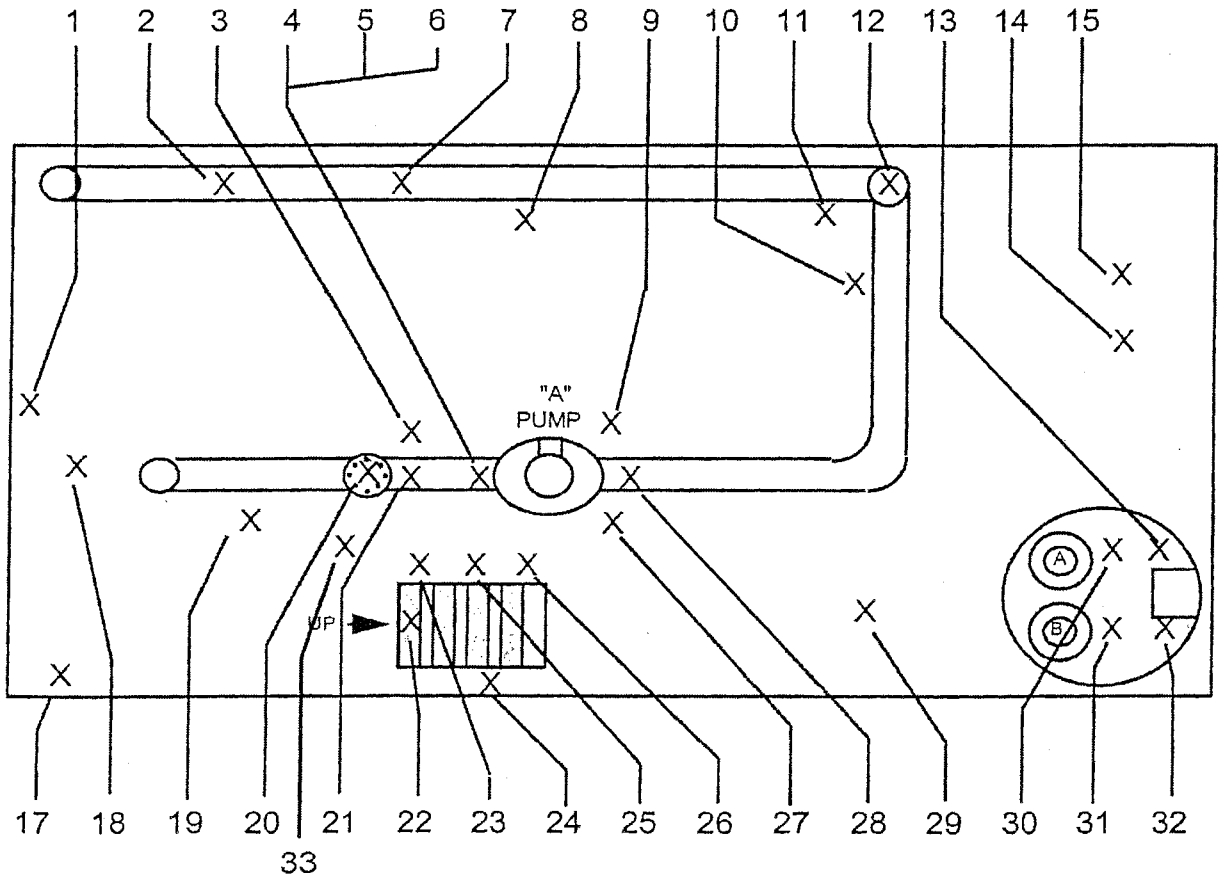
ZONE 102

REV. 11/30/06

UNIT-4 "A" RHR PUMP ROOM

Location	Valve	Feet Off Floor
1	4-755A	7.5
2	MOV-4-861A	6
3	4-1461	2
4	4-769C	5
5	4-938A	5
6	4-939A	5
7	4-899D	3.5
8	4-1462	3
9	4-766C	1
10	4-766E	1
11	4-762A	6.5
12	4-752A(V.O.)	8.5
13	4-12-008	1.5
14	MOV-4-862B	5
15	4-942R	3
16		
17	4-70-117	7.5

Location	Valve	Feet Off Floor
18	4-754A(V.O.)	11
19	4-10-039	11
20	4-753A	2
21	4-756A	3
22	4-768A	4.5
23	40-1848	11
24	4-769A	3
25	40-1847	11
26	40-1846	11
27	4-766A	0.5
28	4-756C	3.5
29	4-10-040	11
30	4-12-007	1
31	4-12-009	1
32	4-12-010	1.5
33	4-767A (H.W.)	1
34		



(V.O.) = Location of the valve NOT the hand wheel (H.W.) = Location of the hand wheel Not the valve

REV. 5/14/07

FLORIDA POWER & LIGHT - PTN

HP-44:30B

LOCATION: UNIT 4 RESIDUAL HEAT REMOVAL "B" Pump Room

LOG# 09-0389

DATE: 2-20-09

TIME: 16:30

TECH.: D Nattig

PID#: 1131

SIGNATURE: D Nattig

RWP #: 11

Instrument	HPI #
RO20	1225
XLB	1201
RM25	1247

β MDA= 22.45 dpm

α MDA= 17.44 dpm

(A) RADIOLOGICAL AREA
(B) RESPIRATORY PROTECTION
(C) CONTAMINATED AREA
(D) HIGHLY CONTAMINATED AREA
(E) EXCLUSION AREA
(F) HOT PARTICLE AREA
(H) HIGH RADIATION AREA
(K) KEEP OUT
(L) LOCKED HIGH RAD AREA
(M) RADIOACTIVE MATERIAL
(N) NOTIFY HP PRIOR TO ENTRY
(R) RADIATION AREA
(S) SURVEY METER REQUIRED
(T) H.P. COVERAGE REQUIRED
( )
( )

REFER TO LOCAL AREA POSTINGS FOR ADDITIONAL INFORMATION

DOSE RATES IN MREM/HR UNLESS OTHERWISE NOTED

= GENERAL AREA DOSE RATE
○ = SMEAR LOCATION
△ = NEUTRON DOSE RATE
□ = BETA DOSE RATE
0000 = CONTAMINATED BOUNDARY
------ = RAD BOUNDARY

Remarks: Quarterly.

SMEARS dpm/100cm² (COUNT AT LEAST ONE SMEAR ≥ 50,000 DPM FOR ALPHA)

1 <LMDA	6 <LMDA	11 133	16 <LMDA	21	26	
2 <LMDA	7 48	12 503	17 <LMDA	22	27	
3 <LMDA	8 315	13 <LMDA	18 N/A	23 N/A	28 N/A	
4 <LMDA	9 <LMDA	14 <LMDA	19 N/A	24 N/A	29 N/A	
5 <LMDA	10 <LMDA	15 <LMDA	20 N/A	25	30	

SMEAR NO.:

BETA/GAMMA: N/A

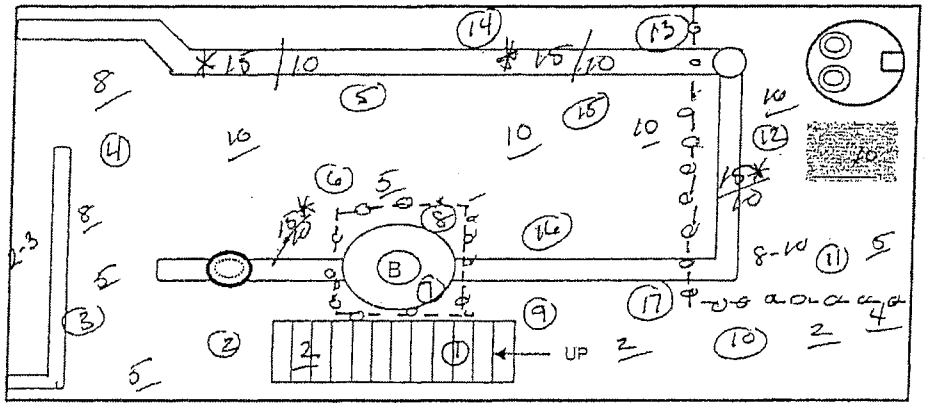
ALPHA:

REVIEWED BY:

PRINT: _____ SIGN: _____ DATE: _____

= SURVEY POINTS

LAS < 1000 dpm Gross wipe
BY PER LAS



Room Posted Top of Caddock "R"

COPY

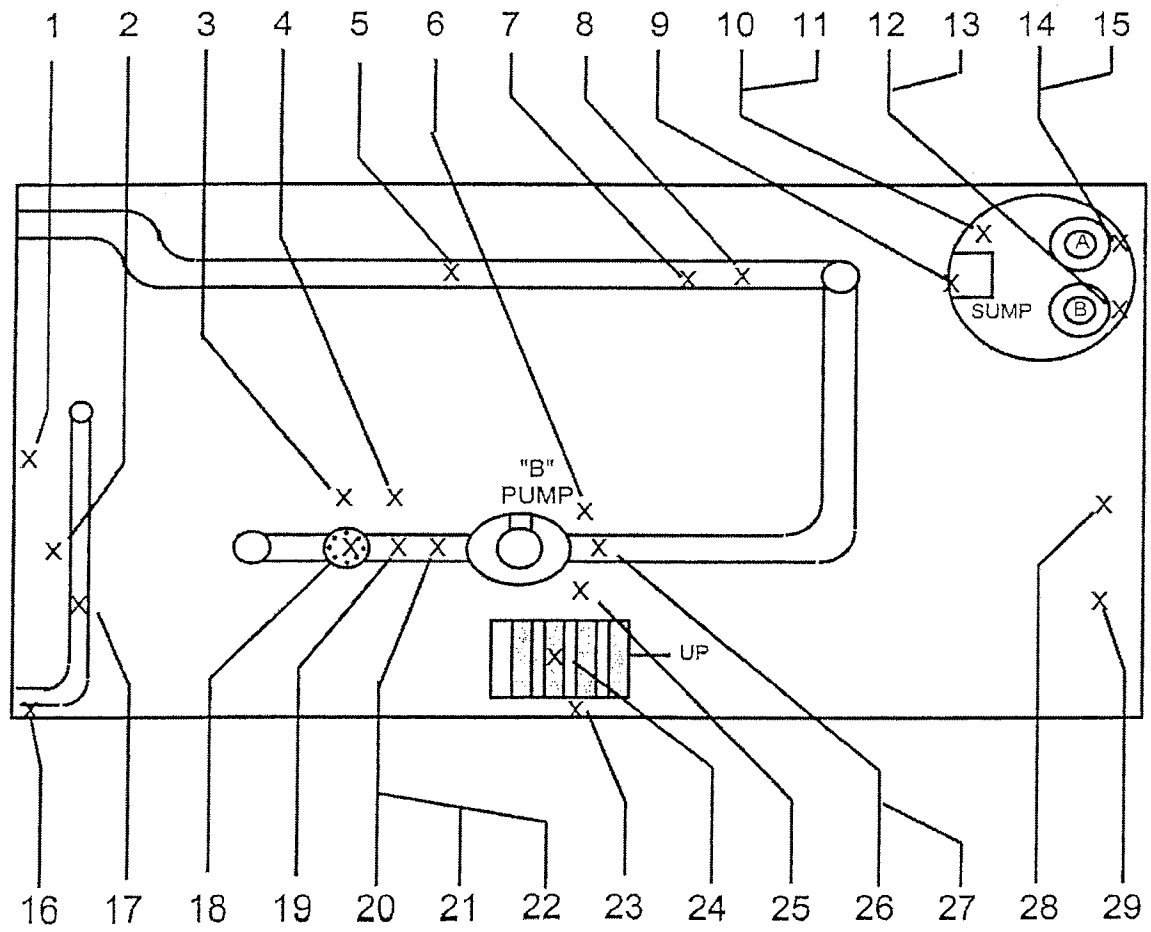
ZONE 103

REV. 11/30/06

UNIT-4 "B" RHR PUMP ROOM

Location	Valve	Feet Off Floor
1	4-755B	7
2	4-754B(V.O.)	11
3	4-767B(V.O.)	0.5
4	4-1463	2
5	MOV-4-861B	5
6	4-766D	1
7	4-899F	3.5
8	4-1464	3
9	4-766F	1
10	4-752B(V.O.)	8
11	4-762B	6.5
12	4-12-014	2
13	4-12-013	1
14	4-12-011	1
15	4-12-012	2

