

JOB PERFORMANCE MEASURE SETUP SHEET

System: Administrative

Time Critical: No Applicability: RO

Administrative Topic: Conduct of Operations Validated Time: 13 Minutes

Setting: Classroom/Simulator

References: PDB-I0002 Rev 7, PDB-I0003 Rev 14, PDB-I0018 Rev 3, & SOI-E31 Rev 8

Required Material: PDB-I0002 - Transmitter To Trip Unit Cross Reference,
PDB-I0003 - Trip Unit To Technical Specification Cross Reference
PDB-I0018 - E31 Trip Instructions
SOI-E31 - Leak Detection System

Task: 035-519-04-01 Place a NUMAC Temperature Monitoring Channel in the Tripped/Untripped Condition
299-753-03-01 Determine Affected Trip Units or Indicators Associated with a Transmitter

Task Standard: Determine required actions for placing 1E31-N700A A2-3 in trip and determine components affected by placing unit in trip.

K/A Data: 2.1.7 Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior, and instrument interpretation. Importance: RO 4.4 / SRO 4.7

1. Setup Instructions: If done in simulator, insert Malfunction pt01_1e31n0034a to "0".
2. Location / Method: Classroom/ Simulator / Admin Performance
3. Initial Condition: I&C personnel have reported that transmitter 1E31-N034A has failed low. The Unit Supervisor has determined that Tech Spec 3.3.6.1 Condition A is not met and the Required Action to place the channel in trip must be performed.
4. Initiating Cue: Unit Supervisor directs you the Reactor Operator to determine the method for placing the instrument in trip to meet Technical Specification 3.3.6.1 Condition A and what components will isolate when channel is tripped.

Start: _____ Stop: _____

Candidate: _____

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

PDB-I0002 - Transmitter to Trip Unit Cross Reference

Or

PDB-I0003 - Trip Unit to Technical Specification Cross Reference

Or

PDB-I0018 - Instrument Failure Response Manual Trip Instructions

Operator refers to one or more of the above PDB's to determine that the correct trip unit is NUMAC 1E31-N700A (A2-3)

Critical Step: Operator determines that the correct trip unit is NUMAC 1E31-N700A (A2-3).

Instructor Cue: None

Notes: Operator may also refer to a drawing to ascertain the correct trip unit.

SAT ____ **UNSAT** ____

Comment(s): _____

Step 2**PDB-I0018 - Instrument Failure Response Manual Trip Instructions**

Place TRIP UNIT in trip condition:

- 1) Place 1E31-N700A in INOP.
- 2) Press ETC to select menu layer containing MANUAL TRIP.
- 3) Press MANUAL TRIP.
- 4) Select Module/Input A2-3.
- 5) Press TRIP.
- 6) Press EXIT.
- 7) Place 1E31-N700A in OPER.

Critical Step: Operator determines the required actions to place channel in trip from PDB-I0018 page 65 or SOI-E31 - Leak Detection System, Section 7.4.

Instructor Cue: None

Notes: PDB-I0018 and SOI-E31, Section 7.4 contain the same information. However, the PDB is specific for this input module and the SOI is not specific.

SAT ____ **UNSAT** ____

Comment(s): _____

Step 3**PDB-I0018 - Instrument Failure Response Manual Trip Instructions**

- 1) De-energizes E31-N702A-K12
 - a) Closes G33F039, G33F004
 - b) Closes G33F034, G33F054

Critical Step: Operator determines Division 1 RWCU isolation valves, 1G33-F004, 1G33-F034, 1G33-F039, and 1G33-F054 will isolate.

Instructor Cue: None

Notes: Terminate the JPM

SAT ____ **UNSAT** ____

Comment(s): _____

Terminating Cue: Candidate has determined required actions for placing 1E31-N700A A2-3 in trip and has identified components affected by placing unit in trip.

Evaluation Results: SAT____ UNSAT____

End Time: _____

JPM CUE SHEET

<p>INITIAL CONDITIONS:</p>	<p>I&C personnel have reported that transmitter 1E31-N034A has failed low. The Unit Supervisor has determined that Tech Spec 3.3.6.1 Condition A is not met and the Required Action to place the channel in trip must be performed.</p>
<p>INITIATING CUE:</p>	<p>Unit Supervisor directs you the Reactor Operator to determine the method for placing the instrument in trip to meet Technical Specification 3.3.6.1 Condition A and what components will isolate when channel is tripped.</p>

JOB PERFORMANCE MEASURE SETUP SHEET

System: Administrative
Time Critical: No
Applicability: RO
Administrative Topic: Conduct of Operations
Setting: Classroom
Validated: 20 minutes
References: TMA-4206, Rev 15
Required Material: TMA-4206, Licensed Operator Requalification Programs and Attached Work Schedule
NOP-LP-4011, FENOC Work Hour Control
Tasks: 299-831-03-01 Perform licensed duties only if your license is Current and Active
Task Standard: Review proposed work schedules to determine appropriate schedule(s) to reactivate RO license per TMA-4206, Licensed Operator Requalification Programs
K / A Data: 2.1.4 Knowledge of individual licensed operator responsibilities related to shift staffing, such as medical requirements, “no-solo” operation, maintenance of active license status, 10CFR55, etc. RO 3.3 SRO 3.8

1. Setup Instructions: N/A
2. Location / Method: Classroom / Perform
3. Initial Condition: You are a Staff RO who maintains your license Active. Today is March 9th of this year and you have not stood any proficiency watches since December 20th of last year. You have been directed to maintain your RO license activate this year. The OPS Training Coordinator has developed 6 proposed schedules based on filling existing holes in the schedule.
4. Initiating Cue:
 - Evaluate the proposed schedules to determine if each/any of the schedules meets the requirements to maintain your RO license active.
 - If a schedule does not meet one of these requirements, **EXPLAIN** why it does not.

Start Time: _____ End Time: _____

Candidate: _____

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

Evaluate Schedule 1.

Standard: Operator determines Schedule 1 does not meet:

- The five 12-hour shifts per calendar quarter in a [Qualifying](#) Licensed Position.
- The appropriate watch standing position (NOT Field Supervisor)

Instructor Cue: None

Notes: None

SAT ____ **UNSAT** ____

Comment(s): _____

Step 2

Evaluate Schedule 2

Critical Step: Operator determines Schedule 2 can be used to maintain his/her RO license ACTIVE.

Instructor Cue: None

Notes: None

SAT ____ **UNSAT** ____

Comment(s): _____

Step 3

Evaluate Schedule 3

Standard:	Operator determines Schedule 3 does not meet: <ul style="list-style-type: none">• The five 12-hour shifts per calendar quarter in a Qualifying Licensed Position.• The appropriate watch standing position (NOT Field Supervisor).
Instructor Cue:	None
Notes:	None
SAT ____	UNSAT ____
Comment(s): _____	

Step 4

Evaluate Schedule 4

Standard:	Operator determines Schedule 4 does NOT meet the five 12-hour shifts per calendar quarter in a Qualifying Licensed Position.
Instructor Cue:	None
Notes:	None
SAT ____	UNSAT ____
Comment(s): _____	

Step 5

Evaluate Schedule 5

Standard:	Operator determines Schedule 5 does NOT meet the five 12-hour shifts per calendar quarter in a Qualifying Licensed Position.
Instructor Cue:	None
Notes:	The operator may also state the schedule does not meet the total hours since total hours count only when standing watch in the appropriate position.
SAT ____	UNSAT ____
Comment(s): _____	

Step 6

Evaluate Schedule 6

<u>Critical Step:</u>	Operator determines Schedule 6 can be used to maintain his/her RO license ACTIVE.
Instructor Cue:	None
Notes:	None
SAT ____	UNSAT ____
Comment(s): _____	

Terminating Cue: Operator has determined that schedules 1, 3, 4, & 5 do not meet the requirements for license reactivation and has selected either schedule 2 or 6 to maintain his license.

Evaluation Results: SAT____ UNSAT____

End Time: _____

STUDENT HANDOUT

Schedules	Mar 10	Mar 11	Mar 13	Mar 15	Mar 19	Mar 21	Mar 27	Apr 1	Apr 2	Apr 3	Apr 4
1 Shift Position	Days BOP		Days FS		Nights BOP		Days ATC	Days ATC	Nights FS	Nights BOP	
2 Shift Position	Nights BOP			Nights BOP	Nights ATC	Days ATC	Nights BOP		Nights FS	Nights ATC	Nights BOP
3 Shift Position		Days BOP	Days BOP	Nights ATC	Nights FS	Days ATC	Nights FS				
4 Shift Position	Days ATC	Days ATC	Days BOP	Days BOP				Nights ATC		Days FS	
5 Shift Position			Days BOP	Days ATC			Nights ATC		Nights ATC	Nights FS	Nights ATC
6 Shift Position		Days ATC	Days BOP	Nights FS	Nights BOP	Days ATC	Nights ATC	Days FS			

ATC = At the Controls

BOP = Balance of Plant

FS = Field Supervisor

JPM CUE SHEET

INITIAL CONDITIONS:	<ul style="list-style-type: none">• You are a Staff RO who maintains your license Active.• Today is March 9th of this year and you have not stood any proficiency watches since December 20th of last year.• You have been directed to maintain your RO license activate.• The OPS Training Coordinator has developed 6 proposed schedules based on filling existing holes in the schedule.
INITIATING CUE:	<ul style="list-style-type: none">• Evaluate the proposed schedules to determine if each/any of the schedules meets the requirements to maintain your RO license active.• If a schedule does not meet one of these requirements, EXPLAIN why it does not.

