JOB PERFORMANCE MEASURE SETUP SHEET

System: ADMIN
Time Critical: No
Applicability: RO/SRO
Safety Function: Conduct of Operations
Setting: ADMIN, New
Validated: No
References: NOP-OP-1005, PDB Tab A

Tasks: Evaluate conditions to determine time to boil and time to core uncovery.

K / A Data: 2.1.25 Ability to obtain and interpret station reference materials such as graphs / monographs / and tables which contain performance data.

1. Instructions: Once student has found correct Plant Data Book graphs, provide student with attached graphs.

2. Location / Method: Simulator or Control Room / Administrative performance.

3. Initial Condition: Day 25 of Refueling Outage 10. Reactor vessel reassembly is in progress after refueling completed. Current Reactor level band is 355 to 360 inches for setting the vessel head. The backup decay heat removal system is unavailable. Thirty minutes ago RHR B tripped with Reactor water temperature of 90 degrees. Operations and maintenance personnel are attempting to determine cause.

4. Initiating Cue: No decay heat removal systems are in service or currently available. The Shift Manager directs you to calculate Time to Boil and Time to Core Uncovery, per NOP-OP-1005 Shutdown Safety.

JPM CUE SHEET

INITIAL CONDITIONS:	Day 25 of Refueling Outage 10. Reactor vessel reassembly is in progress after refueling completed. Current Reactor level band is 355 to 360 inches for setting the vessel head. The backup decay heat removal system is unavailable. Thirty minutes ago RHR B tripped with Reactor water temperature of 90 degrees. Operations and maintenance personnel are attempting to determine cause.
INITIATING CUE:	No decay heat removal systems are in service or currently available. The Shift Manager directs you to calculate Time to Boil and Time to Core Uncovery, per NOP-OP-1005 Shutdown Safety.

JPM BODY SHEET

Standard:	Performer obtains or simulates obtaining all materials, procedures, tools, keys, radios, etc… before performing task.
Standard:	Performer follows management expectations with regards to safety and communication standards.

Step 1

Operator obtains curves for Time to Boil PDB-A0017 and Time to Core Uncovery PDB-0019.

Critical Step: Operator obtains correct curves, PDB-0017 page 8 and PDB-0019 page 8.

Instructor Cue: None

Notes: None

SAT ___ UNSAT ___

Comment(s):_____

Step 2

Operator determines Time to Boil.

Critical Step: Operator determines Time to Boil is 8.5 to 9 hours.

Instructor Cue: None

Notes: Day 25 of outage with initial temp of 90 degrees. After core alteration and with vessel level at flange.

SAT ___ UNSAT ___

Comment(s):_____

Step 3

Operator determines Time to Boil.

Critical Step: Operator determines Time to Core Uncovery is 44 to 48 hours.

Instructor Cue: None

Notes: Day 25 of outage with initial temp of 90 degrees. After core alteration and with vessel level at flange.

SAT ___ UNSAT ___

Comment(s):_____

Step 4

Operator reports results to Shift Manager.

Standard: Operator reports times to Shift Manager.

Instructor Cue: None

Notes: None

SAT ___ UNSAT ___

Comment(s):_____

Terminating Cue: Time to Boil and Time to Core Uncovery reported to Shift Manager.

Evaluation Results: SAT_____ UNSAT_____

JOB PERFORMANCE MEASURE SETUP SHEET

System: P54
Time Critical: No
Applicability: RO / SRO
Safety Function: Conduct of Operations
Setting: ADMIN, New
Validated: No
References: PAP-1910, Drawing 914-0001-0000 Fire Service Yard Area

Tasks: Isolate System Leak and Evaluate Affect on P54 system and Plant Operation

K / A Data: 2.1.24 Ability to obtain and interpret station electrical and mechanical drawings.

1. Instructions: When Student identifies where to locate or how to locate drawings provide student attached drawing.

2. Location / Method: Simulator or Control Room / Administrative performance.

3. Initial Condition: Reports from field indicate that P54F3554 Motor to Diesel Fire Pump Xconn Supply to Ring has a thru wall pipe rupture. SRO has ordered all Fire Pumps shutdown to secured status per SOI-P54 Water.

4. Initiating Cue: Unit Supervisor directs you to determine how P54F3554 can be isolated. What Fire Protection Functional Specification(s) is the plant currently in per PAP-1910?

