Final Submittal

(Blue Paper)

SEQUOYAH RETAKE EXAM
50-327 & 50-328/2003-301

FEBRUARY 27, 2003

1. Administrative Questions/JPMs

~~2. In-plant JPMs~~

~~3. Control Room JPMs (simulator JPMs)~~

Facility: Sequoyah	Date of Examination: 2/27/2003
Examination Level (circle one): **RO**	Operating Test Number: 1

Administrative Topic/Subject Description		Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	Conduct Of Operations	JPM # 161-2 - Calculate Subcooling Margin (Neither SPDS nor Subcooling Margin Monitors are available.) (New) **(Perform in Simulator))**
	Plant Parameter Verification	JPM # 017 - Determine if SI Termination Criteria is Met **(Perform in Simulator)**
A.2	Equipment Control	JPM # 022, Calibrate Power Range NI **(Perform in Simulator)**
A.3	Radiation Control	JPM # 165-2 - Perform a Shielding Calculation. (New)
A.4	Emergency Plan	JPM # 157 - Monitor Status Trees, Pressurized Thermal Shock **(Perform in Simulator)**

SEQUOYAH NUCLEAR PLANT
JOB PERFORMANCE MEASURE

JPM # 161-2

Calculate Subcooling Margin

PREPARED/ REVISED BY: _____ Date/ _____

VALIDATED BY: * _____ Date/ _____

APPROVED BY: _____ Date/ _____
(Operations Training Manager)

CONCURRED: ** _____ Date/ _____
(Operations Representative)

* Validation not required for minor enhancements, procedure Rev changes that do not affect the JPM, or individual step changes that do not affect the flow of the JPM.
** Operations Concurrence required for new JPMs and changes that affect the flow of the JPM (if not driven by a procedure revision).

NUCLEAR TRAINING

REVISION/USAGE LOG

REVISION NUMBER	DESCRIPTION OF REVISION	V	DATE	PAGES AFFECTED	PREPARED/ REVISED BY:
0	Initial Issue	Y	01/30/03	All	G. S. Poteet

V - Specify if the JPM change will require another Validation (Y or N).
See cover sheet for criteria.

SEQUOYAH NUCLEAR PLANT
RO/SRO
JOB PERFORMANCE MEASURE

Task:
Calculate Subcooling with no Subcooling Monitors and NO Plant computers available.

JA/TA task # : (RO/SRO)

K/A Ratings: 002K5.09 (3.7/4/2)
002A1.04 (3.9/4.1)

Task Standard:
Determine actual subcooling margin based on Control Board Indicators and calculated results using Steam Tables.

Evaluation Method : Simulator ___X_____ In-Plant ___ _____

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Performer: _____
NAME Start Time _____

Performance Rating : SAT _____ UNSAT _____ Performance Time _____ Finish Time _____

Evaluator: _____/_____
SIGNATURE DATE

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COMMENTS

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SPECIAL INSTRUCTIONS TO EVALUATOR:

1. Critical steps identified by an asterisk (*)
2. Sequenced steps identified by an "s"
3. Any UNSAT requires comments
4. Initialize the simulator in IC-92. Trip the Reactor, and FREEZE the simulator when RCS pressure is ~2050 psig and RCS HL temperature is ~ 547°F (if necessary open PZR spray valve to lower pressure). Place covers over the Saturation Monitor Displays.
5. Supply Examinee with a Steam Table and hand held calculator.

Validation Time: CR. 15 mins **Local** _____

Tools/Equipment/Procedures Needed:

References:

	Reference	Title	Rev No.
1.	Steam Tables	Combustion Engineering Steam Tables	15

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READ TO OPERATOR

Directions to Trainee:

I will explain the initial conditions, and state the task to be performed. All steps shall be simulated for this JPM. I will provide initiating cues and indicate any steps to be discussed. When you complete the task successfully, the objective for this job performance measure will be satisfied. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

The Unit has tripped from 100% power and all system have responded normally.
The ICS computers and Saturation Monitor Displays were out of service just before the trip and have not been returned to service.

INITIATING CUES:

You are the Unit 1 RO and the US has directed you to determine the amount of Subcooling in the RCS if any. Report your findings to the US when your calculations are complete.

Job Performance Checklist:

STEP/STANDARD	SAT/UNSAT
STEP 1: (do not delete this *contains hidden text*) STEP 1.: Operator obtains a copy of Steam Tables and a Hand held calculator. **NOTE: Calculator and Steam Tables are located on Simulator Desk.** **NOTE: If JPM is performed in the Main Control Room, the examiner should provide a Calculator and Steam Tables.** STANDARD: Operator locates Steam Tables and a Hand held calculator.	___ SAT ___ UNSAT Start Time____
STEP 2.: Obtain RCS Hot Leg Temperature. **Cue: If JPM is performed in the Main Control Room, Examiner will give the examinee a temperature of 550°F.** STANDARD: Operator observes RCS Hot Leg Temperature Indicators marked as PAM and determines HL Temperature is approximately 550 degrees F. (1-TI-68-1, 1-TI-68-24, 1-TI-68-43, 1-TI-68-65)	___ SAT ___ UNSAT **Critical Step**
STEP 3.: Obtain RCS Pressure. **Cue: If JPM is performed in the Main Control Room, Examiner will give the examinee a pressure of 2025 - 2075 psig.** STANDARD: Operator observes RCS Pressure Indicators marked as PAM and determines RCS Pressure is approximately 2025 - 2075 psig. (1-PI-68-66A, 1-PI-68-62, 1-PI-68-69) (2040 - 2090 psia)	___ SAT ___ UNSAT **Critical Step**
STEP 4.: Determine Saturation Temperature for RCS Pressure of 2050 psig (2035 psia). STANDARD: MCR calculation: Operator refers to Steam Tables and determines Saturation temperature for 2025 - 2075 psig is approximately 635 - 642 degrees. Simulator Calculation: *May be different based on simulator* RCS pressure and temperature. (2025psig = 2040 psia, 2075 psig = 2090psia)	___ SAT ___ UNSAT **Critical Step**

Job Performance Checklist:

	STEP/STANDARD	SAT/UNSAT
STEP 5.:	Determine subcooling margin for given parameters.	___ SAT ___ UNSAT
NOTE:	***Subcooling calculation results in ~ 90.3 degrees F subcooled. (90 to 95 degrees will be acceptable if no cues for temperature or pressure are given by the examiner.)***	**Critical Step**
STANDARD:	Operator determines subcooling is approximately 90.3 degrees F. based on calculation from given information.	Stop Time____

End of JPM

SEQUOYAH NUCLEAR PLANT
JOB PERFORMANCE MEASURE

JPM # 17

Determine if SI Termination Criteria is Met

Original Signatures on File

PREPARED/ REVISED BY: _____ Date/ _____

VALIDATED BY: * _____ Date/ _____

APPROVED BY: _____ Date/ _____
(Operations Training Manager)

CONCURRED: ** _____ Date/ _____
(Operations Representative)

* Validation not required for minor enhancements, procedure Rev changes that do not affect the JPM, or individual step changes that do not affect the flow of the JPM.
** Operations Concurrence required for new JPMs and changes that affect the flow of the JPM (if not driven by a procedure revision).