JOB PERFORMANCE MEASURE SETUP SHEET

System: R10
 Time Critical: Yes Applicability: RO
 Administrative Topic: Equipment Control Validated Time: 18 Minutes
 Setting: Classroom
 References: SVI-R10-T5227
 Required Material: SVI-R10-T5227, Off-Site Power Availability Verification
 Task: 299-903-03-01 Perform a Surveillance Instruction (SVI/PTI/TXI) as the Lead Test Performer
 299-717-03-01 Notify Unit Supervisor if Expected Surveillance Test Results are not achieved
 Task Standard: Perform SVI-R10-T5227, and determine that 2 sources of off-site power are not available.
 K/A Data: 2.2.12 Knowledge of surveillance procedures.
 Importance: RO 3.7 SRO 4.1

1. Setup Instructions: None
2. Location / Method: Simulator Classroom Plant Control Room / Performance / Administrative Performance
3. Initial Condition: Plant operating at power. Thirty minutes ago, conditions developed that required the performance SVI-R10-T5227, Off-Site Power Availability Verification. SVI-R10-T5227 has been completed through Step 5.1.1.3 by the Field Supervisor. However, the Field Supervisor was toned out with the Fire Brigade and not able to complete SVI-R10-T5227.
4. Initiating Cue: Unit Supervisor directs you, a Reactor Operator to complete SVI-R10-T5227, Off-Site Power Availability Verification for LCO 3.8.1 Condition B and document results on Data Package Cover Sheet.

Start: _____ **Stop:** _____

Candidate: _____

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-R10-T5227, Off-Site Power Availability Verification**

5.1.1 Test Authorization

4. REFER TO the decision table below and perform the required section.

Standard: From the Initiating Cue, Operator works way down logic boxes and determines SVI-R10-T5227 Section 5.1.3 is to be performed.

Instructor Cue: None

Notes: Performance required to meet LCO 3.8.1 given in Initiating Cue.
See Answer Key

SAT ____ **UNSAT** ____

Comment(s): _____

Step 2

5.1.3 Confirming Two Sources of Offsite Power Available

1. REFER TO Attachment 1, PLANT DATA and the decision table and TAKE the required action:

Standard: From the data recorded in Attachment 1, Operator works way down logic boxes and determines SVI-R10-T5227 Step 5.1.3.3 is to be performed.

Instructor Cue: None

Notes: See Answer Key

SAT ____ **UNSAT** ____

Comment(s): _____

Step 3

3. REFER TO Attachment 1, PLANT DATA and the decision table and TAKE the required action:

Critical Step: Operator determines conditions in the left column are not met, and notifies the Unit Supervisor that SR 3.8.1.1 criteria is not met.

Instructor Cue: See Answer Key - From the data recorded in Attachment 1, Operator works way down logic boxes and determines that breaker EH1114 cannot be closed.

Notes: See Answer Key

SAT ____ **UNSAT** ____

Comment(s): _____

Step 4

3. REFER TO Attachment 1, PLANT DATA and the decision table and TAKE the required action:

GO TO step 5.1.3.4 and RECORD acceptance criteria for SR 3.8.1.1 is not satisfactory.

Standard: Operator proceeds to Step 5.1.3.4 to record acceptance criteria for SR 3.8.1.1 is not satisfactory.

Instructor Cue: None

Notes: See Answer Key

SAT ____ **UNSAT** ____

Comment(s): _____

Step 5

Operator completes Data Package Cover Sheet for SVI.

Standard:	The checks the following boxes: <ul style="list-style-type: none">• Test Completion: FAILED• Technical Specification Data: UNACCEPTABLE• Reschedule Credit: NO CREDIT <p>The "Test Completed" line should be filled in.</p> <p>The "Comments" field should have reason for Unsat performance.</p>
Instructor Cue:	None
Notes:	See Answer Key
	Terminate the JPM
SAT ____	UNSAT ____
Comment(s):	_____

Terminating Cue: Candidate determines SR 3.8.1.1 is not satisfactory and completes the Data package Cover Sheet for the SVI.

Evaluation Results: SAT_____ UNSAT_____

End Time: _____

JPM CUE SHEET

INITIAL CONDITIONS:	<ul style="list-style-type: none">• Plant operating at power.• Thirty minutes ago, conditions developed that required the performance SVI-R10-T5227, Off-Site Power Availability Verification.• SVI-R10-T5227 has been completed through Step 5.1.1.3 by the Field Supervisor. However, the Field Supervisor was toned out with the Fire Brigade and not able to complete SVI-R10-T5227.
INITIATING CUE:	Unit Supervisor directs you, a Reactor Operator to complete SVI-R10-T5227, Off-Site Power Availability Verification for LCO 3.8.1 Condition B and document results on Data Package Cover Sheet.

JOB PERFORMANCE MEASURE SETUP SHEET

System: Administrative

Time Critical: No Applicability: RO

Administrative Topic: Radiation Control Validated Time: 23 Minutes

References: NOP-OP-4201 Rev 2 & NOP-OP-4202 Rev 0

Required Material: NOP-OP-4201, Routine External Exposure Monitoring
NOP-OP-4202 Declared Pregnant Workers

Task: 299-656-03-01 Direct Non-Licensed Personnel in the Performance of their Duties
299-691-03-01 Properly Use the Exposure Reduction Tools and Methods Available
299-502-03-01 Maintain Radiation Exposure as Low as Reasonably Achievable (ALARA)

Task Standard: Select an eligible NLO with the lowest dose to perform a valve manipulation.

K/A Data: 2.3.12 Knowledge of radiological safety principles pertaining to licensed operator duties, such as containment entry requirements, fuel handling responsibilities, access to locked high-radiation areas, aligning filters, etc. Importance: RO 3.2 SRO 3.7

1. Setup Instructions: None
2. Location / Method: Simulator Classroom / Administrative Performance
3. Initial Condition: Plant operating at power. A PMT on RCIC requires the performance of PTI-E51-P0003, RCIC Terry Turbine Overspeed Trip Test. Valve 1P61-F586, Aux. Steam To RCIC Turbine must be opened to perform the overspeed test.
It is expected to take five minutes to travel to the valve (1 min. in the Turbine Building, 3 min in 620' Steam Tunnel, and 1 min. in the 630' Steam Tunnel), five minutes to operate the valve and 5 minutes to exit the area.
General Area Dose Rates as follows:
Turbine Building - 420 mrem/hr Steam Tunnel 620' - 1350 mrem/hr
Steam Tunnel 630' - 375 mrem/hr @ 1P61F586 - 185 mrem/hr
4. Initiating Cue: Using ALARA principals, select one NLO from the list provided. These are the only NLOs qualified and available to perform this task. Complete dose extension forms if necessary.

Start: _____ Stop: _____

Candidate: _____

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**Survey Map**

Candidate [may review survey map](#) and calculates total dose to perform task.

Standard: Operator determines travel dose one way is 49.8 mrem, (~50) and dose to open valve is 15.4 mrem.

Critical Step: Operator determines total dose for job is > 173 mrem.

Instructor Cue: If requested, provide survey map to applicant.

Notes:
Dose rate in Turbine building is 420 mrem for 7 mrem.
Dose rate in 620' Steam Tunnel is 1350 mrem for 67.5 mrem.
Dose rate in 630' Steam Tunnel is 375 mrem for 6.3 mrem.
Dose rate at valve P61-F586 is 185 mrem for 15.4 mrem,

SAT ____ **UNSAT** ____

Comment(s): _____

Step 2

<u>Critical Step:</u>	The Candidate reviews NOP-OP-4201 and NOP-OP-4202 and determines that Amanda Smith is the correct choice for the job and will need an ACL Extension form completed.
Instructor Cue:	If requested by applicant, sign Administrative Control Level Extension form for Amanda Smith.
Notes:	Sarah Jones would receive > 100 mrem this month if she were selected. Selecting Amanda Smith would result in her still having a lower dose than Bill Jones. See below for supporting documentation.
SAT ____	UNSAT ____
Comment(s):	_____

NOP-OP-4201, Routine External Exposure Monitoring**2.2 Exceptions**

2. This procedure does not provide dose limitation for Declared Pregnant Workers. Refer to NOP-OP-4202 for this class of workers.

3.0 DEFINITIONS

- 3.1 Administrative Control Level (ACL) – A company imposed dose guideline used for the purpose of maintaining doses below the dose limits established in 10 CFR 20.