JPM CUE SHEET

INITIAL CONDITIONS:	Reports from field indicate that P54F3554 Motor to Diesel Fire Pump Xconn Supply to Ring has a thru wall pipe rupture. SRO has ordered all Fire Pumps shutdown to secured status per SOI-P54 Water.
INITIATING CUE:	Unit Supervisor directs you to determine how P54F3554 can be isolated. What Fire Protection Functional Specification(s) is the plant currently in per PAP-1910.

JPM BODY SHEET

Standard:	Performer obtains or simulates obtaining all materials, procedures, tools, keys, radios, etc… before performing task.
Standard:	Performer follows management expectations with regards to safety and communication standards.

Step 1

Leak Isolation, Drawing 914-0001-0000 Rev LL, Fire Service Yard Area

Critical Step: Operator obtains drawing and determines that P54F3552, P54F3555 and P54F6371 will isolate P54F3554.
Instructor Cue: When the Operator determines the correct 914 drawing to use, then provide the drawing to the Operator'
Notes: P54F3554 coordinates are F4, P54F3552 coordinates H2, P54F3555 coordinates F4 and P54F6371 C3.
SAT ___ UNSAT ___

Comment(s):_____

Step 2

Fire Protection Functional Specifications: Refer to PAP-1910 Fire Protection Program
Current Specification, prior to isolation and restoration:

1. Attachment 3 section 3A Fire Suppression Water Supply

   step D.2.a(1) or a(2) Both Fire Pumps are not Functional

Critical Step: Determines that **Both** fire pumps are not functional, a(1) 24 hours to establish backup system or a(2) LCO 3.0.3.
Instructor Cue: Plant is in Mode 1

Notes: PAP 1910 page 65 and 66, with both pumps in secured status, pumps are not functional.

SAT ___ UNSAT ___

Comment(s):_____

Step 3

Fire Protection Functional Specifications: Refer to PAP-1910 Fire Protection Program

Current Specification, prior to isolation and restoration:

2. Attachment 3 section 4A Fire Mains and Headers

   step D.1.a or b Fire Main is not Functional, no pumps

Standard: a. 1 hour verify flow path exists, b. 24 hours to establish back up system

Instructor Cue: Fire Marshall is working on the necessary compensation for each individual system per the note on page 69 and 70.

Notes: PAP-1910 page 69 and 70, Fire Pump spec more limiting

SAT ___ UNSAT ___

Comment(s):_____

Terminating Cue: Unit Supervisor has the valves needed to isolate the leak and the correct Functional Specifications for the loss of Fire Suppression Equipment.

Evaluation Results: **SAT_____ UNSAT_____**

JOB PERFORMANCE MEASURE SETUP SHEET

System: ADMIN
Time Critical: YES
Applicability: SRO
Safety Function: Conduct of Operations
Setting: ADMIN, New
Validated: No
References: FITS Qualification Matrix, NOP-OP-1002, and Tech Specs Section 5.0

Tasks: Staff oncoming shift for minimum manning per the guidelines in NOP-OP-1002.

K / A Data: 2.1.4 Knowledge of Shift Staffing Requirements.

1. Instructions: Direct use of FITS Qualification Matrix. When the Operator locates the appropriate Qualification Matrix for each shift position in the FITS computer database. Then provide the Operator with the appropriate hard copy of the Qualification Matrix'.

2. Location / Method: Simulator or Control Room / Administrative performance.

3. Initial Condition: The plant is operating at 100% power and grid risk is RED. Schedule adjustments are in progress due to coming out of a forced outage. The following are the personnel scheduled in for the oncoming shift: RO's Cross, Jones and Evans. NLO's Rarick, Cowger, Clark, Rigden and Furmanek, Fire Technician Vollman.

4. Initiating Cue: As the Unit supervisor staff the oncoming shift.

JPM CUE SHEET

INITIAL CONDITIONS:	The plant is operating at 100% power and grid risk is RED. Schedule adjustments are in progress due to coming out of a forced outage. The following are the personnel scheduled in for the oncoming shift: RO's Cross, Jones and Evans. NLO's Rarick, Cowger, Clark, Rigden and Furmanek, Fire Technician Vollman.
INITIATING CUE:	As the Unit supervisor staff the oncoming shift.

