

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: 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.
4. Initiating Cue: Using ALARA principals and the attached survey map, select an NLO from the list provided. These are the only NLOs qualified and available to perform this task. If necessary, complete dose extension forms. 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. Use the highest dose in each section of the travel path to calculate the travel dose.

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 reviews survey map and calculates total dose to perform task.

Critical Step: Operator determines travel dose one way is 49.8 mrem, (~50) and dose to open valve is 15.4 mrem for a total of 177 mrem.

Instructor Cue: None

Notes: Highest dose rate in Turbine building is 420 mrem for 7 mrem.
Highest dose rate in 620' Steam Tunnel is 1350 Mrem for 67.5 mrem.
Highest 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

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.

Step 2 continued

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.

Critical Step: 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: None

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.

SAT ____ UNSAT ____

Comment(s): _____

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. 5040 |
|-----------------------------|--------------------------|------------------------------|---------------------------|

INCREASED DOSE LEVEL REQUESTED

1. ☒ >1000 mrem/yr TEDE current year SITE dose. Request increase to SITE dose of >1000 mrem
2. ☐ >2000 mrem/yr TEDE current year TOTAL dose. Request increase to TOTAL dose of _____ mrem

REASON FOR INCREASE:Open ID61-1586 in Steam Tunnel*Answer Key**Do Not Give To Operator*WERE OTHER SIMILARLY QUALIFIED PERSONNEL CONSIDERED? ☒ YES ☐ NO

IF NO, WHY NOT?

WORKER: Candidate Today FENOC MANAGER: _____
Signature Date Signature Date

SUPERVISOR: _____ NOTE: It is the responsibility of the Supervisor to inform the affected individual when the Authorization is approved.
Signature Date

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
Signature DateDirector, Site Operations _____ Required for SITE > 1500, TOTAL > 3000
Signature DateSite Vice-President _____ Required for SITE > 2000, TOTAL > 4000
Signature Date**SECTION 4 - IMPLEMENTATION**New authorized dose value entered into HIS-20 by: _____
Initials Date/TimeDosimetry Supervision review & verification performed by: _____
Signature Date

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>INITIATING CUE:</p> | <ul style="list-style-type: none">• Using ALARA principals and the attached survey map, select an NLO from the list provided.• These are the only NLOs qualified and available to perform this task.• 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.• Use the highest dose in each section of the travel path to calculate the travel dose.• If necessary, complete dose extension forms. |

| 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: 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, starting at Step 5.1.1.4. Turn in this SVI to the US within 30 minutes. **This Task is Time Critical.**

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.

Critical Step: 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:

Critical Step: 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: From the data recorded in Attachment 1, Operator works way down logic boxes and determines that breaker EH1114 cannot be closed. 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

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): _____

Terminating Cue: Candidate determines SR 3.8.1.1 is not satisfactory and completes the Surveillance within 30 minutes.

Evaluation Results: SAT____ UNSAT____

End Time: _____

JPM CUE SHEET

| | |
|--------------------------------|--|
| <p>INITIAL CONDITIONS:</p> | <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. |
| <p>INITIATING CUE:</p> | <p>Unit Supervisor directs you, a Reactor Operator to complete SVI-R10-T5227, Off-Site Power Availability Verification for LCO 3.8.1 Condition B, starting at Step 5.1.1.4. Turn in this SVI to the US within 30 minutes.</p> <p>This Task is Time Critical.</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
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.
 - **STATE** which, if any, of the proposed schedules you would work so that your license may be remain activated.

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 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 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 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 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): _____ | |

Step 7

Critical Step: Operator does **NOT** select Schedules 1, 3, 4 or 5 as appropriate for maintaining his 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

| | |
|--------------------------------|--|
| <p>INITIAL CONDITIONS:</p> | <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. |
| <p>INITIATING CUE:</p> | <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.• STATE which, if any, of the proposed schedules you would work so that your license may be remain activated. |

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 not 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, starting at Step 5.1.1.4. Turn in this SVI to the US within 30 minutes. **This Task is Time Critical.**

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.

Critical Step: 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:

Critical Step: 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: From the data recorded in Attachment 1, Operator works way down logic boxes and determines that breaker EH1114 cannot be closed. 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

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?
- What Required Actions are to be performed?
- What are the most limiting Completion times?

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: Terminate the JPM

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.