6.1.10 Determine the worker's ACL values:

1. Refer to Attachment A for the standard list of ACLs.

6.5 ACL Extension Authorization Excluding PSE

NOTES

- HIS-20 implements ACL dose limitation. Typically, the TEDE ACL is limiting. HIS-20 limits the EAD dose alarm set point use the minimum of the following:

Allowable set point = ANNUAL ACL – 100 mrem – TOTAL YTD TEDE

OR,

Allowable set point = SITE ACL – 100 mrem – SITE YTD TEDE

- For TEDE, the initial ANNUAL ACL is 2000 mrem, and the initial SITE ACL is 1000 mrem. If the dose alarm set point is less than needed to perform work, an ACL extension may be requested to increase the ACL.

6.5.1 The work group supervisor initiates the ACL extension authorization by completing Section 1 of NOP-OP-4201-02. After Section 1 is completed, forward the form to Radiation Protection/Dosimetry.

Table 2 – HIS-20 Options - ACL Limits for Site and Annual

Limit Type	TEDE	SDE_SK	SDE_EX	LDE	TDE	DAC_HR	FRAC_ALI
PUBLIC	*200	1000	1000	300	1000	20	0.01
ACL 500	500	5000	5000	1500	5000	20	0.01
**ACL	1000	10000	10000	3000	10000	20	0.01
ACL 1500	1500	15000	15000	4500	15000	50	0.018
***ACL	2000	20000	20000	6000	20000	80	0.036
ACL 3000	3000	30000	30000	9000	30000	100	0.06
ACL 4000	4000	40000	40000	12000	40000	200	0.1

* Includes 100 mrem buffer. Actual limit is 100 mrem.

** Default values for Site.

*** Default values for Annual.

NOP-OP-4202, Declared Pregnant Workers

4.0 LIMITS AND PRECAUTIONS

4.5 The EFDE occupational dose limit is 500 mrem for the entire gestation period or period of declared pregnancy. In addition, substantial variation above a monthly uniform dose rate (e.g., no greater than 100 mrem per month) shall be avoided.

Step 3**NOP-OP-4201, Routine External Exposure Monitoring****ADMINISTRATIVE CONTROL LEVEL EXTENSION AUTHORIZATION** form

Critical Step: The Candidate completes Section 1 of form NOP-OP-4201-02, ADMINISTRATIVE CONTROL LEVEL EXTENSION AUTHORIZATION for Amanda Smith

Instructor Cue: None

Notes: See attached sheet for answer key.

SAT ____ UNSAT ____

Comment(s): _____

Terminating Cue: Candidate determines total dose to perform task, selects an operator using ALARA principals and completes a dose extension form.

Evaluation Results: SAT____ UNSAT____

End Time: _____

ADMINISTRATIVE CONTROL LEVEL EXTENSION AUTHORIZATION

NOP-OP-4201-02 Rev. 01

SECTION 1 - REQUEST			
NAME Amanda Smith	PLANT ID Perry	DEPT/SECT/UNIT Ops	PHONE EXT. 8040
INCREASED DOSE LEVEL REQUESTED			
1. <input checked="" type="checkbox"/> >1000 mrem/yr TEDE current year SITE dose. Request increase to SITE dose of <u>>1004</u> mrem 2. <input type="checkbox"/> >2000 mrem/yr TEDE current year TOTAL dose. Request increase to TOTAL dose of _____ mrem			
REASON FOR INCREASE:			
<u>Open IDOL ISS6 in Steam Tunnel</u> <div style="text-align: center; color: gray; font-size: 1.2em; margin-top: 10px;"> Answer Key Do Not Give To Operator </div>			
WERE OTHER SIMILARLY QUALIFIED PERSONNEL CONSIDERED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
IF NO, WHY NOT?			
<div style="display: flex; justify-content: space-between;"> <div> WORKER: _____ <small>Signature Date</small> </div> <div> FENOC MANAGER: _____ <small>Signature Date</small> </div> </div>			
SUPERVISOR: <u>Candidate</u> <u>Today</u> <small>Signature Date</small>			
NOTE: It is the responsibility of the Supervisor to inform the affected individual when the Authorization is approved.			
SECTION 2 - EXPOSURE HISTORY			
COMPLETED BY RADIATION PROTECTION	RECORD (mrem)	ESTIMATE (mrem)	TOTAL (mrem)
CURRENT YEAR SITE			
CURRENT YEAR OFFSITE			
YEAR TO DATE TOTAL			
Dosimetry Initials/Date _____ / _____			
Comments: _____			
SECTION 3 - APPROVAL			
APPROVED TEDE DOSE EXTENSION TO _____ mrem SITE, and/or _____ mrem TOTAL			
Manager, Radiation Protection _____ Required for any ACL extension <small>Signature Date</small>			
Director, Site Operations _____ Required for SITE > 1500, TOTAL > 3000 <small>Signature Date</small>			
Site Vice-President _____ Required for SITE > 2000, TOTAL > 4000 <small>Signature Date</small>			
SECTION 4 - IMPLEMENTATION			
New authorized dose value entered into HIS-20 by: _____ <small>Initials Date/Time</small>			
Dosimetry Supervision review & verification performed by: _____ <small>Signature Date</small>			

JPM CUE SHEET

<p>INITIAL CONDITIONS:</p>	<p>Plant operating at power. A PMT on RCIC requires the performance of PTI-E51-P0003, RCIC Terry Turbine Overspeed Trip Test. Valve 1P61-F586, Aux. Steam To RCIC Turbine must be opened to perform the overspeed test.</p> <p>It is expected to take 5 minutes to travel to the valve:</p> <ul style="list-style-type: none"> ○ 1 min. in the Turbine Building, ○ 3 min in 620' Steam Tunnel, ○ 1 min. in the 630' Steam Tunnel <p>It is expected to take 5 minutes to operate the valve.</p> <p>It is expected to take 5 minutes to exit the area</p> <p>General Area Dose Rates as follows:</p> <ul style="list-style-type: none"> • Turbine Building 420 mrem/hr • Steam Tunnel 620' 1350 mrem/hr • Steam Tunnel 630' 375 mrem/hr • At 1P61-F586 185 mrem/hr
<p>INITIATING CUE:</p>	<ul style="list-style-type: none"> • Using ALARA principals select one NLO from the list provided. • These are the only NLOs qualified and available to perform this task. • Complete dose extension forms if necessary.

NLO	YTD Dose	Comments
Bill Johnson	945 mrem	Received dose only at Perry YTD
Sarah Jones	176 mrem	Received dose only at Perry YTD Declared Pregnant Worker
Amanda Smith	827 mrem	Received dose only at Perry YTD

JOB PERFORMANCE MEASURE SETUP SHEET

System: Administrative
Time Critical: No Applicability: SRO
Administrative Topic: Conduct of Operations Validated Time: 15 minutes
Setting: Classroom
References: TMA-4206, Rev 15, PYBP-POS 1-5, Rev 3, & NUREG-1021, Rev. 9, Supp. 1
Required Material: TMA-4206, Licensed Operator Requalification Programs and Attached Work Schedule
PYBY – POS 1-5, Operations Training Guidelines
NUREG-1021, Operator Licensing Examination Standards For Power Reactors
NOP-LP-4011, FENOC Work Hour Control
Tasks: 299-831-03-01 Perform licensed duties only if your license is Current and Active
Task Standard: Review proposed work schedules to determine appropriate schedule(s) to reactivate RO license per TMA-4206, Licensed Operator Requalification Programs
K / A Data: 2.1.4 Knowledge of individual licensed operator responsibilities related to shift staffing, such as medical requirements, “no-solo” operation, maintenance of active license status, 10CFR55, etc. RO 3.3 SRO 3.8

1. Setup Instructions: N/A
2. Location / Method: Classroom / Perform
3. Initial Condition: You are a Staff SRO who maintains your license Active. Today is March 9th of this year and you have not stood any proficiency watches since December 20th of last year. You have been directed to maintain your SRO license activate this year. The OPS Training Coordinator has developed 6 proposed schedules based on filling existing holes in the schedule.
4. Initiating Cue:
 - Evaluate the proposed schedules to determine if each/any of the schedules meets the requirements to maintain your SRO license active.
 - If a schedule does not meet one of these requirements, **EXPLAIN** why it does not.

Start Time: _____ End Time: _____

Candidate: _____

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**TMA-4206, Licensed Operator Requalification Programs****4.9 Maintaining an Active NRC License**

In order for a Licensed Operator to maintain an Active NRC License, he must actively perform the functions of a Reactor Operator or Senior Reactor Operator for a minimum of seven 8-hour shifts or five 12-hour shifts per calendar quarter. This requirement may be completed with a combination of COMPLETE 8 hour and COMPLETE 12 hour shifts (in a position appropriately credited for watch-standing proficiency) when working a mixed shift schedule. Watches shall not be truncated when the operator satisfies the minimum quarterly requirement of 56 total hours. The 8 hour or 12 hour shift must include a shift turnover meeting at the beginning and end of the Operator Shift to get credit for the 12 hour or 8 hour watch.

PYBP-POS-1-5, Operations Training Guidelines**4.1 Tracking Of Proficiency Watches**

... To receive credit for the position the operator must stand one of the Technical Specification required license positions (i.e. SM, US, RO-ATC, or RO BOP). . .