JPM BODY SHEET

Standard:	Performer obtains or simulates obtaining all materials, procedures, tools, keys, radios, etc… before performing task.
Standard:	Performer follows management expectations with regards to safety and communication standards.

Step 1

Determine what positions need filled. NOP-OP-1002

Safe Shutdown (SSD)

Perry

JOB TITLE		MODE 1, 2 & 3	MODE 4 & 5
SM (SRO)	SSD	1	1
US (SRO)	SSD	1	None
Reactor Operator (RO)	SSD	2	1
Non-Licensed Operator	SSD	2	1
Shift Engineer		1	None
Radwaste Technician		1	1
Health Physics Technician		1	1
Chemistry Technician		1	1
I&C Technician		1	1
Fire Brigade Leader [1]		1	1
Fire Brigade Members [2]		4	4
Security Personnel		**	**

[1] Fire Brigade Leader (FBL) – Reactor Operator or a person with equivalent knowledge of plant safety related systems (simulator certification with plant systems familiarity).

[2] Fire Brigade Members – Two PO/POAs and two other Fire Brigade qualified individuals.

** In accordance with the PNPP Physical Security Plan

Critical Step: Determine what positions need filled. 3 RO's, one a Fire Brigade Leader, 2 SSD's, 4 Fire Brigade members and 2 must be NLO's.

Instructor Cue: None

Notes: Fire Brigade is 1 RO, 1 Fire Tech and 3 NLO's currently at Perry.

SAT ___ UNSAT ___

Comment(s):_____

Step 2

Determine qualifications of available personnel using FITS qualification matrix.

For Reactor Operator: Cross, Jones and Evans are qualified.

Fire Brigade Leader: Evans is qualified.

Fire Brigade: Vollman, Rarick, and Cowger are qualified.

SSD: Rarick, Cowger, Clark, Rigden and Furmanek are qualified.

Critical Step: Determines qualification of available personnel.

Instructor Cue: Direct use of FITS Qualification Matrix. When the Operator locates the appropriate Qualification Matrix for each shift position in the FITS computer database. Then provide the Operator with the appropriate hard copy of the Qualification Matrix'

Notes: None

SAT ___ UNSAT ___

Comment(s):_____

Step 3

For the Reactor Operator positions:

Fire Brigade leader position:

Critical Step: Evans must be Fire Brigade Leader. Cross and Jones will be Control Room Operators.

Instructor Cue: When the Operator locates the appropriate Qualification Matrix for each shift position in the FITS computer database. Then provide the Operator with the appropriate hard copy of the Qualification Matrix'

Notes: Evans **can not** be ATC and Brigade Leader.

SAT ___ UNSAT ___

Comment(s):_____

Step 4

For the Safe Shutdown positions:

Critical Step: Assigns two to safe shutdown position, Clark, Rigden and/or Furmanek are qualified for Safe Shutdown position.

Instructor Cue: When the Operator locates the appropriate Qualification Matrix for each shift position in the FITS computer database. Then provide the Operator with the appropriate hard copy of the Qualification Matrix'

Notes: Rarick and Cowger are qualified Safe Shutdown but they are the only qualified fire brigade members beside Vollman.

SAT ___ UNSAT ___

Comment(s):_____

Step 5

For Fire Brigade positions:

Critical Step: Assigns Vollman, Rarick and Cowger. Determines that they need one additional fire brigade qualified person.

Instructor Cue: No other qualified fire brigade members are oncoming, no security personnel are qualified.

Notes: None

SAT ___ UNSAT ___

Comment(s):_____

Terminating Cue: Assigns positions for oncoming crew based on qualifications and determines that an additional fire brigade person is needed.

Evaluation Results: SAT_____ UNSAT_____

JOB PERFORMANCE MEASURE SETUP SHEET

System: C11
Time Critical: No
Applicability: RO
Safety Function: Equipment Control
Setting: ADMIN, New
Validated: No
References: SVI-C11-T1006, Tech Spec 3.1.3 and 3.1.4

Tasks: Evaluate Scram Time Data from SVI-C11-T1006 and report to Unit Supervisor. Evaluate Technical Specifications and include in report to Unit Supervisor.

K / A Data: 2.2.12 Knowledge of Surveillance Procedures.