Location	Valve	Feet Off Floor
16	4-70-117B	7
17	4-887	2
18	4-753B	2
19	4-756B	3
20	4-939B	5
21	4-938B	5
22	4-769D	5
23	4-769B	3
24	4-768B	4
25	4-766B	1
26	4-756D	3
27	4-1091	3.5
28	MOV-4-862A	8
29	4-942P	6
30		



(V.O.) = Location of the valve NOT the hand wheel (H.W.) = Location of the hand wheel Not the valve

REV. 5/14/07

FLORIDA POWER & LIGHT - PTN

HP-44:30Hx

LOCATION: UNIT 4 RESIDUAL HEAT REMOVAL Heat Exchangers

LOG# 09 -0388

DATE: 01-30-09

TIME: 0950

TECH.: Daniels

PID#: 209

RWP #: 1-1

Instrument	HPI#
RO-20	1140
RM-25	1247
LD2200	1193
LD2200	1195

β MDA= 121 / 106 dpm

α MDA= N/A dpm

(A) AIRBORNE AREA
(B) RESPIRATORY PROTECTION
(C) CONTAMINATED AREA
(D) HIGHLY CONTAMINATED AREA
(E) EXCLUSION AREA
(F) HOT PARTICLE AREA
(H) HIGH RADIATION AREA
(K) KEEP OUT
(L) LOCKED HIGH RAD AREA
(M) RADIOACTIVE MATERIAL
(N) NOTIFY HP PRIOR TO ENTRY
(R) RADIATION AREA
(S) SURVEY METER REQUIRED
(T) H.P. COVERAGE REQUIRED
( ) N/A
( ) N/A

REFER TO LOCAL AREA DOOR FOR ADDITIONAL INFORMATION

DOSE RATES IN MREM/HR UNLESS OTHERWISE NOTED

____ = GENERAL AREA DOSE RATE
* = CONTACT DOSE RATE
○ = SMEAR LOCATION
△ = NEUTRON DOSE RATE
□ = BETA DOSE RATE
-0-0-0- = CONTAMINATED BOUNDARY
- - - - - - = RAD BOUNDARY

Remarks: Quarterly

SMEARS dpm/100cm² (COUNT AT LEAST ONE SMEAR ≥ 50,000 DPM FOR ALPHA)

1 <MDA	6 <MDA	11 <MDA	16 N/A	21 N/A	26 N/A
2 <MDA	7	12 <MDA	17	22	27
3 <MDA	8	13 243	18	23	28
4 <MDA	9	14 <MDA	19	24	29
5 343	10 <MDA	15 <MDA	20	25	30

SMEAR NO.: N/A

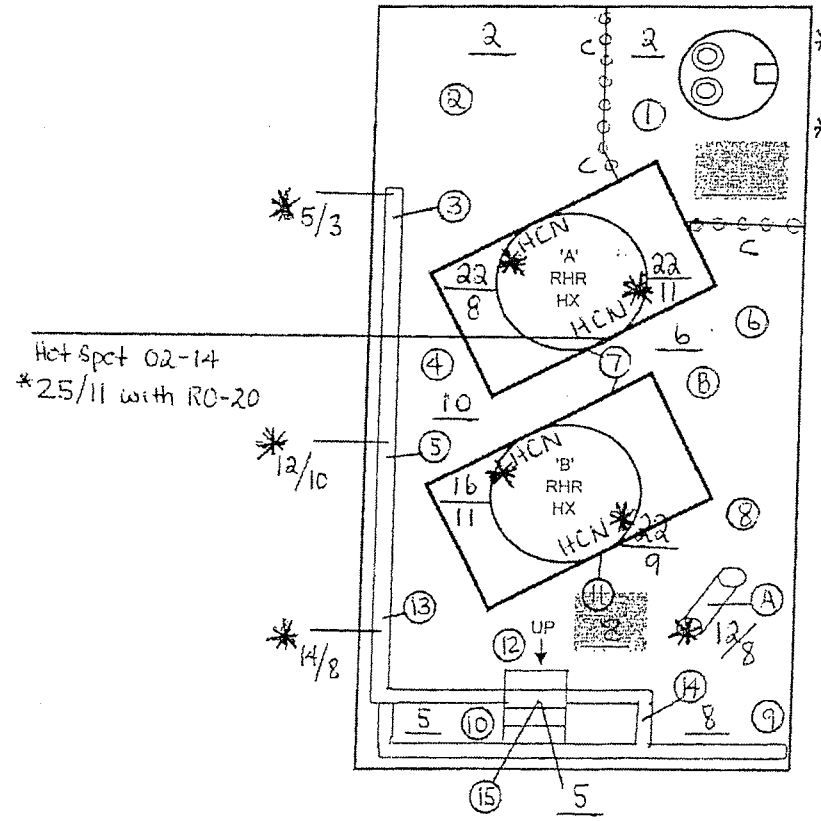
BETA/GAMMA:

ALPHA:

REVIEWED BY:

PRINT: _____ SIGN: _____ DATE: _____

= SURVEY POINTS



*LARGE AREA SMEARS (A & B): <1000 dpm/gross-wipe, beta-gamma

* ROOM POSTED: 'R' @ 18'

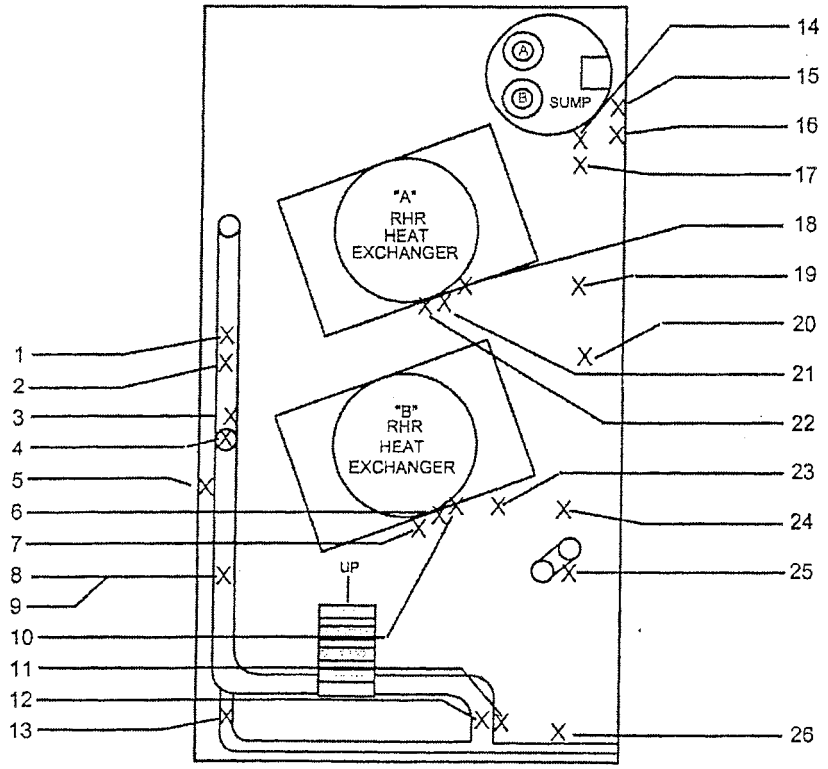
ZONE 104

REV. 11/30/06

UNIT-4 RHR HX ROOM

Location	Valve	Feet Off Floor
1	4-771E	6
2	4-759A(V.O.)	6
3	4-771F	9
4	4-759B(V.O.)	8
5	4-760A	3
6	4-771D	5.5
7	4-771C	5.5
8	4-842	1
9	4-943V	4
10	4-746D	10.5
11	4-943W	1
12	MOV-4-863B	2
13	MOV-4-863A	2
14	4-12-017	2
15	4-12-016	2

Location	Valve	Feet Off Floor
16	4-12-015	2
17	4-12-018	2
18	4-746C	10.5
19	4-757A(V.O.)	10
20	4-757D(V.O.)	10
21	4-771B	5.5
22	4-771A	5.5
23	4-757B(V.O.)	9
24	4-757C(V.O.)	10
25	4-757F	1
26	4-942T	1
27		
28		
29		
30		



(V.O.) = Location of the valve NOT the hand wheel (H.W.) = Location of the hand wheel Not the valve

REV. 12/4/06

FLORIDA POWER & LIGHT - PTN

HP-44:30.1

LOCATION: UNIT 4 10' ELEVATION (ACCESS TO RHR PITS)

LOG# 08-7381

DATE: 12-16-08

TIME: 19:05

TECH.: Storey

PID#: 137

SIGNATURE:

RWP #: 2

Instrument	HPI #
RO-2	494
RM3C-4	410
SS-XLB	1200

β MDA= 22.59 dpm

α MDA= N/A dpm

(A) AIRBORNE AREA
(B) RESPIRATORY PROTECTION
(C) CONTAMINATED AREA
(D) HIGHLY CONTAMINATED AREA
(E) EXCLUSION AREA
(F) HOT PARTICLE AREA
(H) HIGH RADIATION AREA
(K) KEEP OUT
(L) LOCKED HIGH RAD AREA
(M) RADIOACTIVE MATERIAL
(N) NOTIFY HP PRIOR TO ENTRY
(P) RADIATION AREA
(S) SURVEY METER REQUIRED
(T) H.P. COVERAGE REQUIRED
( ) N/A
( ) N/A

REFER TO LOCAL AREA POSTINGS FOR ADDITIONAL INFORMATION

DOSE RATES IN MREM/HR UNLESS OTHERWISE NOTED

- ____ = GENERAL AREA DOSE RATE
- • = CONTACT DOSE RATE
- ○ = SMEAR LOCATION
- △ = NEUTRON DOSE RATE
- □ = BETA DOSE RATE
- -0-0-0- = CONTAMINATED BOUNDARY
- - - - - - = RAD BOUNDARY

Remarks: All dose rates ≤1 and *≤1/cl unless denoted differently below. No hot particles detected

SMEARS dpm/100cm² (COUNT AT LEAST ONE SMEAR ≥ 50,000 DPM FOR ALPHA)

1	<MDA	6	<MDA	11	<MDA	16	<MDA	21	<MDA	26	
2	<MDA	7	<MDA	12	<MDA	17	<MDA	22	<MDA	27	N
3	<1000	8	<MDA	13	23.48	18	<MDA	23	<MDA	28	A
4	<1000	9	<1000	14	<MDA	19	<MDA	24	<MDA	29	"
5	38.46	10	<MDA	15	<MDA	20	<MDA	25	<MDA	30	