... Additionally, on-shift personnel maintaining qualifications for shift positions, other than what they are normally assigned (i.e. SE maintaining RO, SE maintaining US, etc.) also need to document proficiency completion for each position. An SRO must stand at least one complete watch (8 or 12 hr. shift) per calendar quarter in a SRO only supervisory position. The remainder of complete watches in a calendar quarter may be performed in either a credited SRO or RO position. For Shift Manager qualified personnel, at least one complete watch will be in the Shift Manager position. . .

Step 1 continued on next page

Step 1 continued

Standard:	Operator reviews the following for proficiency requirements: <ul style="list-style-type: none">• TMA-4206, Licensed Operator Requalification Programs• PYBP-POS-1-5, Operations Training Guidelines
Instructor Cue:	None
Notes:	Candidate may want to review NOP-LP-4011 for Fatigue Rule.
SAT ____	UNSAT ____
Comment(s): _____	

Step 2

Evaluate Schedule 1.

Standard:	Operator determines Schedule 1 does not meet: <ul style="list-style-type: none">• The five 12-hour shifts per calendar quarter in a Qualifying Licensed Position.• The appropriate watch standing position (NOT Shift Engineer)
Instructor Cue:	None
Notes:	None
SAT ____	UNSAT ____
Comment(s): _____	

Step 3

Evaluate Schedule 2

<u>Critical Step:</u>	Operator determines Schedule 2 can be used to maintain his/her SRO license ACTIVE.
Instructor Cue:	None
Notes:	Schedule 2 can be used to maintain the SRO License , but will not maintain Shift Manager qualifications .
SAT ____	UNSAT ____
Comment(s): _____	

Step 4

Evaluate Schedule 3

Standard:	Operator determines Schedule 3 does not meet: <ul style="list-style-type: none">• The five 12-hour shifts per calendar quarter in a Qualifying Licensed Position.• The appropriate watch standing position (NOT Shift Engineer nor Field Supervisor).
Instructor Cue:	None
Notes:	None
SAT ____	UNSAT ____
Comment(s): _____	

Step 5

Evaluate Schedule 4

Standard:	Operator determines Schedule 4 does NOT meet the five 12-hour shifts per calendar quarter in a Qualifying Licensed Position.
Instructor Cue:	None
Notes:	None
SAT ____	UNSAT ____
Comment(s): _____	

Step 6

Evaluate Schedule 5

Standard:	Operator determines Schedule 5 does NOT meet the five 12-hour shifts per calendar quarter in a Qualifying Licensed Position.
Instructor Cue:	None
Notes:	None.
SAT ____	UNSAT ____
Comment(s): _____	

Step 7

Evaluate Schedule 6

Critical Step: Operator determines Schedule 6 can be used to maintain his/her SRO license ACTIVE.

Instructor Cue: None

Notes: Schedule 6 is the only schedule that will allow the SRO to maintain his/her Shift Manager qualification active.

SAT ____ UNSAT ____

Comment(s): _____

Terminating Cue: Operator has determined that schedules 1, 3, 4, & 5 do not meet the requirements for license reactivation and has selected either schedule 2 or 6 to maintain his license.

Evaluation Results: SAT ____ UNSAT ____

End Time: _____

STUDENT HANDOUT

Schedules	Mar 10	Mar 11	Mar 13	Mar 15	Mar 19	Mar 21	Mar 27	Apr 1	Apr 2	Apr 3	Apr 4
1 Shift Position	Days US		Days SE		Nights US		Days ATC	Days ATC	Nights FS	Nights BOP	
2 Shift Position	Nights BOP			Nights US	Nights ATC	Days ATC	Nights BOP		Nights SE	Nights ATC	Nights US
3 Shift Position		Days US	Days BOP	Nights ATC	Nights SE	Days SE	Nights FS				
4 Shift Position	Days SM	Days US	Days SM	Days BOP				Nights US		Days US	
5 Shift Position			Days SM	Days US			Nights US		Nights ATC	Nights SE	Nights ATC
6 Shift Position		Days US	Days SM	Nights FS	Nights US	Days ATC	Nights ATC	Days SE			

SM = Shift Manager

US = Unite Supervisor

SE = Shift Engineer

ATC = At the Controls

BOP = Balance of Plant

FS = Field Supervisor

JPM CUE SHEET

INITIAL CONDITIONS:	<ul style="list-style-type: none">• You are a Staff SRO who maintains your license Active.• Today is March 9th of this year and you have not stood any proficiency watches since December 20th of last year.• You have been directed to maintain your SRO license activate.• The OPS Training Coordinator has developed 6 proposed schedules based on existing holes in the schedule.
INITIATING CUE:	<ul style="list-style-type: none">• Evaluate the proposed schedules to determine if each/any of the schedules meets the requirements to maintain your SRO license active.• If a schedule does not meet one of these requirements, EXPLAIN why it does not.

JOB PERFORMANCE MEASURE SETUP SHEET

System:	Administrative		
Time Critical:	No	Applicability:	SRO only
Administrative Topic:	N/A - Refueling	Validated:	28 minutes
Setting:	Classroom / Simulator		
References:	FTI-D09 Rev. 17 & SOI-F15 Rev 18		
Required Material:	FTI-D09 - Use of the Fuel Movement Checklist & JPM Support Material		
Tasks:	341-029-03-02 Supervise Refueling Operations as Refueling Supervisor 341-624-01-02 Verify Compliance with Technical Specifications, Procedures, and Instructions During Refueling and Fuel Handling		
Task Standard:	Verify proper placement of in-core components during Refuel Operations IAW the Fuel Movement Checklist.		
K/A Data:	2.1.35 Knowledge of the fuel-handling responsibilities of SROs. Importance Rating: RO 2.2 SRO 3.9. 2.1.42 Knowledge of new and spent fuel movement procedures. Importance Rating: RO 2.5 SRO 3.4		

1. Instructions: None
2. Location / Method: Simulator or Control Room / Administrative performance.
3. Initial Condition: Plant is in Mode 5 with refueling operations in progress. The ROV cameras had been out of service for the past several hours, but are now back in service. You are the on-coming Refuel Bridge SRO. The off-going Refuel Bridge SRO asks you to verify Page 65 of the attached Fuel Movement Checklist. The Fuel Movement Checklist Cover Sheets, Core Map, and ROV pictures of the applicable core cells are available.
4. Initiating Cue: As the Refueling SRO, verify the in-core placement of all components on Page 65 of the attached Fuel Movement Checklist.

Start Time _____ **End Time** _____

Operator _____

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 INCORRECT loading of Cell 54-15.

The operator reviews the Fuel Movement Checklist and compares the cell pictures to the FMC.

Critical Step: The Operator reviews the FMC Page 65 Step 295 and determines that bundle 12P400 is in the incorrect location. Additionally, bundle 12P499 for Step 296 is in the incorrect location.

Instructor Cue: Acknowledge errors and advise to continue to perform peer check.

Notes: Provide a copy of FTI-D09.
Bundle 12P400 should be in location 53-16 and bundle 12P499 should be in location 55-14.

SAT ____ UNSAT ____

Comment(s): _____

Step 2

Determine CORRECT loading of Cell 46-35.

Standard: The Operator reviews the FMC Page 65 Steps 306, 306.5, & 307 and determines that they were performed correctly.

Instructor Cue: Advise to continue to perform peer check.

Notes: None

SAT ____ **UNSAT** ____

Comment(s): _____

Step 3

Determine INCORRECT loading of Cell 42-19.

Critical Step: The Operator reviews the FMC Page 65 Step 311 and determines that bundle 13P907 is in the correct location and correct orientation. However, bundle 13P911 for Step 312 has the incorrect orientation in the correct location.

Instructor Cue: If Operator has not referenced FTI-D009, question operator on what is required when an error is discovered.

Acknowledge errors and advise to continue to perform peer check.

Notes: None

SAT ____ **UNSAT** ____

Comment(s): _____

Step 4

Determine INCORRECT orientation (loading) of Cell 38-55.

Standard:	The Operator reviews the FMC Page 65 Step 315 and determines that the Full Blade Guide was placed in the incorrect locations.
Instructor Cue:	Ask Operator if this is a fuel movement error. He should respond 'no'.
Notes:	FBG is in locations 39-56 & 37-54. Terminate the JPM
SAT ____	UNSAT ____
Comment(s): _____	

Step 5

Question to the Candidate: What is the required action if an error is discovered?

FTI-D09 - Use of the Fuel Movement Checklist**4.7 Recovery from Fuel Movement Errors**

- A fuel movement error is any condition where a fuel assembly is not as defined in the Fuel Movement Checklist.
- A misorientation error is a fuel movement error where a fuel assembly in its assigned location is not orientated as defined in the Fuel Movement Checklist.

Perform the following steps to recover from a fuel movement error:

1. Notify the Unit Supervisor immediately following the discovery of any error.

NOTE

Suspension of CORE ALTERATIONS shall not preclude completion of the movement of a component to a safe conservative position. A mispositioned bundle within the reactor does not constitute a safe conservative position until the impact on shutdown margin is determined.

3. Suspend core alterations for any mispositioning error discovered in a reactor location (RX1-).

JPM **Step 5** continued on next page.