1. Instructions: Provide student with SVI-C11-T1006, Time Events Analyzer Scram Time Data, and Full Core Display diagram. Provide calculator if requested.

2. Location / Method: Simulator or Control Room / Administrative performance.

3. Initial Condition: Plant in Mode 4. Vessel Hydro completed along with scram time testing per SVI-C11-T1006. Time events analyzer was primary method used to time control rods. ICS was unavailable. Currently no Control Rods have an Active or Potential LCO documented.

4. Initiating Cue: Unit Supervisor directs you to evaluate Time Events Analyzer data sheet for scram time testing per section 5.1.3 using attachment 1 of SVI-C11-T1006 and inform the unit supervisor of any slow or inoperable rods.
   Complete SVI-C11-T1006 data sheets column 5.1.3.1.
   - SVI-C11-T1006 provided
   - Time Events Analyzer Scram Time Data provided
   - Full Core Display provided

JPM CUE SHEET

INITIAL CONDITIONS:	Plant in Mode 4. Vessel Hydro completed along with scram time testing per SVI-C11-T1006. Time events analyzer was primary method used to time control rods. ICS was unavailable. Currently no Control Rods have an Active or Potential LCO documented.
INITIATING CUE:	Unit Supervisor directs you to evaluate Time Events Analyzer data sheet for scram time testing per section 5.1.3 using attachment 1 of SVI-C11-T1006 and inform the unit supervisor of any slow or inoperable rods. Complete SVI-C11-T1006 data sheets column 5.1.3.1. • SVI-C11-T1006 provided • Time Events Analyzer Scram Time Data provided • Full Core Display provided

JPM BODY SHEET

Standard:	Performer obtains or simulates obtaining all materials, procedures, tools, keys, radios, etc… before performing task.
Standard:	Performer follows management expectations with regards to safety and communication standards.

Step 1

SVI-C11-T1006 step 5.1.3.1.a: Evaluate speed per one of the following,

If using the time events analyzer, confirm the scram time(s) <Max_Time(s) calculated per Attachment 1 or by using the **following limiting Value(s):**

Reactor Pressure (psig)	Notch	Limiting Max Time (sec)
0 to 600, inclusive	13	0.94
600 to 950	13	1.13
950 to 1050, inclusive	43	0.30
	29	0.78
	13	1.40

Standard: Calculate Scram time values per attachment 1 for a reactor pressure of 1010 psig.

Instructor Cue: Initial cue was to use attachment 1.

Notes: Test completed at 1010 psig, can use limiting values listed for some rods but will need to complete attachment 1. Notch 43 time is .306, Notch 29 time is .816. and Notch 13 time is 1.478.

SAT ___ UNSAT ___

Comment(s):_____

Step 2

SVI-C11-T1006 step 5.1.3.1.a: Evaluate speed per one of the following,

If using the time events analyzer, confirm the scram time(s) <Max_Time(s) calculated per **Attachment 1** or by using the following limiting Value(s):

Reactor Pressure (psig)	Notch	Limiting Max Time (sec)
1010	43	0.306
	29	0.816
	13	1.478

Critical Step: Evaluate Scram Time Data and determines rod 18-55 and 50-43 are slow. Rod 50-23 is inoperable

Instructor Cue: None

Notes: Cue was to use attachment 1, these are the attachment 1 calculated values.

SAT ___ UNSAT ___

Comment(s):_____

Step 3

SVI-C11-T1006 step 5.1.3.1.b:

If test performed to satisfy Technical Specification SR 3.1.4.2, review all slow rods to the representative sample plan and confirm no more than 20% of the control rods in the representative sample are “slow,”

or

expand the sample size until either this 20% criterion is satisfied or the total number of “slow” control rods (throughout the core, from all surveillances) exceeds the LCO limit. <Technical Specification BASES SR 3.1.4.2>

Standard: Confirms less than 4 rods are slow.

Instructor Cue: None

Notes: 20% of 20 is 4, 2 rods are slow and one is inoperable.

SAT ___ UNSAT ___

Comment(s):_____

Step 4

SVI-C11-T1006 step 5.1.3.1.b:

If the rod fails to scram on the first attempt or if the scram time to position 13 is >7 seconds, immediately declare it INOPERABLE, fully insert it, and comply with the applicable Technical Specification CONDITIONS and REQUIRED ACTION statements. <B00806>

Critical Step: Informs Unit Supervisor rod 50-23 is inoperable.