SMEAR NO.: N

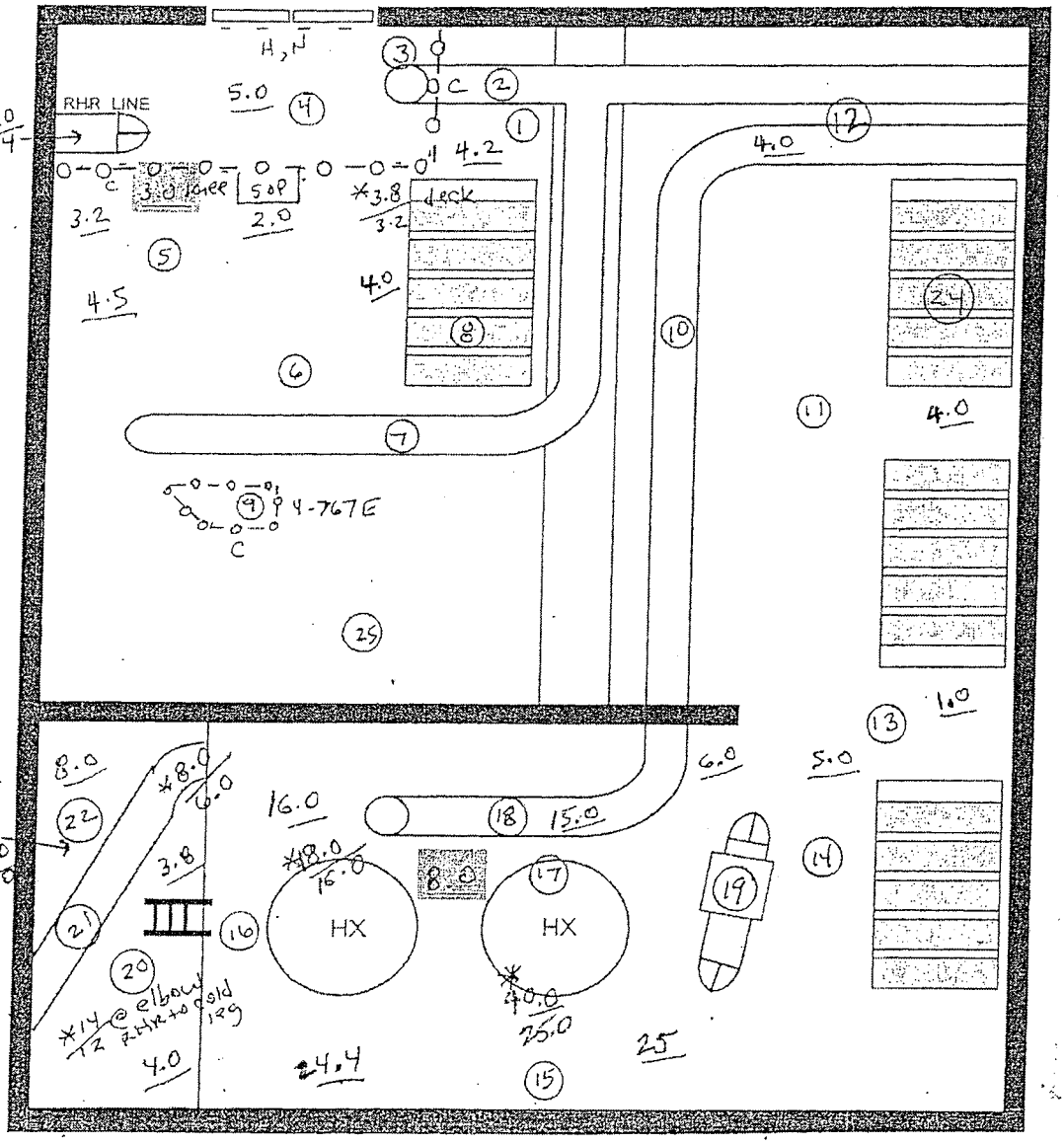
BETA/GAMMA: A

ALPHA:

REVIEWED BY:

PRINT: _____ SIGN: _____ DATE: _____

= SURVEY POINTS



COPY

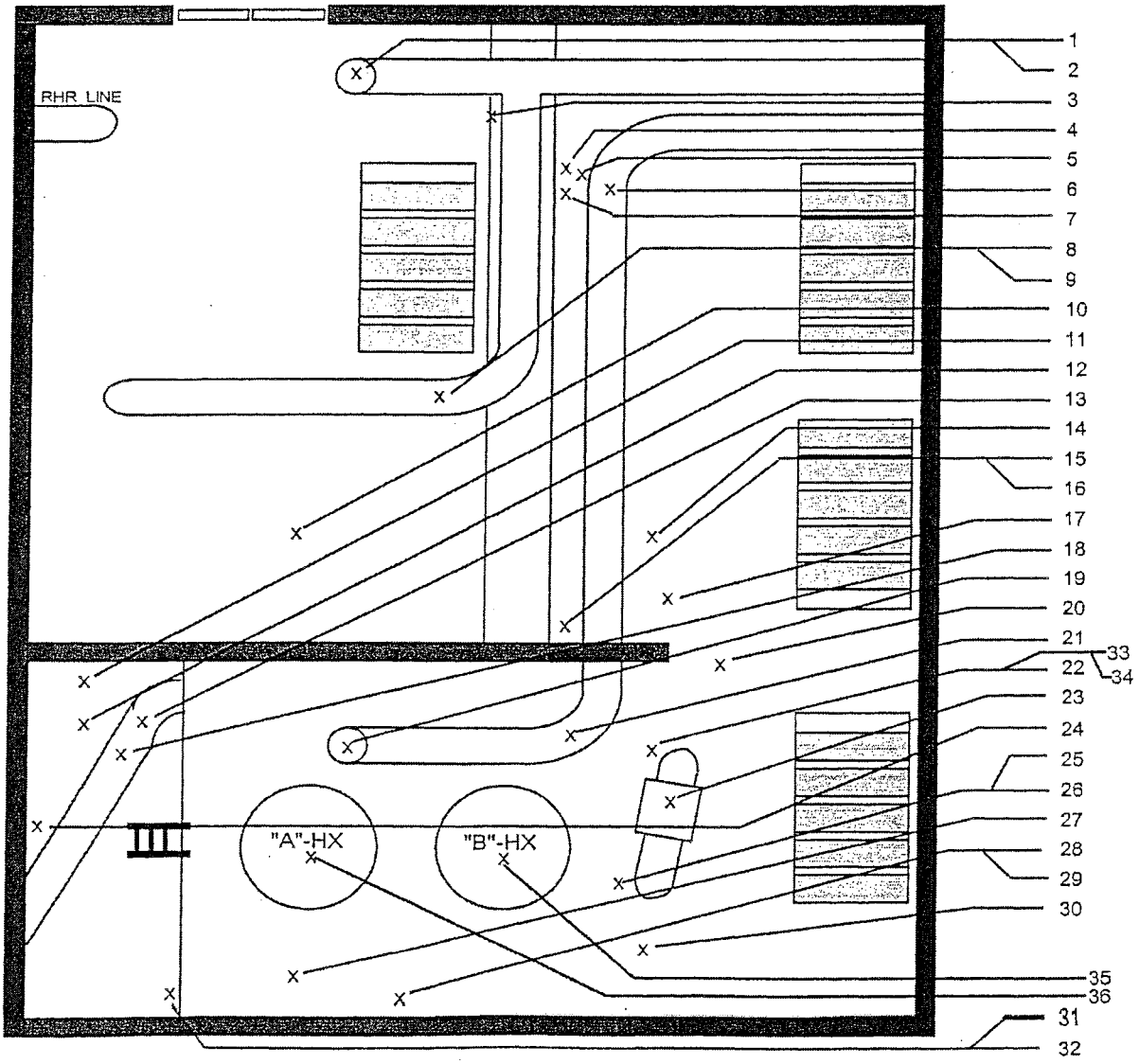
ZONE 105

REV. 11/30/06

UNIT-4 10' ACCESS TO RHR PITS

Location	Valve	Feet Off Floor
1	4-835B	2
2	4-835A	5
3	4-770C	2
4	4-770D	5
5	4816	0.5
6	4802	0.5
7	4-770A	5
8	4-791K	1
9	4-791J	4
10	4-767E	1
11	4-898N (V.O.)	1
12	4-893E	1
13	4-899E	2
14	4-767F	1
15	4-835C	5

Location	Valve	Feet Off Floor
16	4-835D	1.5
17	4-770B	2
18	MOV-4-860B	2
19	4-746A (V.O.)	8.5
20	40-1845	6
21	4-746B (V.O.)	8.5
22	4-40-1905	5.5
23	FCV-4-605	5
24	4-761F	4
25	40-1844	5
26	40-1843	3
27	4-761E	15
28	4-746E	5
29	4-746F	5
30	HCV-4-758	1



(V.O.) = Location of the valve NOT the hand wheel (H.W.) = Location of the hand wheel Not the valve

ZONE 105

REV. 11/30/06

UNIT-4 10' ACCESS TO RHR PITS

Location	Valve	Feet Off Floor
31	4-761B	14
32	4-761A	14
33	4-40-1898	5
34	4-40-1896	6
35	4-765B	21
36	4-765A	21
37		
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Location	Valve	Feet Off Floor
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122		

(V.O.) = Location of the valve NOT the hand wheel (H.W.) = Location of the hand wheel Not the valve

Facility:	Turkey Point	Task No:	
Task Title:	Perform 3-EOP-F-0, Evaluate Critical Safety Function Status Trees	JPM No:	NRC-25-ADMIN-JPM-RA.4
K/A Reference:	2.4.22 Knowledge of the bases for prioritizing safety functions during abnormal/emergency operations		
Examinee:		NRC Examiner:	
Facility Evaluator:		Date:	
Method of testing:			
Simulated Performance		Actual Performance	
Classroom	Simulator	Plant	

Read to the examinee:
I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:

- An accident is in progress. The crew has previously left E-0, Reactor Trip or Safety Injection You have been directed to monitor 3-EOP-F-0, Critical Safety Function Status Trees.

Current Unit Conditions:

- TE-3-6700 = 272 °
- TE-3-6701 = 272 °
- TE-3-6702 = 272 °

- N-3-41= 0%
- N-3-42= 0%
- N-3-43= 0%
- N-3-44= 0%

- N-3-35= 1x 10E -11
- N-3-36= 1x 10E -11

- N-3-35 SUR= -0.3 DPM and lowering
- N-3-36 SUR= -0.3 DPM and lowering

- N-3-31= 4000 cps
- N-3-32= 4000 cps

- N-3-31 SUR= -0.3 DPM and lowering
- N-3-32 SUR= -0.3 DPM and lowering

- Gamma-Metrics NI-3-6649A= 1000cps and 10E-5 % PWR and lowering
- Gamma-Metrics NI-3-6649B= 1000cps and 10E-5 % PWR and lowering

- All Unit 3 CETS = 715 °
- Unit 3 CET Subcooling = 5° Superheat
- Auxiliary Feedwater Flow Train 1 = 0 gpm
- Auxiliary Feedwater Flow Train 2 = 0 gpm
- A S/G NR = 7%
- B S/G NR = 8%
- C S/G NR = 8%
- A S/G Press = 0 psig
- B S/G Press = 400 psig
- C S/G Press = 400 psig
- Cold Leg Decrease in the last 60 min = 0 °
- Lowest Cold Leg Temperature = 503 °
- Current Cold Leg Temperature = 710 °
- Containment Pressure = 15.7 psig
- Containment Recirculation Sump = 404 inches
- Containment Radiation = 5.92 x E-2 R
- Pressurizer Level = 0%
- RVLMS Indicates Voids

Task Standard:

- Operator 3-EOP-F-0, Critical Safety Function Status Trees and determines the status of Enclosures 1-6.
-

Required Materials:

- 3-EOP-F-0, Critical Safety Function Status Trees

General References:

- 3-EOP-F-0, Critical Safety Function Status Trees

Initiating Cue:

- An accident is in progress. The crew has previously left E-0, Reactor Trip or Safety Injection
- You have been directed to perform 3-EOP-F-0, Critical Safety Function Status Trees.
- Provide Unit Supervisor with a marked up copy of 3-EOP-F-0, Critical Safety Function Status Trees..

Time Critical Task: No

Validation Time: 17 minutes

HAND JPM BRIEFING SHEET TO EXAMINEE AT THIS TIME!