JPM **Step 5** continued:

4. Relocate all single mispositioning and misorientation errors in the reactor to a vacant non-reactor location. The Control Room Unit Supervisor shall be apprised of an intended non-reactor location. If multiple errors are discovered, contact the Reactor Engineer to evaluate the impact of the errors and to recommend the appropriate recovery actions.
5. Contact the Reactor Engineer to evaluate the impact of the fuel movement error and to recommend the appropriate recovery actions. The effect on Shutdown Margin shall be addressed, as required.

Standard:	The Operator reviews FTI-D009 and determines the required action if an error is discovered.
Instructor Cue:	Ask the Candidate, "What is the required action if an error is discovered?"
Notes:	Actions for recovery from a fuel movement error are in FTI-D09.
SAT ____	UNSAT ____
Comment(s): _____	

Terminating Cue: Operator determines that bundles 12P400 and 12P499 are in the incorrect locations and bundle 13P911 has the incorrect orientation in the correct location.

Evaluation Results: **SAT** _____ **UNSAT** _____

End Time _____

JPM CUE SHEET

INITIAL CONDITIONS:	<ul style="list-style-type: none">• Plant is in Mode 5 with refueling operations in progress.• The ROV cameras had been out of service for the past several hours, but are now back in service.• You are the on-coming Refuel Bridge SRO.• The off-going Refuel Bridge SRO asks you to verify Page 65 of the attached Fuel Movement Checklist.• The Fuel Movement Checklist Cover Sheets, Core Map, and ROV pictures of the applicable core cells are available.
INITIATING CUE:	As the Refueling SRO, verify the in-core placement of all components on Page 65 of the attached Fuel Movement Checklist.

FUEL MOVEMENT CHECKLIST

REFUEL FLOOR CHECKLIST

PAGES	1	TO	182
STEPS	2	TO	1860
14-APR-2011	15:01		

The purpose of this FMC is to support refueling activities in 1R13. It shall be executed in accordance with FTI-D0009, SOI-F0015, SOI-F0042, and 101-0009.

The Maintenance Window for control rod blades and drive mechanisms, and SRM and IRM visual inspections is reached when Step 495 is completed and stays open through Step 1071.

Steps 1072 through 1074 (which move only single blade guides) may be completed any time after the SRM and IRM dry tube inspections have been completed but must be completed before the LPRM dry tube replacements begin.

Phase 2 commences with Step 1075 and ends with Step 1845.

Steps 1854 through 1860 configure the half blade guides in RPI. Since these half blade guides are not used during the outage, these steps may be completed at any convenient time.

In Phase 1, if any SRM becomes inoperable, contact Reactor Engineering to determine if fuel moves may be continued in another quadrant, and any limitations to changing quadrants. No changes are permitted in Phase 2.

Phase 2 peripheral camera inspections for uncontrolled bundle seating are noted on the FMC. Seating checks are performed after step has been completed.

The quadrants for 1 RI 3 are defined by the North/South line along coordinate 30 and the East/West line along coordinate 31. This makes control rod 30-3 1 the center of the core. This is a change from 1 RI 2.

If a planned location in the containment pool (RP1) is not usable, any unused location in RP1 rows C through F, columns -01 through -03, may be used for a FREE MOVE. Note that the furthest East column is designated 00 (not 01).

FUEL MOVEMENT CHECKLIST

REFUEL FLOOR CHECKLIST

PAGES 1 TO 182
STEPS 2 TO 1860
14-APR-2011 15:01

Notify Reactor Engineering any time a Free Move is used and cleared.

Orientation in RP1 is in accordance with the direction of the bridge supervisor.

Transfer Tube steps may be performed any time the appropriate component is loaded in the carriage.

- ☐ Fuel movement does not involve invessel fuel moves.
- ☐ Fuel movement only removes fuel from core.
- ☐ Fuel movement only reloads core to BOC pattern.
- ☒ Fuel movement involves a shuffle through intermediate loading patterns.

Minimum SDM = 1.0 % dk/k

Reference Tech Spec SR 3.1.1.1 concerning the above requirements.

PREPARED BY: Chuck R. Enginer

REVIEWED BY: Pat B. Peer

APPROVED BY: P. J. Supe

DATE: 4/19/11

FMC COMPLETE: _____

DATE: _____

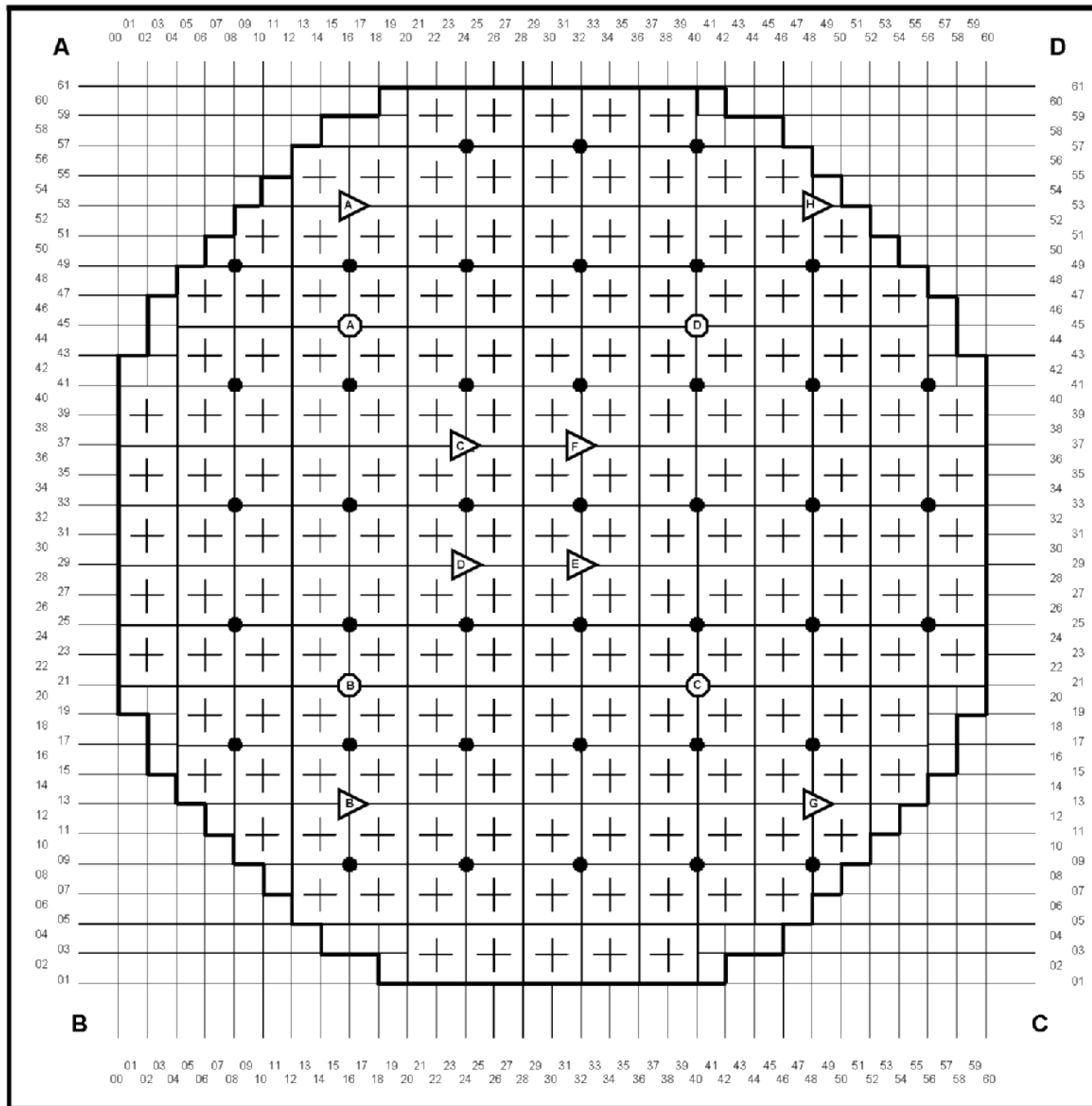
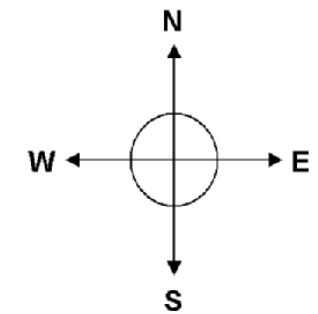
CHANGE HISTORY:

FENOC -- PNPP
NUCLEAR FUEL ACCOUNTING
FUEL MOVEMENT CHECKLIST – Refuel Floor FMC

14-Apr-2011 15:01

Page 65

STEP	COMPONENT	FROM LOCATION	FREE MOVE INIT/DATE	TO LOCATION	ORIENT	INIT	DATE
295	12P400	RX1 31-30	_____	RX1 53-16	SE		
	HD LEFT – EZ RIGHT		_____/____			<u>LBQ</u>	<u>6/6/11</u>
296	12P499	RX1 05-14	_____	RX1 55-14	NW		
	EZ LEFT – EZ RIGHT		_____/____			<u>LBQ</u>	<u>6/6/11</u>
306	14P046	FTT U1-E	_____	RX1 45-36	SE		
			_____/____			<u>LBQ</u>	<u>6/6/11</u>
306.5	TRANSFER FUEL CARRIAGE DOWN TO FHB					<u>LBQ</u>	<u>6/6/11</u>
307	14P038	RP1 B-01	_____	RX1 47-34	NW		
			_____/____			<u>LBQ</u>	<u>6/6/11</u>
311	13P907	RX1 43-30	_____	RX1 43-20	SW		
	HD LEFT – EZ RIGHT		_____/____			<u>LBQ</u>	<u>6/6/11</u>
312	13P911	RX1 49-30	_____	RX1 41-18	NE		
	EZ LEFT – EZ LEFT		_____/____			<u>LBQ</u>	<u>6/6/11</u>
315	FBG	RX1 41-20 RX1 43-18		RX1 37-56 RX1 39-54		<u>LBQ</u>	<u>6/6/11</u>
316	14P051	RX1 59-24	_____	FTT U1-W			
			_____/____			<u>LBQ</u>	<u>6/6/11</u>
317	14P049	FTT U1-E	_____	RX1 47-48	SE		
			_____/____				

Unit 1 Refueling Platform
Core Map

- SRM
- IRM
- LPRM

JOB PERFORMANCE MEASURE SETUP SHEET

System:	R10	
Time Critical:	Yes	Applicability: SRO
Administrative Topic:	Equipment Control	Validated Time: 13 Minutes
Setting:	Classroom	
References:	SVI-R10-T5227 Rev 8	
Required Material:	SVI-R10-T5227, Off-Site Power Availability Verification	
Task:	299-903-03-01 Perform a Surveillance Instruction (SVI/PTI/TXI) as the Lead Test Performer 299-717-03-01 Notify Unit Supervisor if Expected Surveillance Test Results are not achieved 342-565-03-02 Enter Appropriate LCO's and Action Statements for Those Systems/Components Deemed Inoperable During Surveillance Testing	
Task Standard:	Perform SVI-R10-T5227, and determine that 2 sources of off-site power are <u>not</u> available.	
K/A Data:	2.2.12 Knowledge of surveillance procedures. Importance: RO 3.7 SRO 4.1	

1. Setup Instructions: Use support Material from OT-3701-ADM_006_RO
2. Location / Method: Simulator Classroom Plant Control Room / Performance / Administrative Performance
3. Initial Condition: Plant operating at power. Thirty minutes ago, it was discovered that Div 1 Fuel Oil Day tank level was at 200 gallons and lowering. This condition required the performance SVI-R10-T5227, Off-Site Power Availability Verification. SVI-R10-T5227 has been completed through Step 5.1.1.3 by the Field Supervisor. However, the Field Supervisor was toned out with the Fire Brigade and not able to complete SVI-R10-T5227.
4. Initiating Cue: Complete SVI-R10-T5227, Off-Site Power Availability Verification and document results on Data Package Cover Sheet.

Start: _____ **Stop:** _____

Candidate:

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-R10-T5227, Off-Site Power Availability Verification****5.1.1 Test Authorization**

4. REFER TO the decision table below and perform the required section.

Standard: From the Initiating Cue, the Operator determines that this SVI is required to meet TS 3.8.1 Required Action B.1 and works way down logic boxes and determines SVI-R10-T5227 Section 5.1.3 is to be performed.

Instructor Cue: None

Notes: See Answer Key

SAT ____ **UNSAT** ____

Comment(s): _____

Step 2

5.1.3 Confirming Two Sources of Offsite Power Available

1. REFER TO Attachment 1, PLANT DATA and the decision table and TAKE the required action:

Standard: From the data recorded in Attachment 1, Operator works way down logic boxes and determines SVI-R10-T5227 Step 5.1.3.3 is to be performed.

Instructor Cue: None

Notes: See Answer Key

SAT ____ **UNSAT** ____

Comment(s): _____

Step 3

3. REFER TO Attachment 1, PLANT DATA and the decision table and TAKE the required action:

Critical Step: Operator determines conditions in the left column are not met, and notifies the Unit Supervisor that SR 3.8.1.1 criteria is not met.

Instructor Cue: None

Notes: See Answer Key - From the data recorded in Attachment 1, Operator works way down logic boxes and determines that breaker EH1114 cannot be closed.

SAT ____ **UNSAT** ____

Comment(s): _____

Step 4

3. REFER TO Attachment 1, PLANT DATA and the decision table and TAKE the required action:

GO TO step 5.1.3.4 and RECORD acceptance criteria for SR 3.8.1.1 is not satisfactory.

Standard: Operator proceeds to Step 5.1.3.4 to record acceptance criteria for SR 3.8.1.1 is not satisfactory.

Instructor Cue: You are now the Unit Supervisor.

- What Tech Spec 3.8.1 Conditions currently apply?

Notes: Recording acceptance criteria for SR 3.8.1.1 completes the TIME CRITICAL portion of the JPM

TIME: _____

SAT ____ UNSAT ____

Comment(s): _____

Step 5

Operator determines Tech Spec Required Actions.

Critical Step:

The identifies that TS 3.8.1:

Condition A is entered due to breaker EH1114 being tagged out.

Required Actions A1 & A2

Condition B is entered due to fuel oil day tank level low.

Required Actions B1, B2 (no redundant features inop), B3.1 or 3.2, and B4

Condition D is entered due to one off-site source and one required DG concurrently inoperable

Required Action D.1 or D.2

The most limiting completion times are A1 & B1 (1 hr & 8 hr) and D1 or D2 (12 hr)

Instructor Cue: None

Notes: None

SAT ____ **UNSAT** ____

Comment(s): _____

Step 6

Operator completes Data Package Cover Sheet for SVI.

Standard:	<p>The checks the following boxes:</p> <ul style="list-style-type: none"> • Test Completion: FAILED • Technical Specification Data: UNACCEPTABLE • Reschedule Credit: NO CREDIT <p>The “Test Completed” line should be filled in.</p> <p>The “Comments” field should have reason for Unsat performance.</p>
Instructor Cue:	None
Notes:	<p>See Answer Key</p> <p>Terminate the JPM</p>
SAT ____	UNSAT ____
Comment(s): _____	

Terminating Cue: Candidate determines SR 3.8.1.1 is not satisfactory within 30 minutes and that TS 3.1.8 Condition D is NOT met and that Required Actions D.1 or D.2 must be completed within 12 hours. Candidate completes the Data package Cover Sheet for the SVI.

Evaluation Results: SAT____ UNSAT____

End Time: _____

JPM CUE SHEET

INITIAL CONDITIONS:	<ul style="list-style-type: none">• Plant operating at power.• Thirty minutes ago, it was discovered that Div. 1 Fuel Oil Day Tank level was at 200 gallons and lowering. This condition required the performance SVI-R10-T5227, Off-Site Power Availability Verification.• SVI-R10-T5227 has been completed through Step 5.1.1.3 by the Field Supervisor. However, the Field Supervisor was toned out with the Fire Brigade and not able to complete SVI-R10-T5227.
INITIATING CUE:	<p>Complete SVI-R10-T5227, Off-Site Power Availability Verification and document results on Data Package Cover Sheet.</p>

JOB PERFORMANCE MEASURE SETUP SHEET

System: Administrative
Time Critical: No Applicability: SRO
Administrative Topic: Radiation Control Validated Time: 25 Minutes
Setting: Simulator
References: RWI G50(RWDS) Rev 13 & SVI-G50-T5266 Rev 19
Required Material: RWI G50(RWDS), Radwaste Discharge System (marked-up copy)
SVI-G50-T5266, Liquid Radwaste Release Permit (marked-up copy)
Task: 341-637-01-02 Minimize the Amount of Radioactive Water Discharged
to the Environment
Task Standard: Review a Liquid Radwaste Release Permit prior to approval and identify
errors.
K/A Data: 2.3.6 Ability to approve release permits. Importance SRO 3.8

1. Setup Instructions: Reset simulator to an IC with NO ESW pumps running. Override
pt01_0d17n0962 to 1401 if matching control room indication. Check ESW flow rate to match
RWI value. If necessary, correct RWI to match simulator.
2. Location / Method: Simulator / Administrative Performance
3. Initial Condition: You are the Shift Manager.
4. Initiating Cue: Authorize the Liquid Radwaste Release Permit.
Note: You may use the simulator indications for this JPM.

Start: _____ **Stop:** _____

Candidate: _____

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

Candidate reviews SVI-G50-T5266 and RWI (RWDS) to complete approval step.

SVI-G50-T5266, Liquid Radwaste Release Permit**5.1 Surveillance Test:**

9. RWSO obtain the Shift Manager's Authorization to start discharge.

Authorization signifies that the SVI has been reviewed to ensure and provide awareness, at a minimum, of the following checklist:

- _____ All required data has been completed.
- _____ Valve line-up verifications have been completed.
- _____ Verify at least one ESW loop is in operation.
- _____ If a minimum dilution value other than the default value (15107 gpm) was used for the CHI-0006 and CHI-0007 calculations, then adjustments to Circ Water Makeup may cause the settings and assumptions made from the calculations to be non-conservative, therefore minimize adjustments to Circ Water Makeup during the discharge. If adjustments are required, contact the RWSO to monitor Service Water flows to ensure the discharge can continue.
- _____ Verify that no fire water system (P54) hydrant testing, or other incidental use, is in progress or scheduled during the actual liquid release.
- _____ Verify ESW is not lined up to the swale and the sluice gates are not open.