Instructor Cue: Unit Supervisor will generate PLCO and work order for rod 50-23.

Notes: Scram Time 7.5 seconds to position 13.

SAT ___ UNSAT ___

Comment(s):_____

Step 5

SVI-C11-T1006 step 5.1.3.1.d:

If the rod is “slow” on the first attempt, immediately declare it as such and comply with applicable Technical Specification CONDITIONS and REQUIRED ACTION statements.

Critical Step: Informs Unit supervisor of 2 slow rods.

Instructor Cue: Unit Supervisor will generate PLCO and work order for rod 50-23.

Notes: None

SAT ___ UNSAT ___

Comment(s):_____

Step 6

SVI-C11-T1006:

Completes attachment 4 columns 5.1.3.1.

Standard: Per initiating cue complete columns 5.1.3.1 with SAT/UNSAT or Yes/No for all rods tested.

Instructor Cue: None

Notes: None

SAT ___ UNSAT ___

Comment(s):_____

Terminating Cue: Evaluation of scram time data is completed and the Unit Supervisor has been informed of two slow rods and one inoperable rod.

Evaluation Results: SAT_____ UNSAT_____

TIME EVENTS ANALYZER SCRAM TIME DATA

	Time in seconds to Notch Position		
ROD	43	29	13
18-39	0.292	0.802	1.452
14-43	0.286	0.773	1.392
22-51	0.27	0.776	1.403
18-55	0.309	0.821	1.489
10-51	0.266	0.749	1.355
38-55	0.268	0.736	1.362
46-51	0.301	0.771	1.409
50-43	0.316	0.817	1.481
42-39	0.229	0.709	1.388
38-47	0.216	0.699	1.389
02-27	0.302	0.788	1.407
06-19	0.3	0.811	1.472
10-11	0.299	0.806	1.465
18-07	0.285	0.713	1.366
18-23	0.304	0.789	1.463
38-07	0.229	0.704	1.359
38-15	0.298	0.776	1.391
42-23	0.3	0.803	1.469
50-23	0.98	2.629	7.512
54-15	0.219	0.716	1.349

JOB PERFORMANCE MEASURE SETUP SHEET

System: C11
Time Critical: No
Applicability: SRO
Safety Function: Equipment Control
Setting: ADMIN, New
Validated: No
References: SVI-C11-T1006, Tech Spec 3.1.3 and 3.1.4

Tasks: Evaluate Scram Time Data from SVI-C11-T1006 and report to Unit Supervisor. Evaluate Technical Specifications and include in report to Unit Supervisor.

K / A Data: 2.2.23 Ability to Track Limiting Conditions for Operations.

1. Instructions: Provide student with SVI-C11-T1006, Time Events Analyzer Scram Time Data, and Full Core Display diagram. Provide calculator if requested.

2. Location / Method: Simulator or Control Room / Administrative performance.

3. Initial Condition: Plant in Mode 4. Vessel Hydro completed along with scram time testing per SVI-C11-T1006. Time events analyzer was primary method used to time control rods. ICS was unavailable. Currently no Control Rods have an Active or Potential LCO documented.

4. Initiating Cue: As the Reactor Operator evaluate Time Events Analyzer data sheet for scram time testing per section 5.1.3 using attachment 1 of SVI-C11-T1006.
   Complete SVI-C11-T1006 data sheets column 5.1.3.1.
   As the Unit Supervisor identify any Technical Specification that may need an LCO and complete LCO paperwork.
   - SVI-C11-T1006 provided
   - Time Events Analyzer Scram Time Data provided
   - Full Core Display provided

JPM CUE SHEET

INITIAL CONDITIONS:	Plant in Mode 4. Vessel Hydro completed along with scram time testing per SVI-C11-T1006. Time events analyzer was primary method used to time control rods. ICS was unavailable. Currently no Control Rods have an Active or Potential LCO documented.
INITIATING CUE:	As the Reactor Operator evaluate Time Events Analyzer data sheet for scram time testing per section 5.1.3 using attachment 1 of SVI-C11-T1006. Complete SVI-C11-T1006 data sheets column 5.1.3.1. As the Unit Supervisor identify any Technical Specification that may need an LCO and complete LCO paperwork. • SVI-C11-T1006 provided • Time Events Analyzer Scram Time Data provided • Full Core Display provided

JPM BODY SHEET

Standard:	Performer obtains or simulates obtaining all materials, procedures, tools, keys, radios, etc… before performing task.
Standard:	Performer follows management expectations with regards to safety and communication standards.