SIMULATOR SETUP

Reset to IC #

N/A

Load Lesson

N/A

Ensure Simulator Operator Checklist is complete

N/A

Denote critical steps with a check mark(√)

Start Time _____

STEP 1 : √	1 Determine Containment Conditions a. Check containment temperature · TE-3-6700 · TE-3-6701 · TE-3-6702 a. Use adverse containment - LESS THAN 180°F setpoints **AND** go to Step 2.	___ SAT ___ UNSAT
Standard:	• **From Initial Conditions Operator observes Containment Temperature to be 272 °** • **Operator concludes Containment atmosphere is adverse and proceeds to Step 2.**	
Cue	Provided by Initial Conditions.	
Comment		
NOTE:		

STEP 2 :	2 Monitor Critical Safety Functions Using Rules Of Usage Provided In ATTACHMENT 1	___ SAT ___ UNSAT
Standard:	Operator proceeds to Attachment 1 of 3-EOP-F-0, Critical Safety Function Status Trees.	
Cue	Provided by Initial Conditions.	
Comment		
NOTE:		

STEP 3 : √	Monitor Subcriticality using Enclosure 1	___ SAT ___ UNSAT
Standard:	• **Subcriticality monitored using Enclosure 1** • N-3-41= 0% • N-3-42= 0% • N-3-43= 0% • N-3-44= 0% • N-3-35= 1x 10E -11 • N-3-36= 1x 10E -11 • N-3-35 SUR= -0.3 DPM and lowering • N-3-36 SUR= -0.3 DPM and lowering • N-3-31= 4000 cps • N-3-32= 4000 cps • N-3-31 SUR= -0.3 DPM and lowering • N-3-32 SUR= -0.3 DPM and lowering • Gamma-Metrics NI-3-6649A= 1000cps and 10E-5 % PWR and lowering • Gamma-Metrics NI-3-6649B= 1000cps and 10E-5 % PWR and lowering • **Using current Unit conditions determined CSF for Subcriticality to be (SAT) Green**	
Cue	Provided by Initial Conditions.	
Comment		
NOTE:		

STEP 4 : √	Monitor Core Cooling using Enclosure 2	___ SAT ___ UNSAT
Standard:	Monitored Core Cooling using Enclosure 2: • Unit 3 CET Subcooling = 5° Superheat • All Unit 3 CETS = 715 ° • • **Used current Unit conditions determined CSF for Core Cooling to be ORANGE** • • **Candidate continues through F-0**	
Cue	Provided by Initial Conditions.	
Comment		
NOTE:		

STEP 5 : √	Monitor Heat Sink using Enclosure 3	___ SAT ___ UNSAT
Standard:	Heat Sink monitored using Enclosure 3: • Operator Evaluates the following: • Auxiliary Feedwater Flow Train 1 = 0 gpm • Auxiliary Feedwater Flow Train 2 = 0 gpm • A S/G NR = 7% • B S/G NR = 8% • C S/G NR = 8% • **Using Current Unit conditions determined a RED path on Heat Sink CSF.** • **Candidate continues through F-0**	
Cue	Provided by Initial Conditions.	
Comment		
NOTE:		

STEP 6 : √	Monitor ENCLOSURE 4 CSF F-0.4 INTEGRITY	___ SAT ___ UNSAT
Standard:	Candidate Monitors Enclosure 4 • Cold Leg Decrease in the last 60 min = 0 ° • Lowest Cold Leg Temperature = 503 ° • Current Cold Leg Temperature = 710 ° • **Candidate determines Enclosure 4 Integrity is Green/SAT** • **Candidate continues through F-0** •	
Cue	Provided by Initial Conditions.	
Comment		
NOTE:		

STEP 7 : √	Monitor ENCLOSURE 5 CSF F-0.5 CONTAINMENT	___ SAT ___ UNSAT
Standard:	Candidate Monitors ENCLOSURE 5 • Containment Pressure = 15.7 psig • Containment Recirculation Sump = 404 inches • Containment Radiation = 5.92 x E-2 R **Candidate determines Enclosure 5 Containment is Green/SAT** • **Candidate continues through F-0**	
Cue	Provided by Initial Conditions.	
Comment		
NOTE:		

STEP 8 : √	Monitor ENCLOSURE 6 CSF F-0.6 INVENTORY (WITH RVLMS)	___ SAT ___ UNSAT
Standard:	Candidate Monitors ENCLOSURE 6 • Pressurizer Level = 0% • RVLMS Indicates Voids **Candidate determines Enclosure 6 Containment is Yellow** **Candidate continues through F-0**	
Cue	Provided by Initial Conditions.	
Comment		
NOTE:		

STEP 9 :	Monitor ENCLOSURE 7 CSF F-0.7 INVENTORY (WITHOUT RVLMS)	___ SAT ___ UNSAT
Standard:	Candidate is not required to monitor Enclosure 7 due to the availability of RVLMS.	
Cue	Provided by Initial Conditions.	
Comment		
Terminating Cue:	**The task is complete when the Examinee returns the cue sheet to the examiner.**	**STOP**

Stop Time _____

Verification of Completion

Job Performance Measure No. NRC-25-ADMIN-JPM-A.4

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question Documentation:

Question:

_____

_____

_____

_____

_____

Response:

_____

_____

_____

_____

_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____ _____

JPM BRIEFING SHEET

The examiner will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

Initial Conditions:

- An accident is in progress. The crew has previously left E-0, Reactor Trip or Safety Injection You have been directed to monitor 3-EOP-F-0, Critical Safety Function Status Trees.

Current Unit Conditions:

- TE-3-6700 = 272 °
- TE-3-6701 = 272 °
- TE-3-6702 = 272 °

- N-3-41= 0%
- N-3-42= 0%
- N-3-43= 0%
- N-3-44= 0%

- N-3-35= 1x 10E -11
- N-3-36= 1x 10E -11

- N-3-35 SUR= -0.3 DPM and lowering
- N-3-36 SUR= -0.3 DPM and lowering

- N-3-31= 4000 cps
- N-3-32= 4000 cps

- N-3-31 SUR= -0.3 DPM and lowering
- N-3-32 SUR= -0.3 DPM and lowering

- Gamma-Metrics NI-3-6649A= 1000cps and 10E-5 % PWR and lowering
- Gamma-Metrics NI-3-6649B= 1000cps and 10E-5 % PWR and lowering

- All Unit 3 CETS = 715 °

- Unit 3 CET Subcooling = 5° Superheat

- Auxiliary Feedwater Flow Train 1 = 0 gpm
- Auxiliary Feedwater Flow Train 2 = 0 gpm

- A S/G NR = 7%
- B S/G NR = 8%
- C S/G NR = 8%

- A S/G Press = 0 psig
- B S/G Press = 400 psig
- C S/G Press = 400 psig

- Cold Leg Decrease in the last 60 min = 0 °

- Lowest Cold Leg Temperature = 503 °

- Current Cold Leg Temperature = 710 °

- Containment Pressure = 15.7 psig
- Containment Recirculation Sump = 404 inches
- Containment Radiation = 5.92 x E-2 R
- Pressurizer Level = 0%
- RVLMS Indicates Voids
- Containment Recirculation Sump = 404 inches
- Containment Radiation = 5.92 x E-2 R
- Pressurizer Level = 0%
- RVLMS Indicates Voids

Initiating Cue:

Initiating Cue:

- An accident is in progress. The crew has previously left E-0, Reactor Trip or Safety Injection
- You have been directed to perform 3-EOP-F-0, Critical Safety Function Status Trees.
- Provide Unit Supervisor with a marked up copy of 3-EOP-F-0, Critical Safety Function Status Trees..

Acknowledge to the examiner when you are ready to begin.

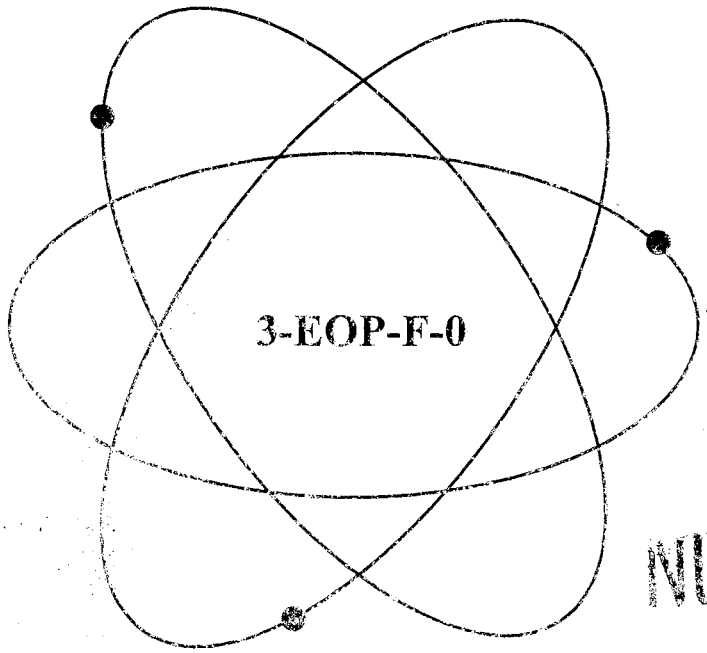
HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

NRC-25-ADMIN-JPM-Rd.4
KEY

Florida Power & Light Company

Turkey Point Nuclear Plant

Unit 3



This procedure may be affected by an O.T.S.C. (On The Spot Change) verify information prior to use
Date verified _____ Initials _____

Title:

Critical Safety Function Status Trees

(Continuous Use)

Safety Related Procedure

Responsible Department:	Operations
Revision Approval Date:	12/9/08

PCRs *08-5810*
RTSs *93-1285P, 93-1464P, 94-1281P, 97-1521P, 98-1130P, 01-0417P*
PC/M *00-027*

NUCLEAR TRAINING DEPARTMENT

W97/daj/nw

NUCLEAR TRAINING DEPARTMENT

LIST OF EFFECTIVE PAGES

Page	Revision Date
1	12/09/08
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9	04/15/99
10	08/03/01
11	04/15/99C
12	04/15/99
13	04/15/99
14	04/15/99
15	04/15/99
16	04/15/99

1.0 PURPOSE

1.1 The Critical Safety Function Status Tree provides direction to evaluate the status of critical safety functions independent of he event scenario.

1.2 This procedure is applicable when directed by EOP entry conditions.

2.0 SYMPTOMS OR ENTRY CONDITIONS

2.1 This procedure is entered from:

2.1.1 E-0, REACTOR TRIP OR SAFETY INJECTION, Steps 1, 4, 8, 11, 13, 14, and 15 when the symptoms of the emergency transient result in a transition from E-0.

2.1.2 E-0, REACTOR TRIP OR SAFETY INJECTION, Step 17 when the initiating event cannot be easily identified.

2.1.3 Any foldout page when a Red Path Summary condition is satisfied.

3.0 REFERENCES/RECORDS REQUIRED/COMMITMENT DOCUMENTS

3.1 References

3.1.1 Technical Specifications for Turkey Point Unit 3 and Unit 4

3.1.2 Turkey Point Unit 3 and Unit 4 Final Safety Analysis Report

3.1.3 As-built plant drawings

3.1.4 Procedures

1. None

3.1.5 Plant Change/Modifications

1. PC/M 00-027, Cold Overpressure Mitigation System (COMs) Setpoint Change

3.1.6 Miscellaneous Documents

1. Generic Technical Guidelines developed by the Westinghouse Owners Group (WOG). This consists of the following documents:

   a. Low pressure version of the WOG Optimal Recovery Guidelines, Status Trees, and Functional Restoration Guidelines

   b. Background documents for each low pressure version Optimal Recovery Guidelines, Status Trees, and Functional Restoration Guidelines

   c. WOG Emergency Response Guidelines Executive Volume

   d. WOG Emergency Response Guidelines Maintenance Program Summary

2. PTN-ENG-BFSI-98-003, AFW Flow Uncertainty Determination

3.2 Records Required

3.2.1 None

3.3 Commitment Documents

3.3.1 None

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

NOTES

- *Critical Safety Function Status Trees are normally monitored by the Shift Technical Advisor. Performance of this procedure may be assigned to other qualified personnel with Nuclear Plant Supervisor approval.*
- *A form similar to ATTACHMENT 2 may be used to report each performance of Steps 1 and 2.*

1 **Determine Containment Conditions**

a. Check containment temperature - LESS THAN 180°F

- TE-3-6700
- TE-3-6701
- TE-3-6702

a. Use adverse containment setpoints **AND** go to Step 2.

b. Check containment radiation - HAS REMAINED LESS THAN 1.3×10^5 R/HR

b. Perform the following:

1) **IF** containment radiation is currently greater than or equal to 1.3×10^5 R/hr, **THEN** use adverse containment setpoints **AND** go to Step 2.

2) Consult with TSC staff to determine integrated dose to containment.