NUCLEAR TRAINING

REVISION/USAGE LOG

REVISION NUMBER	DESCRIPTION OF REVISION	V	DATE	PAGES AFFECTED	PREPARED/ REVISED BY:
2	Transfer from WP. E-0 Rev change.	N	9/10/94	All	HJ Birch
3	E-0 Rev- rearrange two steps	N	10/27/94	5,6	HJ Birch
4	Incorporate Rev B changes.	N	9/12/95	All	HJ Birch
pen/ink	Chgd performance time based on validation time. Added step to check S/G level for tube integrity. Minor enhancements.	N	11/15/95	4,5,6,8	HJ Birch
	E-0 Rev chg only.	N	2/6/97	4	HJ Birch
5	E-0 revision had no impact. Revised task numbers and K/A ratings. Reformatted critical steps	N	8/11/98	All	JP Kearney
pen/ink	E-0 Rev chg only.	N	9/23/99	4	SR Taylor
pen/ink	E-0 Rev 22 some minor changes in wording.	N	09/05/01	ALL	WR Ramsey
6	Incorporated pen/ink changes	N	8/22/02	All	J P Kearney
Pen/ink	E-0 Rev chg only	N	02/12/03	2, 4	G.S. Poteet

V - Specify if the JPM change will require another Validation (Y or N).
See cover sheet for criteria.

SEQUOYAH NUCLEAR PLANT
RO/SRO
JOB PERFORMANCE MEASURE

Task:
Determine If SI Termination Criteria Is Met

JA/TA Task # :
0060150101 (**RO**)
0060150102 3410410302 (**SRO**)

K/A Ratings:
009EK3.24 (4.1/4.6)

Task Standard:
Determine when SI Termination criteria is completely satisfied.

Evaluation Method : Simulator ___X_____ In-Plant _____

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Performer: _____
NAME Start Time _____

Performance Rating : SAT _____ UNSAT _____ Performance Time _____ Finish Time _____

Evaluator: _____/_____
SIGNATURE DATE

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COMMENTS

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SPECIAL INSTRUCTIONS TO EVALUATOR:

1. Sequenced steps identified by an "s"
2. Any UNSAT requires comments
3. Initialize in IC # 10, insert Malfunction **#RP04A** "Inadvertent SI" when all the automatic actions have occurred and the alarms have been reset/cleared, then FREEZE the simulator until the operator has been briefed.
4. Insure operator performs the following required actions for **SELF-CHECKING;**
   a. Identifies the correct unit, train, component, etc.
   b. Reviews the intended action and expected response.
   c. Compares the actual response to the expected response.

Validation Time: CR. 9 mins **Local** _____

Tools/Equipment/Procedures Needed:

E-0 Step #15 to end

References:

	Reference	Title	Rev No.
1.	E-0	Reactor Trip or Safety Injection	23

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READ TO OPERATOR

Directions to Trainee:

I will explain the initial conditions, and state the task to be performed. I will provide initiating cues and indicate any steps to be discussed. When you complete the task successfully, the objective for this job performance measure will be satisfied. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

Unit 1 was operating at 100% power when it experienced a reactor trip and safety injection. All equipment operated as expected.

INITIATING CUES:

The actions of E-0 have been completed through step #14.
You are the Unit 1 OATC and are to start at Step 15 and determine if SI Termination criteria has been met.
Inform the Unit SRO when you have made your determination.

Job Performance Checklist:

STEP/STANDARD	SAT/UNSAT
STEP 1: (do not delete this contains hidden text) STEP 1.: Operator obtains appropriate procedure. **NOTE: The first 14 steps have been completed as stated in the Initiating Cues.** STANDARD: Operator obtains a copy of E-0 and continues actions at step #15.	___ SAT ___ UNSAT Start Time____
STEP 2.: MONITOR RCS temperatures: T-avg stable at or trending to between 547°F and 552°F. ***Cue: If T-avg is outside this band, cue that T-avg is 549°F*** STANDARD: Operator checks T-avg indicators TI-68-2E, 25E, 44E, 67E and ensures T-avg is trending to between 547°F and 552°F.	___ SAT ___ UNSAT
STEP 3.: DISPATCH personnel to perform EA-0-1. ***Cue: The CRO will perform this EA.*** STANDARD: Operator dispatches someone to perform EA-0-1.	___ SAT ___ UNSAT
STEP 4.: CHECK Pzr PORVs CLOSED. STANDARD: Operator checks PCV-68-340A & 334A closed, green light on respective handswitches ON.	___ SAT ___ UNSAT
STEP 5.: CHECK Pzr Safety Valves CLOSED. STANDARD: Operator checks acoustic monitor XX-68-363 has no lights illuminated (XE-68-363,-364,-365), and/or tail pipe temperatures reading normal (TI-68-328,-329,-330).	___ SAT ___ UNSAT

Job Performance Checklist:

STEP/STANDARD		SAT/UNSAT
STEP 6.:	CHECK Normal spray valves CLOSED.	___ SAT ___ UNSAT
STANDARD:	Operator checks FCV-68-340B & 340D closed red lights above controllers are OFF. IF pressure is > 2260, operator verifies trending down and leaves sprays in auto, open. (verifies bulbs are not bad by depressing test switches).	
STEP 7.:	CHECK Power to at least one block valve AVAILABLE.	___ SAT ___ UNSAT
STANDARD:	Operator checks HS-68-332A & 333A for power on indicating lights.	
STEP 8.:	CHECK At least one block valve OPEN.	___ SAT ___ UNSAT
STANDARD:	Operator checks HS-68-332A or 333A for RED indicating light LIT on at least one block valve.	
STEP 9.:	MONITOR RCP trip criteria:	___ SAT ___ UNSAT
STANDARD:	Operator checks, RCS pressure > 1250 psig. Utilizes RNO to go to next step and not trip RCPs.	
STEP 10.:	CHECK if S/G secondary pressures boundary are INTACT:	___ SAT ___ UNSAT
STANDARD:	Operator checks all pressures controlled or rising (and greater than 140 psig) PI-1-2A, 2B, 9A, 9B, 20A, 20B, 27A, 27B.	
STEP 11.:	CHECK if S/G tubes are INTACT: CHECK all S/G narrow range levels controlled or dropping.	___ SAT ___ UNSAT
STANDARD:	Operator checks S/G levels controlled or dropping LI-3-43A, 56A, 98A, 111A	

Job Performance Checklist:

	STEP/STANDARD	SAT/UNSAT
STEP 12.:	CHECK the following Rad monitors, including available **trends** prior to isolation: [on listed instruments]	___ SAT ___ UNSAT
Cue:	***When operator addresses recorders, cue them that no increasing trend is evident.***	
STANDARD:	Operator checks the following parameters: Steam line Rad monitors RI-90-421, 422, 423, 424, normal ___ Condenser exhaust monitors RR-90-119 ___ S/G BD monitors RR-90-120 (no chg prior to isol).___ Post Accident Main Steam Line Radiation Recorder RR-90-268B, points 3, 4, 5, 6 Normal ___	
STEP 13.:	CHECK if RCS is INTACT: [Verify listed instruments normal]	___ SAT ___ UNSAT
Cue:	***When operator addresses recorders, cue them that no increasing trend is evident.***	
STANDARD:	Operator checks the following parameters NORMAL: CNTMT Pressure PDI-30-45 & 44 ___ CNTMT Sump level LI-63-176, 177, 178, 179 ___ Lwr Cntmt Temp alarm XA-55-5C wind #8 (B-1) DARK ___ Upper Cntmt hi range RM-90-271 & 272 NORMAL [M-30] ___ Lwr Cntmt hi range RM-90-273 & 274 NORMAL [M-30] ___ Radiation RR-90-106 &112 normal prior to Isol ___	
STEP 11:	DETERMINE of ECCS flow should be reduced.	
STANDARD:	The next few steps will perform the actions of this procedural step.	
STEP 14.:	CHECK RCS subcooling based on core exit T/Cs greater than 40°F.	___ SAT ___ UNSAT
STANDARD:	Operator determines RCS subcooling is > 40°F [Exo Sensors or P-250 trend recorder] ___	**Critical Step**

Job Performance Checklist:

	STEP/STANDARD	SAT/UNSAT
STEP 15.:	CHECK secondary heat sink: Narrow range level in at least one S/G greater than 10% **OR** Total feed flow to S/Gs greater than 440 gpm.	___ SAT ___ UNSAT
STANDARD:	Operator checks Secondary heat sink: At least one (1) S/G Narrow Range level > 10% [LI-3-42,-39,-55, -52,-97,-94,-110,-107] ___ OR Total AFW flow ≥ 440 gpm [FI-3-163A,-155A,-147A,-170A] ___	**Critical Step**
STEP 16.:	CHECK RCS pressure stable or rising.	___ SAT ___ UNSAT
STANDARD:	Operator checks RCS pressure stable or rising [Exo Sensors, PR-68-69 (for trend only), or PI-68-66A, -62,-69] ___	**Critical Step**
STEP 17.:	CHECK pressurizer level greater than 10%.	___ SAT ___ UNSAT
STANDARD:	Operator checks Pzr level > 10% [LI-68-335A or 320A, LR-68-339] ___	**Critical Step**
STEP 18.:	MONITOR status trees and GO TO ES-1.1,	___ SAT ___ UNSAT
Cue:	***STA will monitor status trees.***	
STANDARD:	Operator determines that all SI Termination criteria was met and is now able to transition to ES-1.1 to terminate SI.	
STEP 19.:	Inform the US/SRO when all termination criteria have been met.	___ SAT ___ UNSAT
STANDARD:	Operator informs the US/SRO when all SI Termination criteria has been satisfied.	Stop Time____

SEQUOYAH NUCLEAR PLANT
JOB PERFORMANCE MEASURE

JPM # 22

CALIBRATE POWER RANGE NUCLEAR INSTRUMENTATION

Original Signatures on File

PREPARED/ REVISED BY: _____ Date/ _____

VALIDATED BY: * _____ Date/ _____

APPROVED BY: _____ Date/ _____
(Operations Training Manager)

CONCURRED: ** _____ Date/ _____
(Operations Representative)

* *Validation not required for minor enhancements, procedure Rev changes that do not affect the JPM, or individual step changes that do not affect the flow of the JPM.*
** Operations Concurrence required for new JPMs and changes that affect the flow of the JPM (if not driven by a procedure revision).

NUCLEAR TRAINING

REVISION/USAGE LOG

REVISION NUMBER	DESCRIPTION OF REVISION	V	DATE	PAGES AFFECTED	PREPARED/ REVISED BY:
3	Transfer from WP. Minor enhancements.	N	8/16/94	All	HJ Birch
4	JPM enhancements	Y	11/2/94	All	HJ Birch
5	Added sign dates to cover page and broke down several large steps into separate JPM steps. SI-78 Rev change added several steps that did not change the JPM performance.	Y	10/2/95	All	HJ Birch
pen/ink	SI-78 Rev Chg: Chgd P-250 to Plant Computer. Added step if NIS inop	N	6/8/96	4-10	HJ Birch
pen/ink	Update SI-78 Rev. Chgd wording in several steps to match new Rev. Chgd procedure step numbers in JPM	N	9/16/96	4-11	HJ Birch
6	Incorp above pen/inks. SI-78 Rev. Deleted sections and change performance flow in procedure. Made step 18 critical	Y	5/22/97	ALL	HJ Birch
	SI-78 Rev chg only	N	8/12/97	4	HJ Birch
7	Revised per recent revisions to 0-SI-OPS-092-078.0; No impact on JPM flow	N	8/19/02	All	J P Kearney

V - Specify if the JPM change will require another Validation (Y or N).
See cover sheet for criteria.