Evaluation Results: SAT____ UNSAT____

End Time: _____

JPM CUE SHEET

| | |
|--------------------------------|--|
| <p>INITIAL CONDITIONS:</p> | <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. |
| <p>INITIATING CUE:</p> | <p>Complete SVI-R10-T5227, Off-Site Power Availability Verification for LCO 3.8.1 Condition B, starting at Step 5.1.1.4. Turn in this SVI to the US within 30 minutes.</p> <p>This Task is Time Critical.</p> |

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.

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-).
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.

JPM **Step 1** continued on next page.

JPM **Step 1** continued:

| | |
|------------------------------|--|
| <u>Critical Step:</u> | 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 if requested. 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.

| | |
|------------------------------|---|
| <u>Critical Step:</u> | 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 <u>incorrect</u> 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 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): _____ | |

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.• You are the on-coming Refuel Bridge SRO.• The ROV cameras had been out of service for the past several hours, but are now back in service.• 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: _____

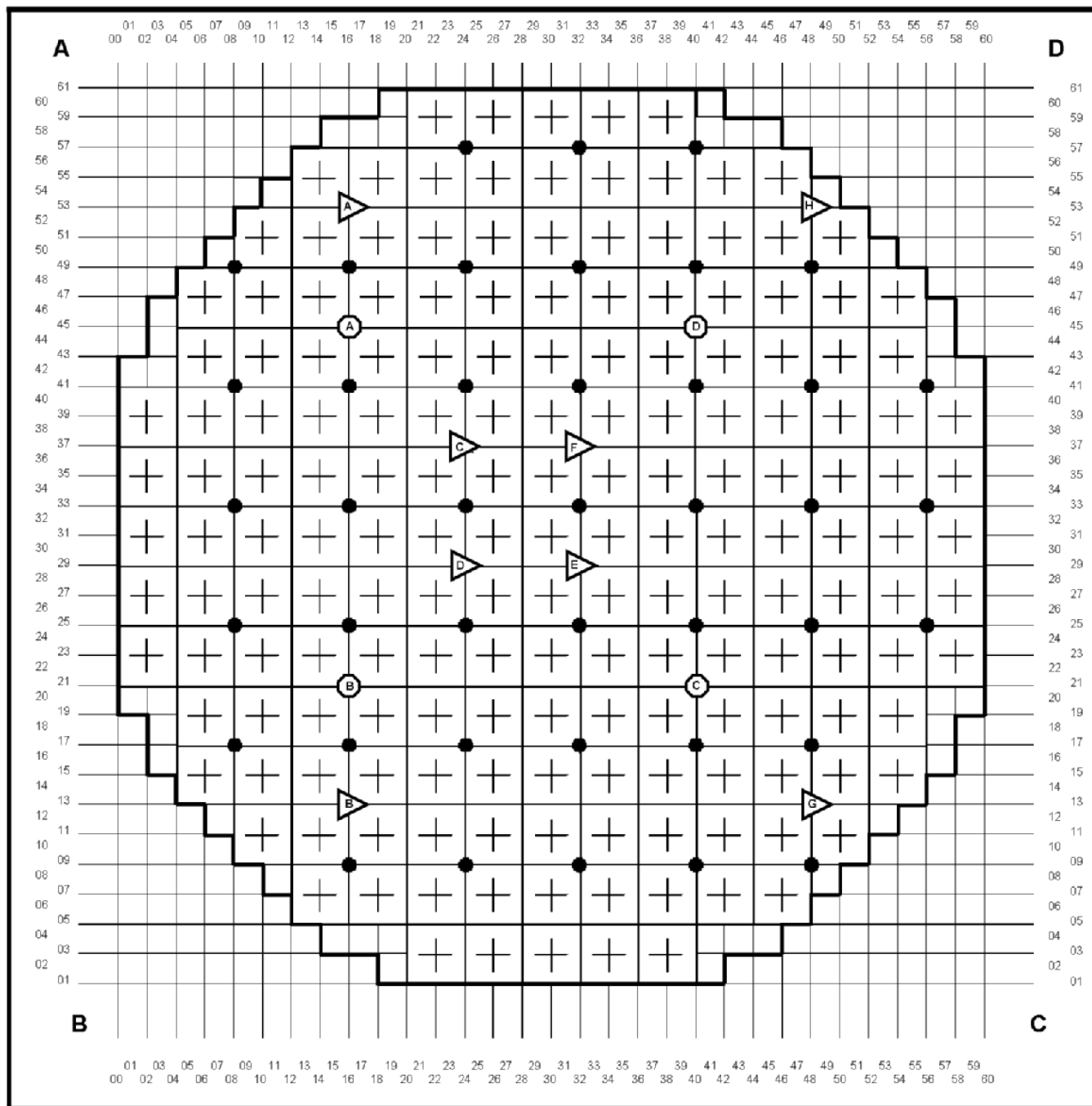
CHANGE HISTORY:

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

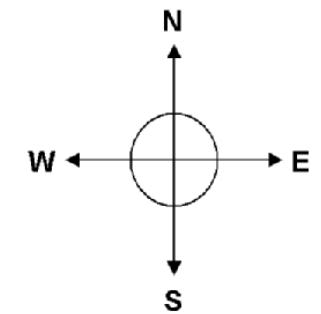
14-Apr-2011 15:01

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 45-36 | SE | | |
| | | | _____ / _____ | | | _____ | _____ |



Unit 1 Refueling Platform
Core Map



- SRM
- IRM
- LPRM

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
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.
 - **STATE** which, if any, of the proposed schedules you would work so that your license may be remain activated.

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: | None |
| 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 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: | None |
| 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 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 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 Licensed Position. |
| Instructor Cue: | None |
| Notes: | None. |
| SAT ____ | UNSAT ____ |
| Comment(s): _____ | |

Step 7

Evaluate Schedule 6

| | |
|------------------------------|---|
| <u>Critical Step:</u> | 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): _____ | |

Step 8

| | |
|------------------------------|---|
| <u>Critical Step:</u> | Operator does NOT select Schedules 1, 3, 4 or 5 as appropriate for maintaining his/her SRO 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 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

| | |
|--------------------------------|--|
| <p>INITIAL CONDITIONS:</p> | <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. |
| <p>INITIATING CUE:</p> | <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.• STATE which, if any, of the proposed schedules you would work so that your license may be remain activated. |

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.
2. Location / Method: Simulator / Administrative Performance
3. Initial Condition: Plant operating at rated power.
4. Initiating Cue: As the Shift Manager, authorize the Liquid Radwaste Release Permit.

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.

Notes: Check FDST ‘B’ on SVI and one-line, initial, & date check for FDST ‘A’
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: None

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: | Plant operating at rated power. |
| INITIATING CUE: | As the Shift Manager, authorize the Liquid Radwaste Release Permit. |

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: N/A
2. Location / Method: Remote Shutdown / Performance
3. Initial Condition: 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: With the information provided, declare the emergency action level, complete initial notifications and other required actions. **Task is Time Critical**

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-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.

EPI-A1 – Emergency Action Levels

| Initiating Conditions | Entry Criteria |
|---|--|
| IS1 Control Room evacuation has been initiated, AND plant control CANNOT be established within 15 minutes. | Entry into <ONI-C61>. |
| | 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>: <ul style="list-style-type: none">• RPV level• RPV pressure• Suppression Pool temperature• Reactor power• Decay heat removal, if required |
| Applicable Modes: | |
| 1 | 2 |
| 3 | 4 |
| 5 | D |

Step 1 continued on next page

Step 1 continued

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

Event Classification Checklist:

Checklist completed through line A.6.

Standard: Uses Event classification checklist to assist with required actions.

Instructor Cue:

- Give Operator E-Plan Packet, when he identifies where to obtain.
- Upon paging I&C communicator, "I&C has been contacted and is in route to designated area".

Notes: I&C technician should be directed to TSC or Remote Shutdown Area.

SAT ____ **UNSAT** ____

Comment(s): _____

Step 3

EPI-B1 - Emergency Notification System

5.5 Notifications Performed from the Unit 1 Remote Shutdown Panel as a Result of a Control Room Evacuation

5.5.1 The Shift Manager shall:

2. Utilize the forms contained in packets stored with the <Emergency Response Telephone Directory> to perform the following:
 - b. Draft, or direct available staff to draft an Initial Notification form, and approve form per Section 5.2.3.

Initial Notification completed within 10 minutes after classification.

| | |
|------------------------------|---|
| <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: | Give Operator E-Plan Packet when he identifies where to obtain. |
| Notes: | None |
| SAT ____ | UNSAT ____ |
| Comment(s): | _____ |

Step 4

- d. Complete, or direct available staff to complete an ERO Pager Message form, and approve.

Complete Pager Message for Emergency Facility staffing.

| | |
|------------------------|---|
| Standard: | Pager Message completed, scenario ID 3. |
| Instructor Cue: | None |
| Notes: | None |
| 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 _____

EVENT CLASSIFICATION CHECKLIST

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

Page 1 of 2

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 NOT 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 was evacuated and control not 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

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">• 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: | <p>With the information provided declare the emergency action level, complete initial notifications and other required actions.</p> <p>Task is Time Critical</p> |