3) **IF** integrated dose is greater than or equal to 10^6 Rads OR integrated dose is **NOT** known, **THEN** use adverse containment setpoints **AND** go to Step 2.

c. Use normal containment setpoints

2 **Monitor Critical Safety Functions Using Rules Of Usage Provided In ATTACHMENT 1**

3 **Report Results To Control Room Operators AND TSC Staff**

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED
4	**Determine If Critical Safety Function Monitoring Can Be Stopped** * The emergency condition has been corrected **AND** a transition to the appropriate plant procedure has been performed **OR** * The plant is stable in Cold Shutdown with RHR cooling established **OR** * TSC staff has determined that Critical Safety Function monitoring is no longer required	**WHEN** additional Critical Safety Function monitoring is required by ATTACHMENT 1, **THEN** observe NOTES prior to Step 1 **AND** return to Step 1. Continue with procedure **AND** step in effect.
5	**Return To Procedure AND Step In Effect**	

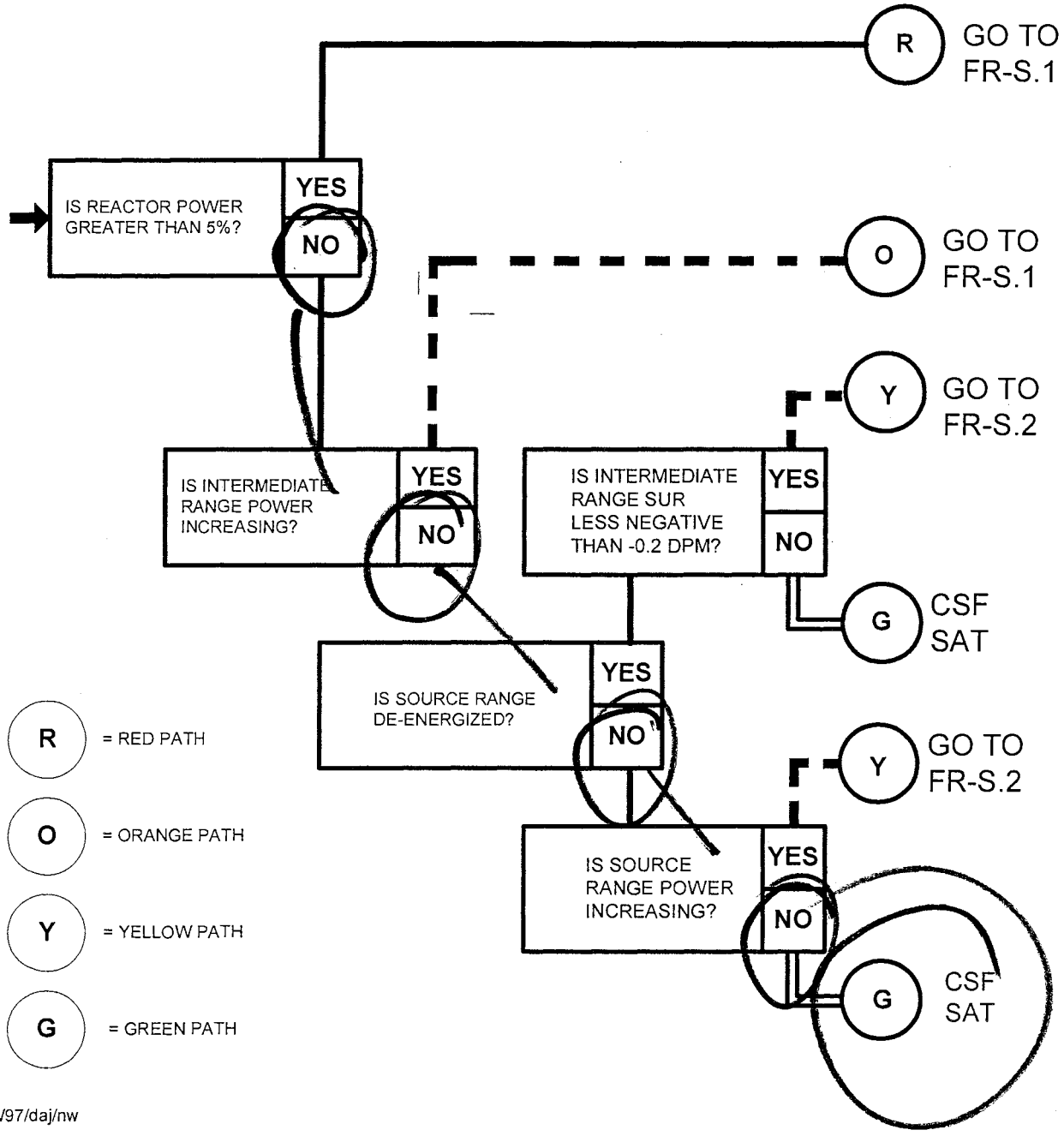
END OF TEXT

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

ENCLOSURE 1
(Page 1 of 1)
CSF F-0.1 SUBCRITICALITY

NOTE

When adverse containment conditions exist, use Gamma-Metrics indication.



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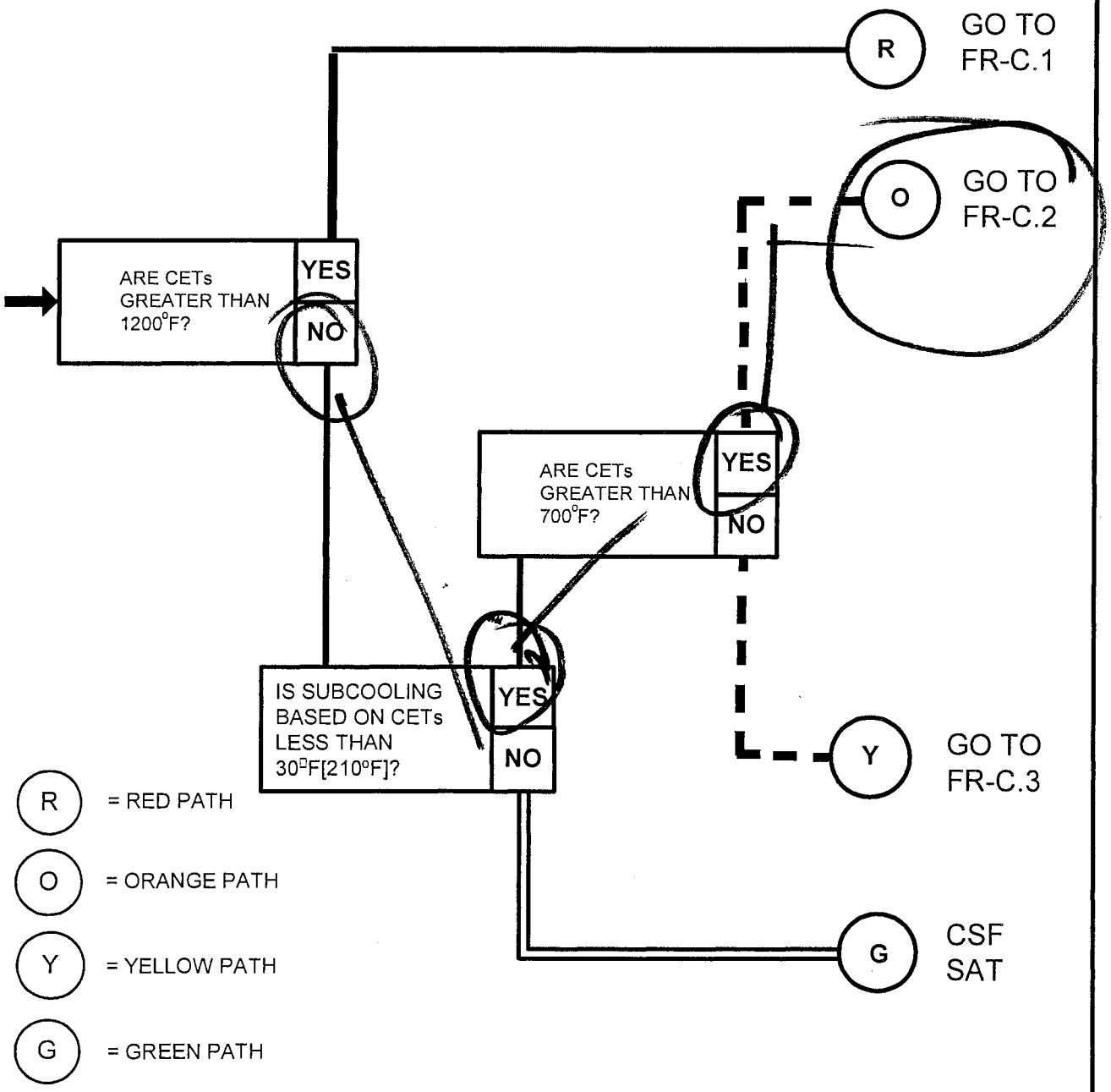
STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

ENCLOSURE 2
(Page 1 of 1)
CSF F-0.2 CORE COOLING

NOTE

Obtain core exit temperature using at least five of the hottest core exit thermocouples.



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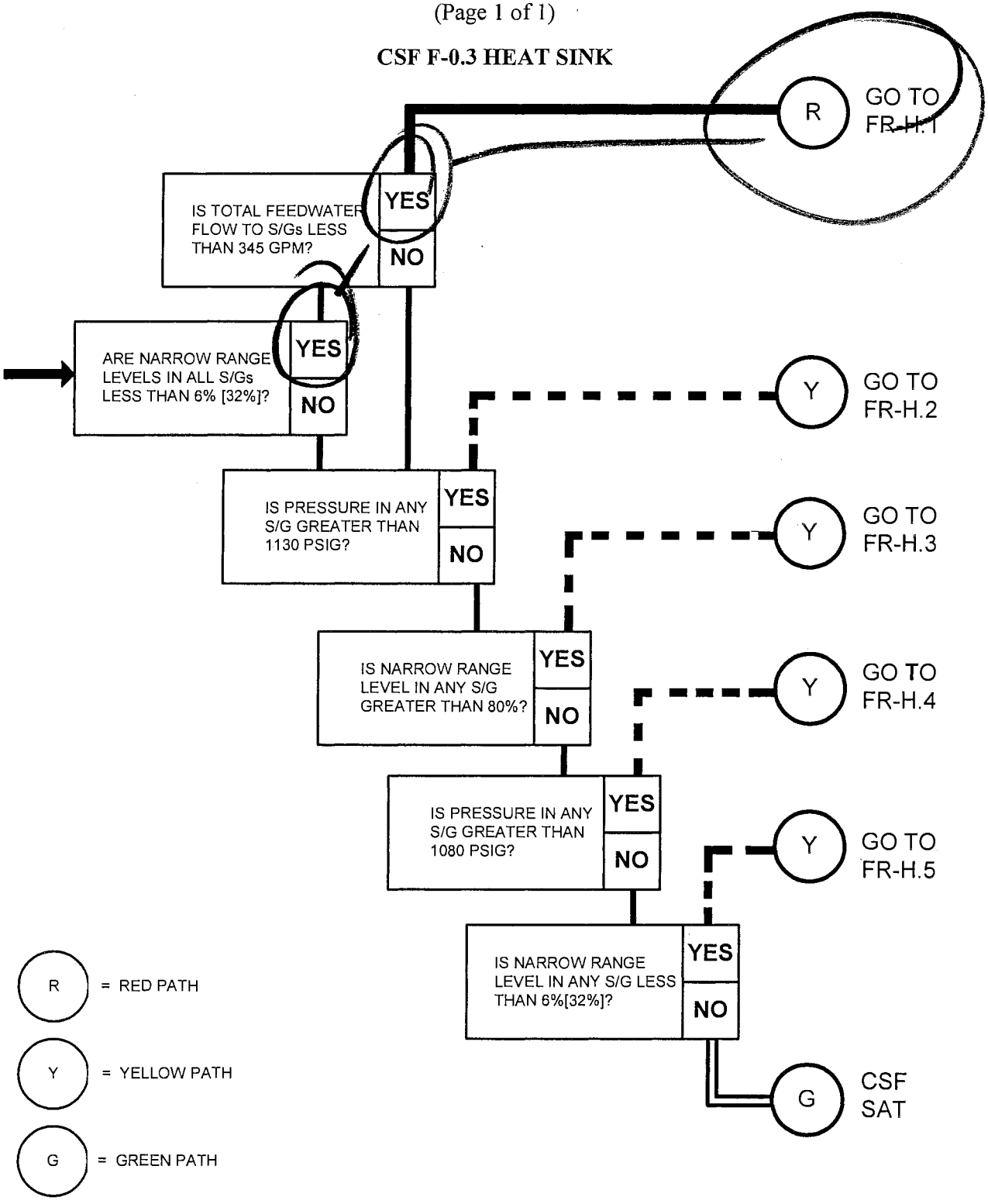
STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

ENCLOSURE 3
(Page 1 of 1)