SEQUOYAH NUCLEAR PLANT
RO/SRO
JOB PERFORMANCE MEASURE

Task:
Calibrate the Power Range Nuclear Instrumentation

JA/TA task:
0150050201 (**RO**)

K/A Ratings:
015000 A1.01 (3.5 - 3.8) 015020 G9 (3.4 - 3.3)
015020 G13 (3.3 - 3.6) 015000 A4.02 (3.9 - 3.9)

Task Standard:
1) Each channel of Power Range instrumentation (on its power range "A" drawer) will indicate within acceptance criteria tolerances of the calorimetric.
2) The unit is not tripped by a power range neutron flux rate trip.

Evaluation Method : Simulator ___X_____ In-Plant _____

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Performer: _____
NAME Start Time _____

Performance Rating : SAT _____ UNSAT _____ Performance Time _____ Finish Time _____

Evaluator: _____/_____
SIGNATURE DATE

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COMMENTS

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SPECIAL INSTRUCTIONS TO EVALUATOR:

1. Sequenced steps identified by an "s"
2. Any UNSAT requires comments
3. This task is to be performed using the simulator in IC #8
   [Rx Power should be ~ 58 %]
4. MANUALLY adjust N41 to read **55%** and N43 to read **61%**. Ensure N42 & N44 are at 58%.
5. Insure operator performs the following required actions for **SELF-CHECKING;**
   a. Identifies the correct unit, train, component, etc.
   b. Reviews the intended action and expected response.
   c. Compares the actual response to the expected response.

Validation Time: **CR.** 21 min **Local** _____

Tools/Equipment/Procedures Needed:

0-SI-OPS-092-078.0, Sections 3.0, 6.1,6.2, Appendix D

References:

	Reference	Title	Rev No.
1.	0-SI-OPS-092-078.0	Power Range Neutron Flux Channel Calibration By Heat Balance Comparison	15

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READ TO OPERATOR

Directions to Trainee:

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

1. The unit is at steady state conditions with all NIS channel operable.
2. ICS and the LEFM are not available. TRM 3.3.3.15 has been entered. A WR has been initiated.

INITIATING CUES:

1. You are the CRO and the US has directed you to perform 0-SI-OPS-092-078.0.
2. Notify the US when the SI has been completed and any necessary adjustments have been made.

Job Performance Checklist

STEP/STANDARD	SAT/UNSAT
STEP 1: (do not delete this contains hidden text) STEP 1.: Obtain the appropriate procedure. STANDARD: Operator identifies 0-SI-OPS-092-078.0 and goes to section 6.0 "Performance".	___ SAT ___ UNSAT Start Time____
STEP 2.: VERIFY availability of LEFM calorimetric power… ***Cue:*** ***Per initial conditions, LEFM calorimetric power unavailable.*** STANDARD: Operator annotates procedure that LEFM calorimetric power is unavailable.	___ SAT ___ UNSAT
STEP 3.: IF LEFM calorimetric power NOT available OR ICS computer NOT available, THEN PERFORM the following: [a] ENTER applicable action of TRM 3.3.3.15. [b] ENSURE work order initiated as required. [c] IF LEFM calorimetric power CANNOT be restored in time to complete this surveillance, THEN PERFORM the following: 1. REDUCE reactor power to 98.7% (3411 MWt) or less USING U1118 (if available) or NIS. 2. WHEN reactor power is less than 98.7%, THEN CONTINUE this instruction using alternate power indications as specified below. ***Cue:*** ***Per initial conditions, ICS and LEFM calorimetric power unavailable, TRM has been entered, and a WR has been issued..*** STANDARD: Operator verifies power is less than 98.7 using NIS.	___ SAT ___ UNSAT
STEP 4.: DETERMINE reactor core power level by performing the applicable appendix below. STANDARD: Operator goes to Appendix D.	___ SAT ___ UNSAT

Job Performance Checklist

STEP/STANDARD	SAT/UNSAT
NOTE: **The following step is from Appendix D.** STEP 5.: IF 0-PI-SXX-000-022.0 will be used for calorimetric data, THEN PERFORM the following: [a] NOTIFY Systems Engineering to perform manual calorimetric calculation using 0-PI-SXX-000-022.0. [b] MARK remaining steps "N/A" in this appendix. Cue: ***Systems Engineering indicates that a calorimetric has been performed and Reactor Thermal Power is 58%.*** STANDARD: Operator notifies Systems Engineering.	___ SAT ___ UNSAT
NOTE: **The following steps are from Section 6.1.** STEP 6.: RECORD below (N/A power if using printout from ICS): % Rated Core Thermal Power STANDARD: Operator Records Reactor power given by Systems Engineering.	___ SAT ___ UNSAT
STEP 7.: RECORD "AS FOUND" power level from each of the four NIS A Channel drawers. STANDARD: Operator records NIS power range readings from the A channel drawers.	___ SAT ___ UNSAT
STEP 8.: COMPARISON of NIS indication with core thermal power level. CHECK appropriate box to indicate whether the following "as-found" ACCEPTANCE CRITERIA were satisfied. **NOTE:** **During simulator set up N41 was manually adjusted to read 55% and N43 was adjusted to read 61%.** STANDARD: Operator **CHECKS** to determine if NIS channels are within ± 2%. Checks **NO** for NIS 41 & NIS 43, Checks **YES** for NIS 42, & NIS 44	___ SAT ___ UNSAT **Critical Step**

Job Performance Checklist

STEP/STANDARD		SAT/UNSAT
STEP 9.:	IF any NIS channels were inoperable during the performance of this Instruction, THEN:	___ SAT ___ UNSAT
STANDARD:	Since all were operable per the initiating conditions, the operator should N/A this step.	
STEP 10.:	VERIFY that all NIS channel indications are within ± 3 % of the determined core thermal power level.	___ SAT ___ UNSAT
Cue:	***Depending on instrument errors the operator may determine that one or more channels exceed 3 percent.***	
STANDARD:	Operator checks the appropriate box	
STEP 11.:	**IF** a NIS channel was more than 3 percent in error in the non-conservative direction (core thermal > NIS) THEN ...	___ SAT ___ UNSAT
Cue:	***If the operator selected YES in the previous step, Play SRO and inform them that you will make the appropriate notifications.***	
STANDARD:	Operator addresses this step as needed.	
STEP 12.:	CHECK appropriate box to indicate whether the following "as-found" acceptance criteria were satisfied. The indicated NIS power level recorded in step [2] is less than or equal to 100.5 percent	___ SAT ___ UNSAT
STANDARD:	The operator checks **YES** for all channels	
STEP 13.:	IF any channel does not meet acceptance criteria, THEN.PERFORM adjustment of section 6.2.	___ SAT ___ UNSAT
STANDARD:	Operator goes to section 6.2 to make adjustments.	