Step 1

SVI-C11-T1006 step 5.1.3.1.a: Evaluate speed per one of the following,

If using the time events analyzer, confirm the scram time(s) <Max_Time(s) calculated per Attachment 1 or by using the **following limiting Value(s):**

Reactor Pressure (psig)	Notch	Limiting Max Time (sec)
0 to 600, inclusive	13	0.94
600 to 950	13	1.13
950 to 1050, inclusive	43	0.30
	29	0.78
	13	1.40

Standard: Use Scram time values per attachment 1 for a reactor pressure of 1010 psig.

Instructor Cue: Initial Cue directed use of attachment 1.

Notes: Test completed at 1010 psig, can use limiting values listed for some rods but will need to complete attachment 1. Notch 43 time is .306, Notch 29 time is .816 and Notch 13 time is 1.478.

SAT ___ UNSAT ___

Comment(s):_____

Step 2

SVI-C11-T1006 step 5.1.3.1.a: Evaluate speed per one of the following,

If using the time events analyzer, confirm the scram time(s) <Max_Time(s) calculated per **Attachment 1** or by using the following limiting Value(s):

Reactor Pressure (psig)	Notch	Limiting Max Time (sec)
1010	43	0.306
	29	0.816
	13	1.478

Critical Step: Evaluate Scram Time Data and determines rod 18-55 and 50-43 are slow. Rod 50-23 is inoperable

Instructor Cue: None

Notes: Attachment 1 directed.

SAT ___ UNSAT ___

Comment(s):_____

Step 3

SVI-C11-T1006 step 5.1.3.1.b:

If test performed to satisfy Technical Specification SR 3.1.4.2, review all slow rods to the representative sample plan and confirm no more than 20% of the control rods in the representative sample are “slow,”

or

expand the sample size until either this 20% criterion is satisfied or the total number of “slow” control rods (throughout the core, from all surveillances) exceeds the LCO limit. <Technical Specification BASES SR 3.1.4.2>

Standard: Confirms less than 4 rods are slow.

Instructor Cue: None

Notes: 20% of 20 is 4, 2 rods are slow and one is inoperable.

SAT ___ UNSAT ___

Comment(s):_____

Step 4

SVI-C11-T1006 step 5.1.3.1.b:

If the rod fails to scram on the first attempt or if the scram time to position 13 is >7 seconds, immediately declare it INOPERABLE, fully insert it, and comply with the applicable Technical Specification CONDITIONS and REQUIRED ACTION statements. <B00806>

Critical Step: Generates PLCO for rod 50-23 against Tech Spec 3.1.3.

Instructor Cue: None

Notes: Scram Time 7.5 seconds to position 13.

SAT ___ UNSAT ___

Comment(s):_____

Step 5

SVI-C11-T1006 step 5.1.3.1.d:

If the rod is “slow” on the first attempt, immediately declare it as such and comply with applicable Technical Specification CONDITIONS and REQUIRED ACTION statements.

Critical Step: Generates PLCO for rods 18-55 and 50-43 against Tech Spec 3.1.4.

Instructor Cue: None

Notes: None

SAT ___ UNSAT ___

Comment(s):_____

Step 6

SVI-C11-T1006:

Completes attachment 4 columns 5.1.3.1.

Standard: Per initiating cue complete columns 5.1.3.1 with SAT/UNSAT or Yes/No for all rods tested.

Instructor Cue: None

Notes: None

SAT ___ UNSAT ___

Comment(s):_____

Terminating Cue: Evaluation of scram time data is completed and PLCO's written for Tech Spec 3.1.3 and 3.1.4.

Evaluation Results: SAT_____ UNSAT_____

JOB PERFORMANCE MEASURE SETUP SHEET

System: Administrative
Time Critical: No
Applicability: RO/SRO
Safety Function: Radiation Control
Setting: ADMIN, New
Validated: No
References: HPI-B3, PAP-0114, SVI-G33-T2002A

Tasks: Calculate expected exposure and determine not going to exceed quarterly limit.