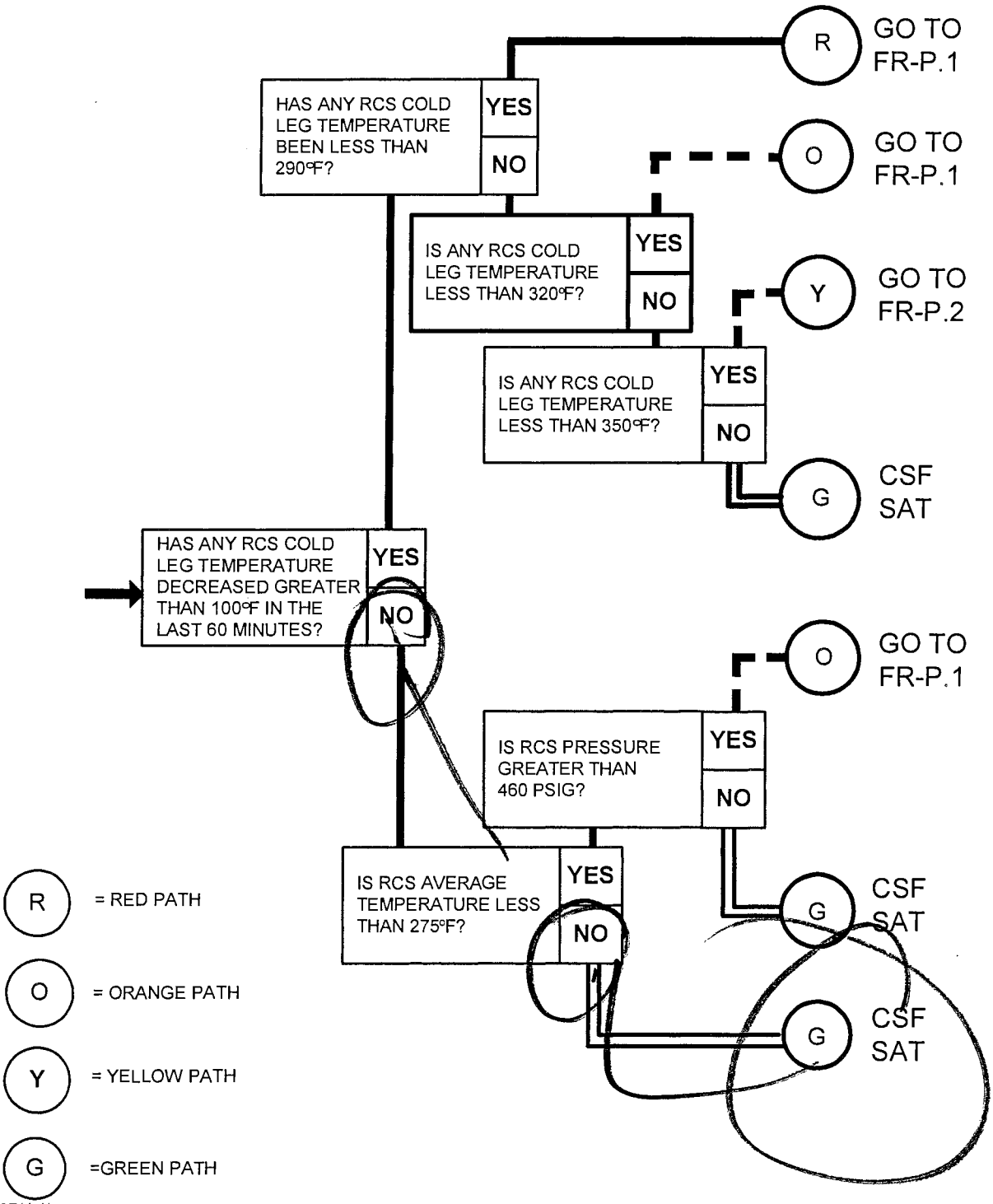
CSF F-0.3 HEAT SINK



STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

ENCLOSURE 4
(Page 1 of 1)

CSF F-0.4 INTEGRITY



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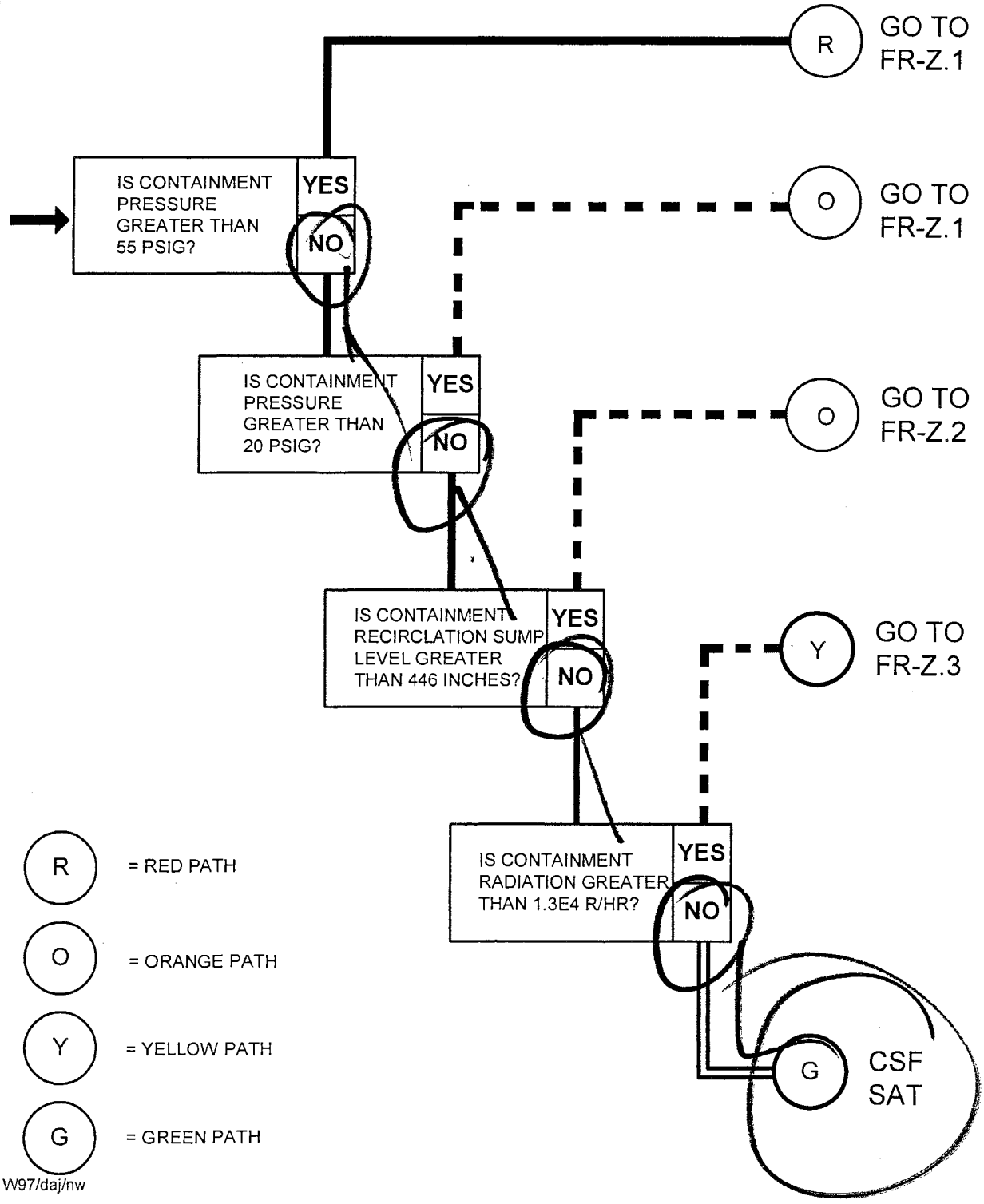
STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

ENCLOSURE 5
(Page 1 of 1)

CSF F-0.5 CONTAINMENT

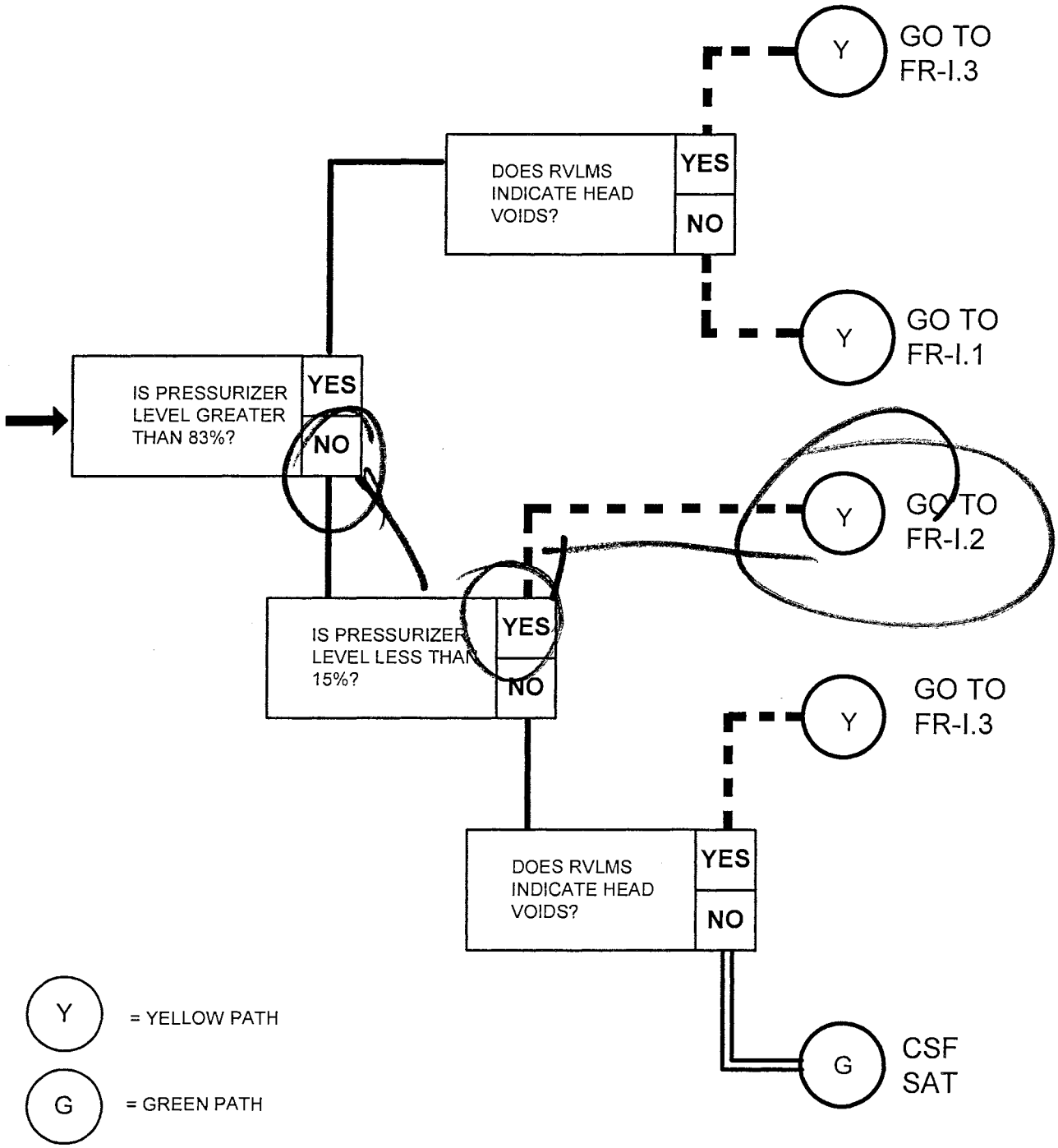


W97/daj/nw

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

ENCLOSURE 6
(Page 1 of 1)