Job Performance Checklist

STEP/STANDARD		SAT/UNSAT
NOTE:	**The following steps are from section 6.2 NIS Channel Adjustment.**	___ SAT ___ UNSAT
STEP 14.:	IF calculated average power in Section 6.1 .... and average RCS delta T differ by more than approximately 3% THEN...	
Cue:	***Depending on instrument errors the operator may have determined that one or more channels exceed 3 percent. IF asked state notification has been made.***	
STANDARD:	Operator N/As this step or ensures notifications were made.	
STEP 15.:	VERIFY reactor power has remained constant (± 0.5%) since performance of section 6.2.	___ SAT ___ UNSAT
STANDARD:	Operator ensures power has remained stable since he/she took the readings.	
STEP 16.:	IF NIS power range channel is inoperable THEN....	___ SAT ___ UNSAT
STANDARD:	Operator N/As this step since all are operable.	
STEP 17.:	ENSURE all NIS power range channels are operable or bypassed with no bistables tripped.	___ SAT ___ UNSAT
STANDARD:	Operator verifies no bistables tripped. (Initial conditions had all channels operable)	
STEP 18.:	ENSURE rod control system is in MANUAL in accordance with 0-SO-85-1	___ SAT ___ UNSAT **Critical Step**
STANDARD:	Operator turns HS-85-5110 to the MANUAL position.	

Job Performance Checklist

STEP/STANDARD		SAT/UNSAT
STEP 19.:	IF rate trip exists (or occurs) on the NIS channel being calibrated, THEN CLEAR that channel's trip signal (momentarily set RATE MODE switch to RESET position) and annunciator XA-55-6A.	___ SAT ___ UNSAT
Cue:	***For this step and the following steps, inform the operator that "for JPM purposes the CV is not required".***	
STANDARD:	Operator verifies NO rate trip signals are in on ANY of the PR and the annunciator is clear. * **CRITICAL PORTION: If rate trip occurs he/she resets it prior to continuing to the next channel.**	**Critical Step**
STEP 20.:	ADJUST gain potentiometer on associated channel's power range B drawer to bring that channel's indicated power level to within ± .5% of the calorimetric power recorded in section 6.2, step [1].	___ SAT ___ UNSAT
NOTE:	**The step on adjusting coarse adjust was omitted from JPM.**	
STANDARD :	Operator must adjust N41 and N43 to satisfy criteria. The operator should repeat the above step prior to adjusting the second PR.	**Critical Step**
STEP 21.:	WHEN NIS adjustments have been completed, THEN, RECORD the "as left" power level from NIS power range channels.	___ SAT ___ UNSAT
STANDARD:	Operator records the readings from each PR NI; NI41__%, NI42__%, NI43__%, NI44__%.	
STEP 22.:	IF NIS power range channel is inoperable THEN....	___ SAT ___ UNSAT
STANDARD:	Operator N/As this step since all are operable.	
STEP 23.:	CHECK appropriate box to indicate whether the following "as left" acceptance criteria were satisfied.	___ SAT ___ UNSAT
STANDARD:	Operator checks **YES** box for N41, N42, N43, & N44, all being within ± .5% (of 58%).	

Job Performance Checklist

STEP/STANDARD		SAT/UNSAT
STEP 24.:	IF acceptance criteria were NOT satisfied.....	___ SAT ___ UNSAT
STANDARD:	Operator N/As this step.	
STEP 25.:	**RETURN** rod control system to AUTO in accordance with 0-SO-85-1.	___ SAT ___ UNSAT
STANDARD:	Operator places control rod bank selector switch to the AUTO.	
STEP 26.:	Notify SRO that the NIS channels have been calibrated.	___ SAT ___ UNSAT
STANDARD:	Operator notifies the SRO that the SI has been completed and all power range nuclear instruments have been adjusted to meet the acceptance criteria.	Stop Time____

SEQUOYAH NUCLEAR PLANT
JOB PERFORMANCE MEASURE

JPM # 165-2

Perform A Shielding Calculation

PREPARED/ REVISED BY: _____ Date/ _____

VALIDATED BY: * _____ Date/ _____

APPROVED BY: _____ Date/ _____
(Operations Training Manager)

CONCURRED: ** _____ Date/ _____
(Operations Representative)

* Validation not required for minor enhancements, procedure Rev changes that do not affect the JPM, or individual step changes that do not affect the flow of the JPM.
** Operations Concurrence required for new JPMs and changes that affect the flow of the JPM (if not driven by a procedure revision).

NUCLEAR TRAINING

REVISION/USAGE LOG

REVISION NUMBER	DESCRIPTION OF REVISION	V	DATE	PAGES AFFECTED	PREPARED/ REVISED BY:
0	Initial Issue	N	01/30/03	All	G. S. Poteet

V - Specify if the JPM change will require another Validation (Y or N).
See cover sheet for criteria.

SEQUOYAH NUCLEAR PLANT
RO/SRO
JOB PERFORMANCE MEASURE

Task:
Perform a Shielding Calculation

JA/TA task # : 3430290302 **(RO)**

K/A Ratings: 2.3.2 **(2.5/2.9)** 2.3.10 **(2.9/3.3)**

Task Standard:
The examinee will determine the Tenth value layer and the Half value layer of shielding required for adequate protection of a worker.

Evaluation Method : Simulator ___X_____ In-Plant _____

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Performer: _____
NAME Start Time_____

Performance Rating : SAT _____ UNSAT _____ Performance Time _____ Finish Time _____

Evaluator: _____/_____
SIGNATURE DATE

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COMMENTS

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SPECIAL INSTRUCTIONS TO EVALUATOR:

1. Sequenced steps identified by an "s"
2. Any UNSAT requires comments
3. Initialize the simulator in IC-10 and leave in FREEZE. Simulator is NOT required to complete this JPM.
4. Provide Operator with a calculator and equation sheet if required.
5. The simulator is not needed to complete this JPM.