K / A Data: 2.3.4 Knowledge of radiation exposure limits including permissible levels in excess of those authorized.

1. Instructions: Provide calculator if requested.

2. Location / Method: Simulator or Control Room / Administrative performance.

3. Initial Condition: Plant is in a December refueling outage. SVI-G33-T2002A is scheduled for performance and is on critical path. Your year to date dose is 750 mrem.

4. Initiating Cue: You are assigned to complete SVI-G33-T2002A. Section 5.1.1 will take you 10 minutes and section 5.1.2 will take you 25 minutes up until step 14. Step 14 will require 10 minutes and the final field steps of 5.1.2 will require an additional 5 minutes. Calculate expected dose and complete Form PNPP No. 6639, Increased Dose Control Level Authorization, if you will exceed 90% of your quarterly Administrative Dose Limit per HPI-B3.

JPM CUE SHEET

INITIAL CONDITIONS:	Plant is in a December refueling outage. SVI-G33-T2002A is scheduled for performance and is on critical path. Your year to date dose is 750 mrem.
INITIATING CUE:	You are assigned to complete SVI-G33-T2002A. Section 5.1.1 will take you 10 minutes and section 5.1.2 will take you 25 minutes up until step 14. Step 14 will require 10 minutes and the final field steps of 5.1.2 will require an additional 5 minutes. Calculate expected dose and complete Form PNPP No. 6639, Increased Dose Control Level Authorization, if you will exceed 90% of your quarterly Administrative Dose Limit per HPI-B3.

JPM BODY SHEET

Standard:	Performer obtains or simulates obtaining all materials, procedures, tools, keys, radios, etc… before performing task.
Standard:	Performer follows management expectations with regards to safety and communication standards.

Step 1

Determine the specific work location and dose rate information from SVI-G33-T2002A and Survey Map ST614.

Critical Step: Work location determination is at valve 1G33F051B and drain valves 1G33F058 and F057. Dose rate at 1G33F051B is 120 mr/hr, and at drain valves 160 mr/hr.

Instructor Cue: **Give operator SVI-G33-T2002A, when survey map for steam tunnel is requested provide Survey Map.**

Notes: None

SAT ___ UNSAT ___

Comment(s):_____

Step 2

Calculate dose estimate.

Critical Step: 20 minutes at G33F051B at 120 mr/hr = 120/60= 2.0 mr/min * 20 = 40 mrem.
30 minutes at G33F057/58 at 160 mr/hr = 160/60 = 2.66 mr/min * 30 = 80 mrem.

Instructor Cue: None

Notes: Total Dose estimate should be about 120 mrem. If Operator uses G33F051A instead of B total dose will be 160 mrem.

SAT ___ UNSAT ___

Comment(s):_____

Step 3

Operator determines that 90% of quarterly Administrative Dose Limit per HPI-B3 is 900 mrem and that a dose extension is not required.

Critical Step: Operator determines that 90% of quarterly Administrative Dose Limit per HPI-B3 is 900 mrem and that a dose extension is not required.

Instructor Cue: None

Notes: 90% of quarterly limit is 900 mr/hr, so dose extension request will not be required.

SAT ___ UNSAT ___

Comment(s):_____

Terminating Cue: Dose estimated is less than 900 mrem.

Evaluation Results: SAT_____ UNSAT_____

JOB PERFORMANCE MEASURE SETUP SHEET

System: ADMIN
Time Critical: YES
Applicability: SRO
Safety Function: Emergency Procedures/Plan
Setting: ADMIN, New
Validated: No
References: EPI-A1, EPI-A2, and EPI-B1

Tasks: Verify Initial Notification and Pager Message forms are complete prior to notifications.

K / A Data: 2.4.41 Knowledge of emergency action level thresholds and classifications.

1. Instructions: NA

2. Location / Method: Simulator or Control Room / Administrative performance.

3. Initial Condition: This is a DRILL. Fuel Bundle was dropped in the FHB with clad damage. FHB D21 monitors have valid high radiation alarms. FHB D17 has a high alarm and gas channel is pegged high. The Plant Vent Gas channel 1D17K786 is offscale high. The Plant Vent Accident Gas Channel 1D19K300 is reading .40 μCi/cc. CADAP run is complete and attached for review. The Shift Manager has completed the Initial Notification and Pager Forms.