NOTE

The intent is to prevent fire hydrants from being flushed to the Storm Drains.

Date / Time Shift Manager's Signature

Step 1 (continued)

Standard: Candidate reviews SVI Attachment 2 to verify “All required data has been completed”.

Instructor Cue: None

Notes: None

SAT ____ UNSAT ____

Comment(s):_____

Step 2

Candidate reviews SVI-G50-T5266 and RWI (RWDS) to complete approval step.

Critical Step: Candidate reviews RWI (RWDS) to verify “Valve line up verifications have been completed”.
Candidate identifies that SVI indicates FDST ‘A’ to be discharged, but RWI has been prepared for FDST ‘B’.

Instructor Cue: Inform candidate it is FDST ‘B’ to be discharged and you will correct the SVI.
Check FDST ‘B’ on SVI and one-line, initial, & date check for FDST ‘A’

Notes: None

SAT ____ UNSAT ____

Comment(s):_____

Step 3

Candidate reviews SVI-G50-T5266 and RWI (RWDS) to complete approval step.

Critical Step: Candidate walks-down H13-P601 to “Verify at least one ESW loop is in operation”.
Candidate identifies that no loops of ESW are in operation.

Instructor Cue: Inform candidate you will request RO start a loop of ESW.
Continue your review.

Notes: Have Driver start a loop of ESW (should be Div 3 ESW)

SAT ____ **UNSAT** ____

Comment(s): _____

Step 4

Candidate reviews SVI-G50-T5266 and RWI (RWDS) to complete approval step.

Standard: Candidate reviews SVI Attachment 2 to verify minimum dilution flow value.

Instructor Cue: None

Notes: None

SAT ____ **UNSAT** ____

Comment(s): _____

Step 5

Candidate reviews SVI-G50-T5266 and RWI (RWDS) to complete approval step.

Standard:	Candidate reviews SVI Attachment 2 to verify “Verify that no fire water system (P54) hydrant testing, or other incidental use, is in progress or scheduled during the actual liquid release”.
Instructor Cue:	As the fire Marshal, inform candidate that no fire water usage in progress nor is any scheduled for the next 4 days.
Notes:	None
SAT ____	UNSAT ____
Comment(s): _____	

Step 6

Candidate reviews SVI-G50-T5266 and RWI (RWDS) to complete approval step.

Standard:	Candidate reviews last step to “Verify ESW is not lined up to the swale and the sluice gates are not open.”
Instructor Cue:	None
Notes:	Candidate may walk-down H13-P601 to verify Sluice Gates are not open.
SAT ____	UNSAT ____
Comment(s): _____	

Step 7

Candidate reviews SVI-G50-T5266 and RWI (RWDS) to complete approval step.

Critical Step: Candidate determines the permit can be approved and signs the permit.

Instructor Cue: Terminate the JPM.

Notes: None

SAT ____ **UNSAT** ____

Comment(s): _____

Terminating Cue: Candidate identifies incorrect tank listed on permit, ESW loop not running, and approves permit.

Evaluation Results: SAT ____ UNSAT ____

End Time _____

JPM CUE SHEET

INITIAL CONDITIONS:	You are the Shift Manager.
INITIATING CUE:	Authorize the Liquid Radwaste Release Permit. Note: You may use the simulator indications for this JPM.

JOB PERFORMANCE MEASURE SETUP SHEET

System:	E-plan		
Time Critical:	Yes	Applicability:	SRO only
Administrative Topic:	Emergency Plan	Validated Time:	14 Minutes
Setting:	Classroom		
References:	EPI-A1 Rev 26, EPI-A2 Rev 18, EPI-B1 Rev 24		
Required Material	EPI-A2 - Emergency Actions Based On Event Classification EPI-B1 - Emergency Notification System EPI-A1 - Emergency Action Levels E-plan Form Packet		
Task:	344-532-05-02 Prepare Emergency Plan Initial Notification Form		
Task Standard:	Perform Event Classification (IS1) within 15 minutes and complete forms per EPI-A1, A2, & B1 and deliver to Communicator within an additional 10 minutes.		
K/A Data:	295016 – AA2.04 Ability to determine and/or interpret the following as they apply to Control Room Abandonment: Suppression pool temperature Importance: SRO 4.1, AK2.01 Knowledge of the interrelations between Control Room Abandonment and the following: Remote shutdown panel: Plant-Specific Importance: SRO 4.5, AK2.02 Local control stations: Plant-Specific. Importance: SRO 4.1		

1. Setup Instructions: Perform in Simulator Remote Shutdown Room with Glass Top Simulator running. Place EPI and PSI books and E-Plan packets in RSD room. If done in RSD room, cannot do in groups.
2. Location / Method: Remote Shutdown / Performance
3. Initial Condition: You are the Shift Manager. Plant was operating at 100% power on a week day evening at 2000. Division 1 outage is in progress on the Diesel Generator and ESW A. The Control Room has been evacuated. Immediate actions of ONI-C61 were completed. The Reactor is shutdown. Control was transferred to the Remote Shutdown Panel 15 minutes after the evacuation. RCIC is providing Level and Pressure control along with SRV's. Transfer to Division 2 Remote Shutdown has not started due to manpower. Wind speed is 10 mph and wind is out of the south at 180 degrees.
4. Initiating Cue: Assess the above conditions. Classify the event and complete the necessary E-Plan actions. **Task is Time Critical**

This JPM updated for 2015 ILO exam (new proc revs & form revs) Do CNRR after exam.

Start Time _____ **End Time** _____ **Operator** _____

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**EPI-A1 - Emergency Action Levels****5.1 Event Assessment and Event Classification****5.1 Classify the emergency as follows:**

1. Using Initiating Condition Index (PNPP No. 8852, Attachment 1), identify the emergency by event category and determine the most appropriate Initiating Condition (IC).
2. Refer to Attachment 2 for the applicable Initiating Condition(s) to determine whether the criteria are met for the operating mode(s) listed.
3. Declare an emergency class when all the conditions listed in at least one EAL column have been met, and implement <EPI-A2>.
 - a. When several Initiating Conditions are met, declare the most severe emergency class.
4. Complete the EVENT CLASSIFICATION CHECKLIST (PNPP No. 7983A), contained in <EPI-A2>.

EPI-A2 - Emergency Actions Based On Event Classification**4.4 Shift Manager**

1. Initially classify an emergency event based on criteria set forth in <EPI-A1>, and assume the position of Emergency Coordinator.

JPM Step 1 continued on next page

EPI-A1 – Emergency Action Levels

Initiating Conditions							Entry Criteria
<div>IS1</div> <div>Control Room evacuation has been initiated, AND plant control CANNOT be established within 15 minutes.</div> <div>Applicable Modes:</div>							Entry into <ONI-C61>.
							<div>Within 15 minutes of entry into <ONI-C61>, Operator(s) located at the remote shutdown controls CANNOT establish control of one or more of the following parameters per <IOI-11>:</div> <div><ul style="list-style-type: none">RPV levelRPV pressureSuppression Pool temperatureReactor powerDecay heat removal, if required</div>
1	2	3	4	5	D		

Critical Step: Classifies IS1, **15 minutes to classify.**

Instructor Cue:

- Notify that time critical action starts after reading of Initial Conditions and he is given Initiating Cue.
- If asked Suppression Pool Temperature 90 degrees and rising slowly.
- If asked no time estimate for control at Division 2 Remote Shutdown.

Notes: ESW A not available, can not establish suppression pool cooling from Division 1 in 15 minutes.

SAT ____ **UNSAT** ____

Comment(s): _____

Step 2

Note to Examiner: For this JPM, the event classification checklist should be completed through step A.6.

5.1 Event Assessment and Event Classification

5.1 Classify the emergency as follows:

4. Complete the EVENT CLASSIFICATION CHECKLIST (PNPP No. 7983A), contained in <EPI-A2>.

EVENT CLASSIFICATION CHECKLIST:**A. IMMEDIATE ACTIONS**

1. Announce event classification and reason for declaring emergency over the Plant PA System.

Standard: Operator announces Event classification over PA

Instructor Cue: None

Notes: Immediate Actions Steps 2 and 3 are not applicable at Remote Shutdown, However, the I&C technician should be directed to TSC or Remote Shutdown Area via the PA system.

SAT ____ **UNSAT** ____

Comment(s): _____

Step 3

4. Complete an Initial Notification form (PNPP No. 7794), approve, and forward to communicators within 10 minutes of decision to classify event or revise Protective Action Recommendations (PARs).