Validation Time: CR. 15 mins **Local** _____

Tools/Equipment/Procedures Needed:

References:

	Reference	Title	Rev No.
		None	

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READ TO OPERATOR

DIRECTIONS TO TRAINEE:

I will explain the initial conditions and state the task to be performed. All steps of this JPM shall be simulated. I will provide initiating cues and reports on other actions when directed by you. When you complete the task successfully, the objective for this job performance measure will be satisfied. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return, the handout sheet I provided you.

INITIAL CONDITIONS:

You have been directed to work in an area where the Gamma Radiation intensity is 10,000 Rad/Hr. with no shielding. You cannot work in the area unless the field is reduced to no greater than 200 Rad/Hr.

INITIATING CUES:

You are to calculate the minimum number of half-value layers (HVLs) required to reduce the Gamma level to no greater that 200 Rad/hr.

You are also to calculate the minimum number of tenth-value layers (TVLs) required to reduce the Gamma level to no greater than 100 Rad/hr.

Job Performance Checklist:

STEP/STANDARD	SAT/UNSAT
STEP 1: (do not delete this contains hidden text) STEP 1.: Operator Understands the definition of HVL. That thickness of a specified substance which, when introduced into the path of a given beam of radiation, reduces the exposure rate to one-half of its original value. Operator determines the number of HVLs based on given intensity of 10,000 Rad/hr. **NOTE: 1 HVL = 5000 Rad/hr** **2 HVL = 2500 Rad/hr** **3 HVL = 1250 Rad/hr** **4 HVL = 625 Rad/hr** **5 HVL = 312 Rad/hr** **6 HVL = 156 Rad/hr** **NOTE: Examinee may use intensity equation. If Examinee uses equation then cue him/her that lead will be used as shielding and the " μ" , the total linear attenuation coefficient for lead is 0.772 cm^{-1}** STANDARD: Operator determines 6 HVLs are required to reduce intensity to less than 200 Rad/hr.	___ SAT ___ UNSAT Start Time____ **Critical Step**
STEP 2.: Operator Understands the definition of TVL. That thickness of a specified substance which, when introduced into the path of a given beam of radiation, reduces the exposure rate to one-tenth of its original value. Operator determines the number of TLVs based on given intensity of 10,000 Rad/hr. **NOTE: 1 TVl = 1000 Rad/hr** **2 TVL = 100 Rad/hr** **3 TVL = 10 Rad/hr** **NOTE: Examinee may use intensity equation. If Examinee uses equation then cue him/her that lead will be used as shielding and the " μ" , the total linear attenuation coefficient for lead is 0.772 cm^{-1}** STANDARD: Operator determines 3 TVLs are required to reduce intensity to less than 100 Rad/hr.	___ SAT ___ UNSAT **Critical Step** Stop Time____

Job Performance Checklist:

STEP/STANDARD	SAT/UNSAT
THIS BLOCK FOR USE AND REFERENCE BY EXAMINER $I_{shielded} = I_{unshielded}\ (1/2)^{\#HVL}(1/10)^{\#TVL}$ where #HVL = $\frac{\text{Shield Thickness (cm)}}{\text{HVL (cm)}}$ and #TVL = $\frac{\text{Shield Thickness (cm)}}{\text{TVL (cm)}}$ Shielding Equation $I = I_o e^{-\mu x}$ Where: I - the exposure rate with the shield (Rad/hr) I_o - the unshielded exposure rate (Rad/hr) x - the shield thickness (cm) μ - the total linear attenuation coefficient (cm^{-1}).	

SEQUOYAH NUCLEAR PLANT
JOB PERFORMANCE MEASURE

JPM # 157

Monitor Status Trees - Pressurized Thermal Shock

PREPARED/ REVISED BY: _____ Date/ _____

VALIDATED BY: * _____ Date/ _____

APPROVED BY: _____ Date/ _____
(Operations Training Manager)

CONCURRED: ** _____ Date/ _____
(Operations Representative)

* Validation not required for minor enhancements, procedure Rev changes that do not affect the JPM, or individual step changes that do not affect the flow of the JPM.
** Operations Concurrence required for new JPMs and changes that affect the flow of the JPM (if not driven by a procedure revision).

NUCLEAR TRAINING

REVISION/USAGE LOG

REVISION NUMBER	DESCRIPTION OF REVISION	V	DATE	PAGES AFFECTED	PREPARED/ REVISED BY:
0	New JPM	Y	2/15/01	All	SR Taylor

V - Specify if the JPM change will require another Validation (Y or N).
See cover sheet for criteria.

SEQUOYAH NUCLEAR PLANT
RO/SRO
JOB PERFORMANCE MEASURE

Task: Monitor Status Trees and Identify Pressurized Thermal Shock Conditions Requiring Implementation FR-P.1

JA/TA task # : 3110450601 (RO) 3110460602 (SRO) 3520950305 (STA)

K/A Ratings:
E14 EA2.1 (3.3/3.8) E08 EA2.1 (3.4/4.2)

Task Standard: Monitor Status Trees and identify Red Path to FR-P.1, Orange Path to FR-Z.1, and determine that FR-P.1 is the higher priority.

Evaluation Method : Simulator ___X___ In-Plant _____

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Performer: _____ Start time _____
NAME

Performance Rating : SAT _____ UNSAT _____ Performance Time _____ Finish time _____

Evaluator: _____/_____
SIGNATURE DATE

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COMMENTS

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SPECIAL INSTRUCTIONS TO EVALUATOR:

1. Critical steps identified by the Words "**Critical Step**" in the SAT/UNSAT Column.
2. Sequenced steps identified by an "s"
3. Any UNSAT requires comments
4. Initialize Simulator to IC #85 or IC # 10 with steps 5 through 8.
5. Activate malfunction **cs01a (Containment spray Pump 1A Trip). Pull to lock and Tag Containment Spray pump 1A-A.**
6. Run simulator and Activate Malfunction **tho1a @ 50% severity (LOCA Hot leg break Loop 1)**
7. Continue to Run simulator and Control AFW as necessary with total flow greater than 440 gpm. **Stop all RCPs after Phase B.**
8. Acknowledge alarms and place Simulator in Freeze when all the following conditions are met: SR is re-instated, RVLIS lower range is >40%, at least one Tcold is less than 191^{0}F, all S/G NR levels are <25%, SAT Margin is inadequate (<40^{0}F) on both exo-sensors, and both the SR and IR SUR indications are zero or negative. The Simulator will **remain in freeze during performance of this JPM.**

   NOTE: SAT margin may fluctuate between adequate and inadequate, and Tcold may fluctuate above and below 191^{0}F. Also, the SR and IR indicators will be bouncing above and below zero, therefore care must be taken when freezing the simulator for the exercise to ensure all the conditions are met at the same time.