4. Initiating Cue: This is a Drill. The Shift Manager requests you to review Initial Notification and Pager Message forms prior to transmittal. **Notification is due in 15 minutes**. **This is a Time Critical JPM**.

JPM CUE SHEET

INITIAL CONDITIONS:	This is a Drill. Fuel Bundle was dropped in the FHB with clad damage. FHB D21 monitors have valid high radiation alarms. FHB D17 has a high alarm and gas channel is pegged high. The Plant Vent Gas channel 1D17K786 is offscale high. The Plant Vent Accident Gas Channel 1D19K300 is reading .40 μCi/cc. CADAP run is complete and attached for review. The Shift Manager has completed the Initial Notification and Pager Forms.
INITIATING CUE:	This is a Drill. The Shift Manager requests you to review Initial Notification and Pager Message forms prior to transmittal. **Notification is due in 15 minutes. This is a Time Critical JPM**

JPM BODY SHEET

Standard:	Performer obtains or simulates obtaining all materials, procedures, tools, keys, radios, etc… before performing task.
Standard:	Performer follows management expectations with regards to safety and communication standards.

Step 1

TIME STARTED: _____

Evaluate Event Classification: EPI-A1

Initiating Conditions	Entry Criteria	
HS1 **Site Boundary dose resulting from an actual or imminent release of gaseous radioactivity that exceeds 100 mRem TEDE dose OR 500 mRem CDE Child Thyroid dose for the actual or projected duration of the release**	A valid indication greater than the listed reading for one or more of the following plant gaseous effluent monitors: • PLANT VENT GAS 1D19-K300 3.8E-1 µCi/cc • OG VENT GAS 1D19-K400 2.2E0 µCi/cc • TB/HB VENT GAS 1D17-K856 1.6E4 cpm • PLANT VENT GAS 2D19-K300 6.0E-1 µCi/cc	Emergency dose calculations, using actual meteorology indicate that one or more of the following are met at the Site Boundary: • Greater than 100 mRem TEDE • Greater than 500 mRem CDE Child Thyroid
	Emergency dose calculations CANNOT confirm, within 15 minutes of exceeding limit, that levels at the Site Boundary are less than 100 mRem TEDE and 500 mRem CDE Child Thyroid dose using actual meteorology.	
Applicable Modes:		
1 2 3 4 5 D		

Critical Step: HS1, is met. Column 1 1D19K300 is greater than value listed. CADAP complete. Go to column two, TEDE at SB is 104 mRem, meet requirement for greater than 100 mRem TEDE. CADAP is in Rem must convert to mRem.

Instructor Cue: None

Notes: Meet Entry conditions for GA2 and HA1.

SAT ___ UNSAT ___

Comment(s):_____

Step 2

Check of Initial Notification Form:

Blocks 1 and 2 are correct. Block 3 should be checked Site Area Emergency and HS1 identified in the EAL block.'

Critical Step: Sire Area Emergency should be checked and HS1 identified in the EAL block.'

Instructor Cue: None

Notes: None

SAT ___ UNSAT ___

Comment(s):_____

Step 3

Check of Initial Notification Form:

Blocks 4 is accurate, Block 5 should have block 5.b checked.

Critical Step: Discovers that block 5.b should be checked, a release is in progress. Plant Vent monitors are release point monitors.

Instructor Cue: None

Notes: None

SAT ___ UNSAT ___

Comment(s):_____

Step 4

Check of Initial Notification Form:

Blocks 6 and 7 are accurate.

Standard: No errors in blocks 6 and 7.

Instructor Cue: None

Notes: None

SAT ___ UNSAT ___

Comment(s):_____

TIME COMPLETE: _____

Step 5

Check of Page Message:

Scenario ID should be 3, Site Area Emergency.

Standard: Discovers wrong block checked, should be block 3 or event code 3333.

Instructor Cue: None

Notes: None

SAT ___ UNSAT ___

Comment(s):_____

Terminating Cue: Check of Initial Notification form complete within 15 minute classification time.

Evaluation Results: SAT_____ UNSAT_____