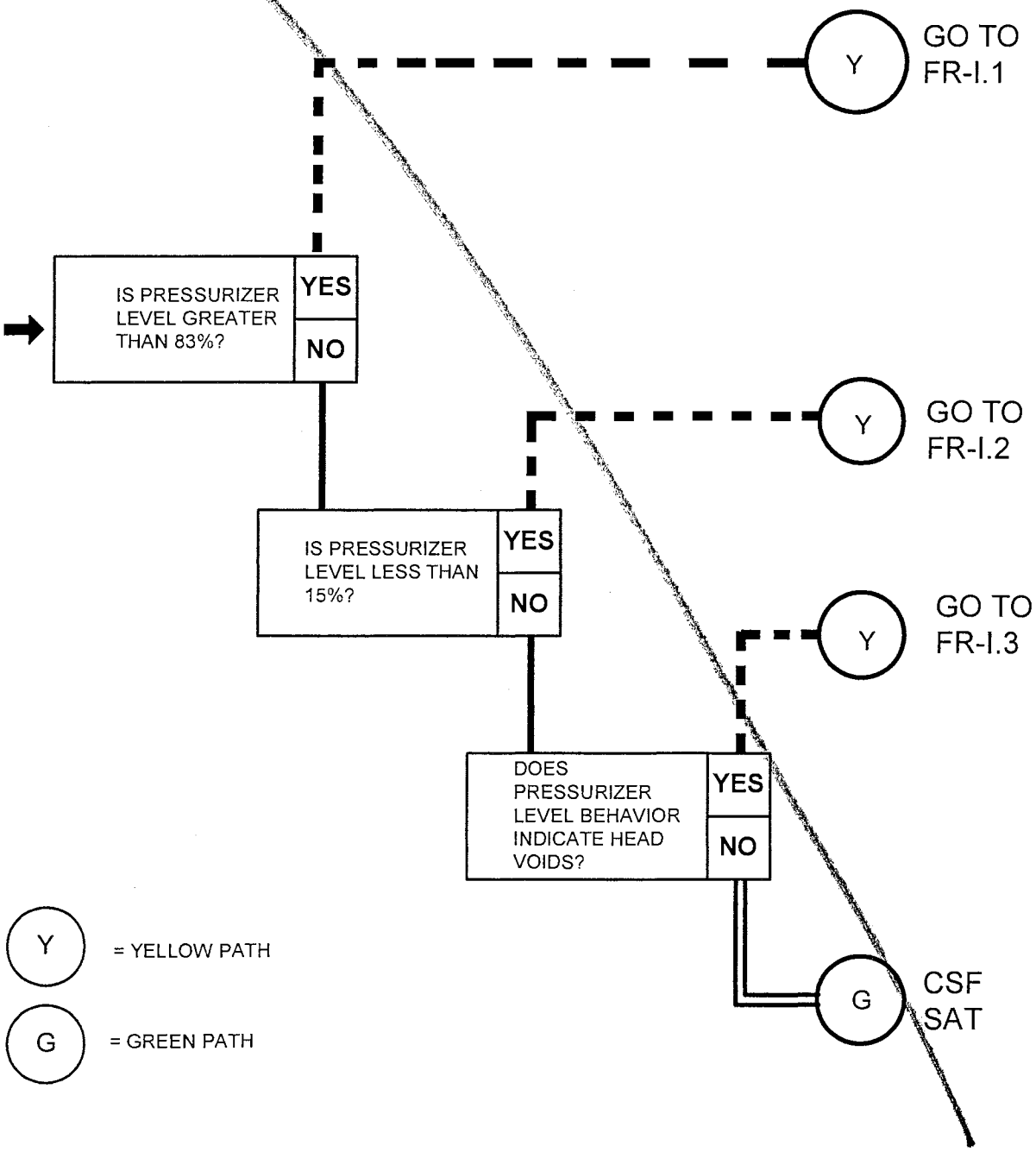
CSF F-0.6 INVENTORY (WITH RVLMS)



STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

ENCLOSURE 7
(Page 1 of 1)

CSF F-0.7 INVENTORY (WITHOUT RVLMS)



W97/daj/nw

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

ATTACHMENT 1
(Page 1 of 2)

RULES OF USAGE FOR CRITICAL SAFETY FUNCTION STATUS TREES

1. Critical Safety Function Status Trees shall be monitored in the following order of priority:
   a. Subcriticality using Enclosure 1
   b. Core Cooling using Enclosure 2
   c. Heat Sink using Enclosure 3
   d. Integrity using Enclosure 4
   e. Containment using Enclosure 5
   f. Inventory:
      1) **IF** RVLMS in service, **THEN** use Enclosure 6.
      2) **IF** RVLMS **NOT** in service, **THEN** use Enclosure 7.

NOTE

Notes or cautions within EOPs which prohibit the use of functional restoration procedures shall take precedence over the following rules.

2. **IF** an extreme challenge (RED PATH) is diagnosed, **THEN** the operator shall immediately stop procedure in effect **AND** initiate functional restoration to restore the critical safety function under extreme challenge.

3. **IF** a severe challenge (ORANGE PATH) is diagnosed, **THEN** the operator shall continue to check the status of all remaining critical safety functions. **IF** no extreme challenges exist, **THEN** the operator shall stop procedure in effect **AND** initiate functional restoration to restore the highest priority critical safety function under severe challenge.

4. **IF** a **NOT** satisfied condition (YELLOW PATH) is diagnosed, **THEN** the operator shall continue to check the status of all remaining critical safety functions. **IF** no extreme or severe challenges exist, **THEN** it is the operator's option to continue optimal recovery procedures **OR** to initiate functional restoration of the affected critical safety function challenge.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

ATTACHMENT 1
(Page 2 of 2)

RULES OF USAGE FOR CRITICAL SAFETY FUNCTION STATUS TREES

5. **IF** a satisfied condition (GREEN PATH) is diagnosed, **THEN** no challenge exists for the affected critical safety function and the operator shall continue to check the status of all remaining critical safety functions.

6. **IF** during function restoration to address a critical safety function challenge, a higher priority challenge is diagnosed, **THEN** the operator should terminate the ongoing response **AND** initiate function restoration to address the higher priority critical safety function challenge.

7. **IF** an extreme challenge (RED PATH) exists **OR** a severe challenge (ORANGE PATH) exists **OR** plant conditions are changing rapidly, **THEN** critical safety function status trees shall be monitored continuously.

8. **IF** an extreme challenge (RED PATH) does **NOT** exist **AND** a severe challenge (ORANGE PATH) does **NOT** exist **AND** plant conditions are **NOT** changing rapidly, **THEN** critical safety function status trees shall be monitored every 10 to 20 minutes.

STEP	ACTION/EXPECTED RESPONSE	RESPONSE NOT OBTAINED

ATTACHMENT 2
(Page 1 of 1)

CRITICAL SAFETY FUNCTION REVIEW

1. Today's Date: MM DD YY / /

2. Time Monitoring Started: am / pm

3. Containment Conditions: (Circle current status) NORMAL / ADVERSE

4. Critical Safety Function Summary: (Circle current status)

	CRITICAL SAFETY FUNCTION	RED	ORANGE	YELLOW	GREEN
S	Subcriticality	FR-S.1	FR-S.1	FR-S.2	SAT
C	Core Cooling	FR-C.1	FR-C.2	FR-C.3	SAT
H	Heat Sink	FR-H.1		FR-H.2 FR-H.3 FR-H.4 FR-H.5	SAT
P	Integrity	FR-P.1	FR-P.1	FR-P.2	SAT
Z	Containment	FR-Z.1	FR-Z.1 FR-Z.2	FR-Z.3	SAT
I	Inventory			FR-I.1 FR-I.2 FRI.3	SAT

5. Time Monitoring Completed: am / pm

FINAL PAGE

Facility:	Turkey Point	Task No:	
Task Title:	Classify Plant Event and Determine Notifications	Job Performance Measure No:	NRC-25-ADMIN-JPM-A.4
K/A Reference:	2.4.41 Knowledge of the emergency action level thresholds and classifications. 2.9/4.6		
Examinee:		NRC Examiner:	
Facility Evaluator:		Date:	
Method of testing:	Perform		
Simulated Performance	Yes	Actual Performance	
Classroom	Yes	Simulator	Plant

Read to the examinee:

I will explain the initial conditions, which steps to simulate or discuss, and provide initiating cues. When you complete the task successfully, the objective for this job performance measure will be satisfied.

INITIAL CONDITIONS FOR CLASSIFICATION:

0659: Both units are at 100% power.
0700: A fire starts in the Cable Spreading Room.
0705: The Shift Manager orders Control Room Evacuation and proceeds to the TSC.
0710: The fire is quickly extinguished by the Fire Team.
0723: The Unit ROs have not yet established control of shutdown systems on either unit.

ADDITIONAL INITIAL CONDITIONS FOR FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM COMPLETION:

Wind direction is from 168°.
Wind speed is 5 mph.
MET Tower ΔT = -1.0
MET Tower Sigma Theta = 7.0
TSC ERDADS data implies normal post shutdown core parameters being maintained.
Process and Area Radiation monitors are reading normal post shutdown values.

Task Standard:

1. The current level of classification is made.
2. The Florida Nuclear Plant Emergency Notification Form is completed with the current classification in accordance with standards set in 0-EPIP-20101, "Duties of Emergency Coordinator."

Required Materials:

1. 0-EPIP-20101, DUTIES OF EMERGENCY COORDINATOR, Enclosure 1
2. 0-EPIP-20101, DUTIES OF EMERGENCY COORDINATOR, Attachment 1

General References:

1. 0-EPIP-20101, DUTIES OF EMERGENCY COORDINATOR

Initiating Cue:

You are the Emergency Coordinator. It is now 0723. Identify the current emergency classification that applies.

Following the classification, complete the Florida Nuclear Plant Emergency Notification Form.

Raise your hand when Classification Complete and then when SNF is Complete.

Time Critical Task: Yes

Validation Time: 15 minutes for Classification
15 minutes for Notification Form

INSTRUCTIONS TO OPERATOR

READ TO OPERATOR:
WHEN I TELL YOU TO BEGIN, YOU ARE TO PERFORM THE ACTIONS AS DIRECTED IN THE INITIATING CUES. I WILL DESCRIBE THE GENERAL CONDITIONS UNDER WHICH THIS TASK IS TO BE PERFORMED AND PROVIDE THE NECESSARY TOOLS WITH WHICH TO PERFORM THIS TASK. BEFORE STARTING, I WILL EXPLAIN THE INITIAL CONDITIONS, WHICH STEPS TO SIMULATE OR DISCUSS, AND PROVIDE INITIATING CUES. WHEN YOU COMPLETE THE TASK SUCCESSFULLY, THE OBJECTIVE FOR THIS JOB PERFORMANCE MEASURE WILL BE SATISFIED.

HAND JPM BRIEFING SHEET, PROCEDURE, AND NOTIFICATION FORM FOR CLASSIFICATION TO OPERATOR AT THIS TIME!

INITIAL CONDITIONS FOR CLASSIFICATION:

0659: Both units are at 100% power.
0700: A fire starts in the Cable Spreading Room.
0705: The Shift Manager orders Control Room Evacuation and proceeds to the TSC.
0710: The fire is quickly extinguished by the Fire Team.
0723: The Unit ROs have not yet established control of shutdown systems on either unit.

ADDITIONAL INITIAL CONDITIONS FOR FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM COMPLETION:

Wind direction is from 168°.
Wind speed is 5 mph.
MET Tower ΔT = -1.0
MET Tower Sigma Theta = 9.0
TSC ERDADS data implies normal post shutdown core parameters being maintained.
Process and Area Radiation monitors are reading normal post shutdown values

INITIATING CUE:

You are the Emergency Coordinator. It is now 0720. Identify the emergency classification that applies.

Following classification, complete the Florida Nuclear Plant Emergency Notification Form.

Raise your hand when Classification Complete and then when SNF is Complete.

NOTE: This is a Time Critical Task.

TERMINATION CUE:

WHEN YOU FEEL THAT YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK, HAND YOUR JPM BRIEFING SHEET BACK TO ME.

DO YOU HAVE ANY QUESTIONS?

YOU MAY BEGIN.

Denote critical steps with a check mark

Start Time _____

STEP 1 :	Obtain 0-EPIP-20101.	___ SAT ___ UNSAT
STANDARD:	0-EPIP-20101 obtained in a timely manner. Candidates may use authorized computers to access procedures	
Cue	CUE: Provide procedure when correctly identified, or have candidate obtain procedure.	
Comment		
NOTE:	Candidates may use authorized computers to access procedures.	