9. Insure operator performs the following required actions for **SELF-CHECKING**;
   a. Identifies the correct unit, train, component, etc.
   b. Reviews the intended action and expected response.
   c. Compares the actual response to the expected response.

Validation Time: CR 8 min. **Local** _____

Tools/Equipment/Procedures Needed:
FR-0, Status Trees .

REFERENCES:

	Reference	Title	Rev No.
A.	FR-0	Status Trees	11

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Task Number	Task Title	Cont TRN
3110450601	Monitor Status Trees to ensure that the Critical Safety Functions are maintained	Y
3110460602	Monitor Status Trees to ensure that the Critical Safety Functions are maintained	Y
3520950305	Monitor status trees to ensure that the critical safety functions are maintained {LICENSE PROGRAM}	Y

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READ TO OPERATOR

Directions to Trainee:

I will explain the initial conditions, and state the task to be performed. I will provide initiating cues and reports on other actions when directed by you. All steps shall be simulated for this task and the **simulator will remain in freeze during performance of this JPM.** When you complete the task successfully, the objective for this job performance measure will be satisfied. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

Approximately 15 minutes ago, Unit 1 was at 100% power with 1-AA Containment Spray Pump tagged out of service when a LOCA occurred. E-0 has been completed and the Crew is currently in E-1.

INITIATING CUES:

You are an RO and have been assigned to monitor status trees. Monitor the Status trees for the current conditions and inform the Unit Supervisor of the results.

Job Performance Checklist:

STEP/STANDARD	SAT/UNSAT
STEP 1: (do not delete this contains hidden text) STEP 1: Perform the Subcriticality Status Tree (F-0.1) **NOTE: The following steps are from performance of the subcriticality Status Tree.**	___ SAT ___ UNSAT Start Time____
STEP 2: Power Range less than 5%. STANDARD: Operator checks power range less than 5% on 1-M-13 Power Range Drawer Indicators (1-XI-92-5005B, 5006B, 5007B, & 5008B) and determines Power Range is less than 5%.	___ SAT ___ UNSAT
STEP 3: Intermediate Range SUR Zero or Negative. ***Cue:*** ***If simulator was not frozen with Zero or Negative SUR cue that it is when checked.*** STANDARD: Operator checks Intermediate Range SUR Zero or Negative Using 1-M-13 Comparator and Rate Drawer (1-XX-92-5041) Indicator with the Startup Rate Selector Switch to in both the N35 *and N36 positions and determines it is Zero or Negative.*	___ SAT ___ UNSAT
STEP 4: Source Range Reinstated. STANDARD: Operator checks Source Range Reinstated by observing 1-M-13 Source Range indicators (1-XI-92-5001B & 5002B) responses and determines it is Reinstated.	___ SAT ___ UNSAT
STEP 5: Source Range SUR Zero or Negative. ***Cue:*** ***If simulator was not frozen with Zero or Negative SUR cue that it is when checked.*** STANDARD: Operator checks Source Range SUR Zero or Negative Using 1-M-13 Comparator and Rate Drawer (1-XX-92-5041) Indicator with the Startup Rate Selector Switch to in both the N31 and N32 positions and determines it is Zero or Negative.	___ SAT ___ UNSAT

Job Performance Checklist:

	STEP/STANDARD	SAT/UNSAT
STEP 6:	Perform the Core Cooling Status Tree (F-0.2)	___ SAT ___ UNSAT
NOTE:	**The following steps are from performance of the Core Cooling Status Tree.**	
STEP 7:	Core Exit thermocouples less than 1200°F.	___ SAT ___ UNSAT
NOTE:	**Operator must use the Exo Sensor "Next " button to see page 2 of some T/C quadrants. Quadrants 3 & 4 on 1-XI-94-101 have 2 pages, Quadrants 1 & 2 on 1-XI-94-102 have 2 pages**	
STANDARD:	Operator Checks thermocouples in **all** quadrants Exo sensors (1-XI-94-101 & 102) on 1- M-4 using the Quad buttons to determine if 5 T/Cs have exceeded 1200°F as follows: One T/C near the core center and the hottest T/C in each quadrant (this can be verified by ensuring no T/Cs are above the limit without identifying a specific T/C near the core center). The Operator should determine that the limit has **not** been exceeded.	
STEP 8:	RCS Subcooling Based on Core Exit T/C greater than 40°F.	___ SAT ___ UNSAT
STANDARD:	Operator Checks Subcooling on both Exo sensor "Margin" Displays (1-XI-94-101 & 102) on 1-M-4 to determine if subcooling is greater than 40°F. The Operator should determine that subcooling is less than 40°F.	
STEP 9:	At least one RCP running.	___ SAT ___ UNSAT
STANDARD:	Operator Checks RCPs Running and determines that No RCPs are running.	

Job Performance Checklist:

	STEP/STANDARD	SAT/UNSAT
STEP 10:	Core Exit T/Cs Less than 700°F	___ SAT ___ UNSAT
NOTE:	**Operator must use the Exo Sensor "Next " button to see page 2 of some T/C quadrants. Quadrants 3 & 4 on 1-XI-94-101 have 2 pages, Quadrants 1 & 2 on 1-XI-94-102 have 2 pages**	
STANDARD:	Operator Checks thermocouples in **all** quadrants Exo sensors (1-XI-94-101 & 102) on 1- M-4 using the *Quad buttons to determine* if 5 T/Cs have exceeded 700°F as follows: One T/C near the core center and the hottest T/C in each quadrant (this can be verified by ensuring no T/Cs are above the limit without identifying *a specific T/C near the core center).* The Operator should determine that the limit has **not** been exceeded.	
STEP 11:	RVLIS Lower Range Greater than 40%.	___ SAT ___ UNSAT
STANDARD:	Operator Checks both PAM RVLIS Lower Range Channels (1-LI-68-368 & 371) on 1-M-4. Operator should determine RVLIS is greater than 40% and notes that a yellow path to FR-C.3 exists	
STEP 12:	Perform the Heat Sink Status Tree (F-0.3)	___ SAT ___ UNSAT
NOTE:	**The following steps are from performance of the Heat Sink Status Tree.**	
STEP 13:	Narrow range level in at least one S/G greater than 10% [25% ADV].	___ SAT ___ UNSAT
NOTE:	***Adverse Setpoint will be required.***	
STANDARD:	Operator Checks S/G Narrow Range level on all PAM S/G NR level instruments on 1-M-4 and determines at least one S/G does **not** yet have adequate level (25% NR). (i.e. all S/G are less than 25%)	