<u>Critical Step:</u>	Initial Notification Completed within 10 minutes of classification. Block 3.a is checked with IS1, Site Area Emergency, block 5.c and 6.c are also checked.
Instructor Cue:	If not in Remote Shutdown Room, give Operator E-Plan Packet when he identifies where to obtain.
Notes:	None
SAT ____	UNSAT ____
Comment(s):	_____

Step 4

- 5a. Determine facilities to be activated using table below: (R-required; O-optional)

Classification/Facility	OSC	TSC	PIRT	EOF	JIC
Unusual Event	O	O	O	O	O
Alert	R	R	R	O	O
Site Area Emergency	R	R	R	R	R
General Emergency	R	R	R	R	R

- 5b. Announce facilities to be activated over the Plant PA System.

Standard:	Operator determines facilities to be activated for SAE announces over PA
Instructor Cue:	None
Notes:	Operator may delay announcement of Classification until announcing facility activation.
SAT ____	UNSAT ____
Comment(s):	_____

Step 5

6. Complete the Pager Messages form (PNPP No. 9100), approve, and forward to the SAS within 10 minutes of decision to classify event or revise PARs..

Standard:	Pager Message completed, scenario ID 3
Instructor Cue:	None
Notes:	I&C technician should be directed to TSC or Remote Shutdown Area. Operator may delay announcement of Classification until announcing facility activation.
SAT ____	UNSAT ____
Comment(s): _____	

Terminating Cue: Event Classified within 15 minutes and Initial Notification given to communicator 5 minutes prior to notification due time.

Evaluation Results: SAT____ UNSAT____

End time _____

PNPP No. 7983A Rev. 6/20/13

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EPI-A2

Event classified as a/an: ☐ General Emergency ☒ Site Area Emergency ☐ Alert ☐ Unusual Event

At W/ 15 minutes of CUE on / /
Time Date

Checklist completed by: _____ (Shift Manager/TSC Operations Manager/ EOF Emergency Coordinator)

A. IMMEDIATE ACTIONS						INITIAL	TIME
1.	Announce event classification and reason for declaring emergency over the Plant PA System.					✓	
2.	Sound Plant Emergency Alarm. (Request Control Room to initiate Alarm)					N/A	
3.	[CONTROL ROOM ONLY] Call the shift I&C technician to the Control Room as a communicator. Call I&C to Remote Shutdown or TSC					✓	
	NOTE: For a GENERAL EMERGENCY , ensure that PAR is included using EPI-B8, Attachment 1, PAR Decision Flowchart.					✓	
4.	Complete an Initial Notification form (PNPP No. 7794), approve, and forward to communicators within 10 minutes of decision to classify event or revise Protective Action Recommendations (PARs).						
5a.	Determine facilities to be activated using table below: (R-required; O-optional)					✓	
	Classification/Facility	OSC	TSC	PIRT	EOF	JIC	
	Unusual Event	O	O	O	O	O	
	Alert	R	R	R	O	O	
	Site Area Emergency	R	R	R	R	R	
	General Emergency	R	R	R	R	R	
5b.	Announce facilities to be activated over the Plant PA System.					✓	
	NOTE: (1) Completion of form is delegated to the Security Coordinator once TSC is operational. (2) Activation of ERO pagers is <u>NOT</u> needed if required facilities have already been/are being mobilized.					✓	
6.	Complete the Pager Messages form (PNPP No. 9100), approve, and forward to the SAS within 10 minutes of decision to classify event or revise PARs.						
7.	Complete an Reactor Plant Event Notification Worksheet form (NOP-OP-1015-01), approve, and forward to communicators immediately following notification of the State of Ohio and local counties, but within 50 minutes of event classification.						
	NOTE: It may be prudent to delay implementation of accountability in situations where personnel safety could be jeopardized, such as a security event or severe weather.						
8.	[SITE AREA EMERGENCY or above] Initiate personnel accountability per EPI-B5, if not yet implemented: <input type="checkbox"/> Not Required						
8a.	Direct Shift Manager, or designee, to initiate appropriate "Emergency" message over the Exclusion Area Paging System, and use PA feature to provide further guidance on offsite assembly if required.						
8b.	The Shift Manager, or designee, is to manually repeat the accountability message approximately every 5 minutes until accountability is completed, if the automated message is not working						
9.	Verify that notifications and/or requests for offsite support were completed by the SAS:						
	a. Fire Department (911)	<input type="checkbox"/> Not Required					
	b. Ambulance (911)	<input type="checkbox"/> Not Required					
	c. Hospital: Primary - TriPoint; Backup - Lake West	<input type="checkbox"/> Not Required					
10.	If the NRC requests that the ENS circuit remains open then verify that an individual knowledgeable in system operations is assigned to the NRC ENS Circuit to answer questions and inquiries.						

REFER TO page 2 of 2 FOR LISTING OF FOLLOW-UP ACTIONS

**FENOC NUCLEAR POWER PLANT
INITIAL NOTIFICATION FORM****Perry**

PNPP No. 7794 Rev. 6/8/11

EPI-B1

USE FOR:

- INITIAL CLASSIFICATIONS,
- CHANGES IN CLASSIFICATIONS,
- CHANGES IN PROTECTIVE ACTION RECOMMENDATIONS.
- EVENT TERMINATION

STATE / COUNTY USE ONLY
 DATE: _____ TIME: _____
 MESSAGE NO: _____

1. This is the: **Perry Nuclear Power Plant**
2. This is: ☐ An Actual Emergency ☒ A Drill
3. ☒ a. A(n) ☐ GENERAL EMERGENCY ☒ SITE AREA EMERGENCY ☐ UNUSUAL EVENT
 was declared at: **15 min from** on _____ based on EAL: **IS-1**
 (TIME) (DATE)
- ☐ b. The Emergency situation has been terminated at: _____ on _____
 (TIME) (DATE)
- ☐ c. The Protective Action Recommendation is being changed at: _____ on _____
 (TIME) (DATE)
4. Brief non-technical description of event: **Control Room evacuation has been initiated, AND plant control CANNOT be established within 15 minutes**
-
5. The radiological conditions are:
- ☐ a. A non-routine release of radioactive material, as a result of this event, is in progress.
- ☐ b. The release of radioactive material associated with this event has been terminated.
- ☒ c. NO Radiological Release in progress as a result of this event.
6. Utility Protective Action Recommendations (PAR's):
- ☐ a. Evacuation:
 (check applicable subareas)
☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ LAKE
 AND that potassium iodide (KI) be administered to the general public in accordance with State procedures. The general public in unaffected areas should be advised to go indoors and monitor EAS broadcasts.
- ☐ b. Sheltering:
 (check applicable subareas)
☐ 1 ☐ 2 ☐ 3
 AND Evacuate the Lake
 AND that potassium iodide (KI) be administered to the general public in accordance with State procedures. The general public in unaffected areas should be advised to go indoors and monitor EAS broadcasts.
- ☒ c. None

For Utility Use Only

Approved: _____

PAGER MESSAGES

PNPP No. 9100 Rev. 8/3/12

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EPI-B1

CONTROL ROOM/TSC SECURITY COORDINATOR INSTRUCTIONS:

1. Select appropriate Scenario ID number.
2. Initiate the notification by forwarding to SAS or by forwarding the information contained within the form to an ERS representative.

TSC SECURITY COORDINATOR/SAS OPERATOR INSTRUCTIONS:

Using the information on this form, initiate the notification of the Emergency Response Organization per SPI-0032.

(√)	Scenario ID No.	Event Code	Message Narrative
	1	1111	Unusual Event – No facility activation.
	2	2222	Alert - OSC, TSC, and PIRT to be activated.
√	3	3333	Site Area Emergency - OSC, TSC, EOF, PIRT, and JIC to be activated.
	4	4444	General Emergency - OSC, TSC, EOF, and JIC to be activated.
	51	5555	Event Termination
	52	5555	OSC to be staffed.
	53	5555	TSC to be staffed.
	54	5555	PIRT to be staffed.
	55	5555	
	56		
	57		
	61	6666	All Respond to BEOF.
	62	6666	Site Inaccessible, Duty ERO Team report to BEOF.
	81	8888	Drive-In Drill – OSC, TSC & EOF to be activated.
	91	9999	Weekly Pager Test (Shift Manager approval not required)
	92	9999	Unannounced Pager Test (Shift Manager approval not required)
	93	9999	Security Pager Test (Shift Manager approval not required)

Do not give these forms to the operators

Approved by: _____
 Date Time Emergency Coordinator

Delivered to: _____
 Date Time Name

Activated by: _____
 Date Time Name

JPM CUE SHEET

INITIAL CONDITIONS:	<ul style="list-style-type: none">• You are the Shift Manager• Plant was operating at 100% power on a week day evening at 2000.• Division 1 outage is in progress on the Diesel Generator and ESW A. The Control Room has been evacuated.• Immediate actions of ONI-C61 were completed.• The Reactor is shutdown.• Control was transferred to the Remote Shutdown Panel 15 minutes after the evacuation.• RCIC is providing Level and Pressure control along with SRV's.• Transfer to Division 2 Remote Shutdown has not started due to manpower.• Wind speed is 10 mph and wind is out of the south at 180 degrees.
INITIATING CUE:	<ul style="list-style-type: none">• Assess the above conditions.• Classify the event and complete the necessary E-Plan actions. <p>Task is Time Critical</p>