STEP 2 :	Review 0-EPIP-20101.	___ SAT ___ UNSAT
STANDARD:	1. Reviews 0-EPIP-20101, Enclosure 1, for the event in progress. 2. Reviews each classification in Enclosure 1 in sequence. 3. Reviews Enclosure 1 in its entirety.	
Cue	Provided by Initial Conditions.	
Comment		
NOTE:		

STEP 3 : √	1. Identify appropriate emergency classification. *	___ SAT ___ UNSAT
STANDARD:	Classifies event as a **Site Area Emergency** in accordance with 0-EPIP-20101, Enclosure 1, Category 15C : Control Room has been evacuated **AND** Local control of shutdown systems has **NOT** been established from local stations within 15 minutes. **The examinee classifies the event by interpreting the information given in the initial conditions within 15 minutes of starting the JPM.**	
Cue	Once candidate completes classification portion of the JPM, then direct candidate to fill out State of Florida Notification form.	
Comment		
NOTE:	Annotate the stop time for the event classification.	

Annotate the stop time for the event classification here. **Stop Time** _____

STEP 4	Obtain 0-EPIP-20101, Attachment 1, "Florida Nuclear Plant Emergency Notification Form."	SAT
		UNSAT
STANDARD	Correctly identified/obtained 0-EPIP-20101, Attachment 1, "Florida Nuclear Plant Emergency Notification Form."	
Cue	**CUE: Provide Attachment 1 when correctly identified, or allow candidate to access authorized computer.** **Record time that candidate accesses the State of Florida Notification Form** **Start time: _____**	
Comment		
NOTE:		

STEP 5	Completes Attachment 1 IAW with standards set in 0-EPIP-20101, "Duties of Emergency Coordinator."	SAT
√		UNSAT

STANDARD	Checks STATE and/or MDC and/or Monroe County 1A. Checks "This is a Drill" 2A. Enters today's DATE 2B. Does not enter CONTACT TIME until contact made with State Warning Point 2C. Enters applicant's NAME 2D. Enters Message Number 1 2E. Checks Reported from TSC *(NOTE: Control Room evacuated.)* **3. Checks "D. TP UNIT 3" & "E. TP UNIT 4" *** **4. Checks SITE AREA EMERGENCY *** **5. Checks box "A. EMERGENCY DECLARATION"* and enters Date and Time of declaration *** **6. Checks "A. EAL Number" and enters 15.C OR checks "B. Description" and enter info related to fire in Control Room and Control Room Evacuation. *** 7. Checks "A. None" **OR** if 6A checked above may check "B." and enter info related to fire in Control Room and Control Room Evacuation. **8A. Enters 168 *** **8B. Enters Q, R, A, B *** **9A. Checks "A. None (Go to Item 11)" *** 10. Makes no entries since release not occurring. **11A. Checks "A. No recommended actions at this time." *** 11B. No entry 12A/B/C. Checks "YES" for each 12D. Checks "Stable" 13A. Enters 5 mph 13B. Enters "D" based on ΔT=-1.0 & $\Sigma\Theta$=9.0 14. Makes no entries since release not occurring. 15. Enters MESSAGE RECEIVED BY information Submits form for EC Approval. **NOTE: Standards marked with an * are critical to this Step.**	
Cue		
Comment		

NOTE:	**Standards marked with an * are critical to this Step.**	

STEP ____ :	**STOP** **Stop time: _____ (15 minutes acceptance criteria, from classification completion)**	____ SAT ____ UNSAT
STANDARD:	0-EPIP-20101: 5.1.6 Emergency notification to State and Local Counties is required within15 minutes of declaring an emergency.	
Comment		
NOTE:		
Terminating Cue:	**The task is complete when the Examinee returns the cue sheet to the examiner.**	**STOP**

Stop Time _____

Verification of Completion

Job Performance Measure No. NRC-25-ADMIN-JPM-A.4

Examinee's Name: _____

Examiner's Name: _____

Date Performed: _____

Facility Evaluator: _____

Number of Attempts: _____

Time to Complete: _____

Question Documentation:

Question:

_____

_____

_____

_____

_____

Response:

_____

_____

_____

_____

_____

Result: Satisfactory/Unsatisfactory

Examiner's signature and date: _____ _____

JPM BRIEFING SHEET

INITIAL CONDITIONS FOR CLASSIFICATION:

0659: Both units are at 100% power.
0700: A fire starts in the Cable Spreading Room.
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0710: The fire is quickly extinguished by the Fire Team.
0723: The Unit ROs have not yet established control of shutdown systems on either unit.

ADDITIONAL INITIAL CONDITIONS FOR FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM COMPLETION:

Wind direction is from 168°.

Wind speed is 5 mph.

MET Tower ΔT = -1.0

MET Tower Sigma Theta = 9.0

TSC ERDADS data implies normal post shutdown core parameters being maintained.

Process and Area Radiation monitors are reading normal post shutdown values

INITIATING CUE:

You are the Emergency Coordinator. It is now 0723. Identify the current emergency classification that applies.

Raise your hand to identify that you are done with CLASSIFICATION.

Following the classification, complete the Florida Nuclear Plant Emergency Notification Form.

Raise your hand to identify that you are done COMPLETING SNF.

NOTE: This is a Time Critical Task.

HAND THIS PAPER BACK TO YOUR EVALUATOR WHEN YOU FEEL THAT YOU HAVE SATISFACTORILY COMPLETED THE ASSIGNED TASK.

FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM

Online Verification: ☐ STATE ☐ MIAMI-DADE COUNTY ☐ MONROE COUNTY

1. A. ☑ This Is A Drill B. ☐ This Is An Actual Event
2. A. Date TODAY *B. Contact Time:_____ C. Reported by: Name NAME
   D. Message Number: 1 E. Reported From: ☐ Control Room ☑ TSC ☐ EOF
   F. ☐ Initial/New Classification OR ☐ Update Notification

*3. SITE A. ☐ Crystal River UNIT 3 B. ☐ St. Lucie UNIT 1 C. ☐ St. Lucie UNIT 2
D. ☑ Turkey Point UNIT 3 E. ☑ Turkey Point UNIT 4

*4. EMERGENCY CLASSIFICATION: A. ☐ Notification Of Unusual Event B. ☐ Alert
C. ☑ Site Area Emergency D. ☐ General Emergency

*5. A. ☑ EMERGENCY DECLARATION: B. ☐ EMERGENCY TERMINATION Date: ___/___/___ Time:_____

*6. REASON FOR EMERGENCY DECLARATION:** A. ☑ EAL Number: 15C OR B. ☑ Description FIRE IN CONTROL ROOM AND CONTROL ROOM EVACUATION

7. ADDITIONAL INFORMATION OR UPDATE: A. ☑ None OR B. ☐ Description_____

*8. WEATHER DATA: A. Wind direction from 168 degrees. B. Downwind Sectors Affected Q,R,A,B

*9. RELEASE STATUS: A. ☑ None (Go to Item 11) B. ☐ In Progress C. ☐ Has occurred, but stopped

10. RELEASE SIGNIFICANCE CATEGORY (at the Site Boundary)
A. ☐ Under evaluation B. ☐ Release within Normal Operating Limits (Tech Specs)
C. ☐ Non-Significant (Fraction of PAG Range) D. ☐ PAG Range (Protective Actions required)
E. ☐ Liquid release (no actions required)

*11. UTILITY RECOMMENDED PROTECTIVE ACTIONS FOR THE PUBLIC:
A. ☑ No recommended actions at this time. B. ☐ The utility recommends the following protective actions:

EVACUATE ZONES: NOT APPLICABLE OR	Miles	Evacuate Sectors	Shelter Sectors	No Action Sectors
SHELTER ZONES: NOT APPLICABLE	0 - 2			
	2 - 5			
	5 - 10			

AND consider issuance of potassium iodide (KI)

If form is completed in the Control Room, go to item 15. If completed in the TSC or EOF, continue with item 12.

12. PLANT CONDITIONS:
A. Reactor Shutdown? ☑ YES ☐ NO B. Core Adequately Cooled? ☑ YES ☐ NO
C. Containment Intact? ☑ YES ☐ NO D. Core Condition: ☑ Stable ☐ Degrading

13. WEATHER DATA: A. Wind Speed 5 mph B. Stability Class D

14. ADDITIONAL RELEASE INFORMATION: A. ☐ Not applicable (Go to Item 15)

Distance	Projected Thyroid Dose (CDE) for 1 Hour	Projected Total Dose (TEDE) for 1 Hour
1 Mile (Site Boundary)	B._____mrem	C._____mrem
2 Miles	D._____mrem	E._____mrem
5 Miles	F._____mrem	G._____mrem
10 Miles	H._____mrem	I._____mrem

or RM Approval Signature_____ Date___/___/___ Time_____

15. MESSAGE RECEIVED BY: Name NAME Date___/___/___ Time_____

** IF EMERGENCY CLASS ESCALATION IS KNOWN TO BE NECESSARY AND A NEW NOTIFICATION FORM WILL BE TRANSMITTED WITHIN 15 MINUTES, THEN YOU MAY GO TO EC/RM APPROVAL SIGNATURE LINE.

* ITEMS ARE EVALUATED FOR NRC PERFORMANCE INDICATORS (PIs)

FLORIDA NUCLEAR PLANT EMERGENCY NOTIFICATION FORM

METEOROLOGICAL WORKSHEET

SECTOR REFERENCE:

The chart below can be used to determine sectors affected by a radiological release, through comparison with wind direction from the meteorological recorders in the Control Room.

If the wind direction is directly on the edge of two sectors (e.g., 11°, 33°, 56°, etc.), an additional sector should be added to the protective action recommendations. For example, if the wind direction is from 78°, then the affected sectors for PARs should be L, M, N and P.

SECTOR INFORMATION:

WIND SECTOR	WIND FROM	DEGREES	WIND TOWARD	SECTORS AFFECTED
[A]	N	348-11	S	HJK
[B]	NNE	11-33	SSW	JKL
[C]	NE	33-56	SW	KLM
[D]	ENE	56-78	WSW	LMN
[E]	E	78-101	W	MNP
[F]	ESE	101-123	WNW	NPQ
[G]	SE	123-146	NW	PQR
[H]	SSE	146-168	NNW	QRA
[J]	S	168-191	N	RAB
[K]	SSW	191-213	NNE	ABC
[L]	SW	213-236	NE	BCD
[M]	WSW	236-258	ENE	CDE
[N]	W	258-281	E	DEF
[P]	WNW	281-303	ESE	EFG
[Q]	NW	303-326	SE	FGH
[R]	NNW	326-348	SSE	GHJ

STABILITY CLASSIFICATION REFERENCE:

Either ERDADS or the below chart can be used to determine atmospheric stability classification for notification to the State of Florida. Primary method is from ΔT via the South Dade (60 meter) tower. Backup method is from Sigma Theta via the Ten Meter Tower. If neither meteorological tower is available, Stability Classification shall be determined using data from National Weather Service (See 0-EPIP-20126, Off-site Dose Calculations).

CLASSIFICATION OF ATMOSPHERIC STABILITY:

Stability Classification	Pasquill Categories	Primary Delta T (°F)	Backup Sigma Theta Range (Degrees)
Extremely unstable	A	$\Delta T \leq -1.7$	$ST \geq 22.5$
Moderately unstable	B	$-1.7 < \Delta T \leq -1.5$	$22.5 > ST \geq 17.5$
Slightly unstable	C	$-1.5 < \Delta T \leq -1.4$	$17.5 > ST \geq 12.5$
Neutral	D	$-1.4 < \Delta T \leq -0.5$	$12.5 > ST \geq 7.5$
Slightly stable	E	$-0.5 < \Delta T \leq +1.4$	$7.5 > ST \geq 3.8$
Moderately stable	F	$+1.4 < \Delta T \leq +3.6$	$3.8 > ST \geq 2.1$
Extremely stable	G	$+3.6 < \Delta T$	$2.1 > ST$

Meteorological information needed to fill out the Florida Nuclear Plant Emergency Notification Form is available from the Dose Calculation Worksheet (0-EPIP-20126). The Worksheet shall be filled out by Chemistry and given to the Emergency Coordinator.