Job Performance Checklist:

STEP/STANDARD		SAT/UNSAT
STEP 14:	Total Feedwater flow to S/Gs greater than 440 GPM	___ SAT ___ UNSAT
STANDARD:	Operator Checks PAM AFW Flow instruments on 1-M-4 and determines that total flow to SGs is greater than 440 gpm	
STEP 15:	Pressure in All S/Gs less than 1117 psig.	___ SAT ___ UNSAT
STANDARD:	Operator Checks S/G Pressure on all PAM S/G Pressure instruments on 1-M-4 and determines all S/Gs are less than 1117 psig.	
STEP 16:	Narrow Range level in all S/Gs less than 81%.	___ SAT ___ UNSAT
STANDARD:	Operator Checks S/G Narrow Range level on all PAM S/G NR Level instruments on 1-M-4 and determines that all S/G levels are less than 81%.	
STEP 17:	Pressure in All S/Gs less than 1064 psig.	___ SAT ___ UNSAT
STANDARD:	Operator Checks S/G Pressure on all S/G PAM Pressure instruments on 1-M-4 and determines all S/Gs are less than 1064 psig.	
STEP 18:	Narrow Range level in all S/Gs greater than 10% [25% ADV].	___ SAT ___ UNSAT
NOTE:	**Adverse Setpoint will be required.**	
STANDARD:	Operator Checks S/G Narrow Range level on all PAM S/G NR level instruments on 1-M-4 and determines that all S/G levels are **not** yet greater than 25% and notes that a yellow path to FR-H.5 exists.	

Job Performance Checklist:

	STEP/STANDARD	SAT/UNSAT
STEP 19:	Perform the Pressurized Thermal Shock Status Tree (F-0.4)	___ SAT ___ UNSAT
NOTE:	***The following steps are from performance of the Pressurized Thermal Shock Status Tree.***	
STEP 20:	All T-Colds dropped less than 100°F in the last 60 minutes.	___ SAT ___ UNSAT
STANDARD:	Operator Checks all RCS PAM T-Cold instruments on 1-M-5 (1-TI-68-18, 41, 60, and 83) and determines that All T-Colds have **not** dropped less than 100°F in the last 60 minutes. (i.e. Any T-Cold has exceeded the Cooldown limit)	
STEP 21:	All RCS Pressure Vs T-Cold points to the right of limit A on Curve 3.	___ SAT ___ UNSAT
NOTE:	**Operator should report RED path to the SRO at this time, if so, acknowledge the report and Cue them to continue/complete monitoring of the status trees for any other conditions.**	
STANDARD:	Operator should use the lowest RCS PAM T-Cold on 1-M-5 (1-TI-68-18, 41, 60, and 83) and highest RCS pressure reading from Exo sensors or PAM pressure instruments on 1-M-6 (1-PI-68-66A, 62, & 69) to determine that Limit A has been exceeded on curve 3 and identifies that an RED Path exists to FR-P.1	**Critical Step**
STEP 22:	Perform the Containment Status Tree (F-0.5)	___ SAT ___ UNSAT
NOTE:	***The following steps are from performance of the* Containment Status Tree.**	
STEP 23:	Containment Pressure Less than 12.0 PSID.	___ SAT ___ UNSAT
STANDARD:	Operator Checks PAM Containment pressure instruments on 1-M-6 (1-PDI-30-45 & 44) and determines that Containment Pressure is Less than 12.0 PSID.	

Job Performance Checklist:

STEP/STANDARD		SAT/UNSAT
STEP 24:	Containment Pressure Less than 2.81 PSID.	___ SAT ___ UNSAT
STANDARD:	Operator Checks PAM Containment pressure instruments on 1-M-6 (1-PDI-30-45 & 44) and determines that Containment Pressure is **not** Less than 2.81 PSID. And Identifies an Orange Path to FR-Z.1 Exixts.	**Critical Step**
STEP 25:	Perform the Inventory Status Tree (F-0.6)	___ SAT ___ UNSAT
NOTE:	**The following steps are from performance of the Inventory Status Tree.**	
STEP 26:	Pressurizer Level Less than 92%	___ SAT ___ UNSAT
STANDARD:	Operator Checks PAM Pressurizer level instruments on 1-M-4 (1-PI-68-333A, 335A, & 320) and determines that Pressurizer Level is Less than 92%.	
STEP 27:	Pressurizer Level Greater than 17%.	___ SAT ___ UNSAT
STANDARD:	Operator Checks PAM Pressurizer level instruments on 1-M-4 (1-PI-68-333A, 335A, & 320) and determines that Pressurizer Level is not Greater than 17% and notes that a yellow path to FR-1.2 exists.	

Job Performance Checklist:

	STEP/STANDARD	SAT/UNSAT
STEP 28:	Inform the Unit 1 Unit Supervisor that status trees have been monitored and that a RED Paths exist on PTS (to FR-P.1) and an Orange Path exists on Containment (to FR-Z.1) Status trees requiring transition to FR-P.1.	___ SAT ___ UNSAT Stop Time____
Cue:	***US/SRO acknowledges the report.***	**Critical Step**
NOTE:	**Operator may also report Yellow paths on Heat sink (FR-H.5), Core Cooling (FR-C.3), and Inventory (FR-I.2) status trees. Reporting the yellow paths to the US/SRO is optional.**	
STANDARD:	Operator Inform the Unit 1 Unit Supervisor that status trees have been monitored and that a RED Paths exist on PTS (to FR-P.1) and an Orange Path exists on Containment (to FR-Z.1) Status trees requiring transition to FR-P.1.	