

JOB PERFORMANCE MEASURE

JPM TITLE: Evaluate License Maintenance and Over Time Requirements

JPM NUMBER: 2.1.2-01

REV. 1

TASK NUMBER(S) / TASK TITLE(S): 96.05 (Reactor Operator)

K/A NUMBERS: Generic 2.1.2

K/A VALUE: 4.1

Justification (FOR K/A VALUES <3.0):

TASK APPLICABILITY:

☒ RO ☐ SRO ☐ STA ☐ Non-Lic ☐ SRO CERT ☐ OTHER: _____

APPLICABLE METHOD OF TESTING: Simulate/Walkthrough: ☐ Perform: ☒

EVALUATION LOCATION: In-Plant: ☐ Control Room: ☐

Simulator: ☒ Other: ☐

Lab: ☐

Time for Completion: 20 Minutes Time Critical: NO

Alternate Path [NRC]: NO

Alternate Path [INPO]: NO

Developed by: _____
Instructor/Developer Date

Reviewed by: _____
Instructor (Instructional Review) Date

Validated by: _____
SME (Technical Review) Date

Approved by: _____
Training Supervision Date

Approved by: _____
Training Program Owner Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED PRIOR TO USE.

| REVIEW STATEMENTS | YES | NO | N/A |
|---|--------------------------|--------------------------|--------------------------|
| 1. Are all items on the signature page filled in correctly? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Has the JPM been reviewed and validated by SMEs? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Can the required conditions for the JPM be appropriately established in the simulator if required? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Has the completion time been established based on validation data or incumbent experience? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. If the task is time critical, is the time critical portion based upon actual task performance requirements? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Is the job level appropriate for the task being evaluated if required? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Is the K/A appropriate to the task and to the licensee level if required? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Is justification provided for tasks with K/A values less than 3.0? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Have all special tools and equipment needed to perform the task been identified and made available to the trainee? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Are all references identified, current, accurate, and available to the trainee? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Have all required cues (as anticipated) been identified for the evaluator to assist task completion? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. Are all critical steps supported by procedural guidance? (e.g., if licensing, EP or other groups were needed to determine correct actions, then the answer should be NO.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. If the JPM is to be administered to an LOIT student, has the required knowledge been taught to the individual prior to administering the JPM? TPE does not have to be completed, but the JPM evaluation may not be valid if they have not been taught the required knowledge. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

All questions/statements must be answered "YES" or "N/A" or the JPM is not valid for use. If all questions/statements are answered "YES" or "N/A," then the JPM is considered valid and can be performed as written. The individual(s) performing the initial validation shall sign and date the cover sheet.

Protected Content: (CAPRs, corrective actions, licensing commitments, etc. associated with this material)

{C001}

UPDATE LOG: Indicate in the following table any minor changes or major revisions (as defined in TR-AA-230-1003) made to the material after initial approval. Or use separate Update Log form TR-AA-230-1003-F16.

[illegible]

SIMULATOR SET-UP: *(Only required for simulator JPMs)***SIMULATOR SETUP INSTRUCTIONS:**

If the JPM is performed somewhere other than the simulator, ensure that there is a copy of:

- AD-AA-101-1004 WORK HOUR CONTROLS
- ODI-009, NUCLEAR STATION PLANT EQUIPMENT OPERATOR, REACTOR OPERATOR, SENIOR REACTOR OPERATOR, AND SHIFT TECHNICAL ADVISOR QUALIFICATION REQUIREMENTS.

SIMULATOR MALFUNCTIONS: NONE

SIMULATOR OVERRIDES: NONE

SIMULATOR REMOTE FUNCTIONS: NONE

Required Materials: AD-AA-101-1004
ODI-009

General References: AD-AA-101-1004 Rev. 18
ODI-009, Rev. 47

Task Standards:

- Determine that he cannot take the watch based on not getting a **10 hour break** between shifts.
- Determine that he is not able to assume the watch based on not standing **5 12 hour shifts**.

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

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- Today's date is June 30, 2017 and the time is currently 2000.
- The plant is currently operating at 100%.
- You are a licensed Reactor Operator whose only assignment since April 1, 2017 has been to the Work Control Center.
- During the Second quarter of 2017 you stood the following watches assigned to the Control Room as the ANSOE.

| | |
|----------|--------------|
| April 2 | 0700 to 1900 |
| April 17 | 0700 to 1500 |
| April 27 | 1900 to 0700 |
| April 28 | 1900 to 0700 |
| June 17 | 0700 to 1900 |

- You have just finished standing a partial watch, (1100 to 1900), for John Black, (ANSOE).

INITIATING CUES (IF APPLICABLE):

- You have just received a call from the Control Room Shift Manager that some personal problems have come up for one of the on shift RO licenses. The SM requests you to come back into work tomorrow morning, Saturday, **July 1, 2017**, and complete the NSOE watch starting at 0200 and ending at 0700.
- Per AD-AA-101-1004 are you allowed to take the watch? Why or why not?
- Per ODI-009 are you allowed to take the watch? Why or why not?

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JPM PERFORMANCE INFORMATION

Start Time: _____

NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

NOTE: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

| | |
|--|--|
| Performance Step:1 Critical Y | <p>The Candidate will review his hours worked, then review AD-AA-101-1004 section 4.2.1 for exceeding any of the following:</p> <ul style="list-style-type: none"> • No more than 16 work hours in any 24-hour period. • No more than 26 work hours in any 48-hour period. • No more than 72 work hours in any 7 day (168-hour) period. • At least a 10-hour break between successive work periods, or an 8-hour break when a break of less than 10 hours is necessary to accommodate a crew's scheduled transition between work schedules or shifts. • A 34-hour break in any 216-hour (9-day) period. |
| Standard: | Determines that he has not met the 10-hour break requirement. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|--|---|
| Performance Step:2 Critical Y | Review ODI-009 for requirements of maintaining an active license, and determine the following: For ROs to be considered active , they shall stand operating crew watch stations requiring respective qualification for a minimum of five 12-hour shifts per calendar quarter, and no more than four months shall transpire between standing watches. |
| Standard: | ODI-009 requires five 12-hour shifts, based on the above conditions; he has not met the requirements of ODI-009 and cannot assume the watch as ANSOE. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

Terminating Cues: When the candidate has discussed the questions in the turnover the JPM is complete.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

Stop Time: _____



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JPM
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Examinee: _____

Evaluator: _____

☐ RO ☐ SRO ☐ STA ☐ Non-Lic ☐ SRO CERT

Date: _____

☐ LOIT RO ☐ LOIT SRO

PERFORMANCE RESULTS:

SAT:

UNSAT:

Remediation required:

YES

NO

COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).

EXAMINER NOTE: ENSURE ALL EXAM MATERIAL IS COLLECTED AND PROCEDURES CLEANED, AS APPROPRIATE.

EVALUATOR'S SIGNATURE: _____

NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

TURNOVER SHEET

INITIAL CONDITIONS:

- Today's date is June 30, 2017 and the time is currently 2000.
- The plant is currently operating at 100%.
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- During the Second quarter of 2017 you stood the following watches assigned to the Control Room as the ANSOE.

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- Per ODI-009 are you allowed to take the watch? Why or why not?

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JPM TITLE: Perform STP 3.0.0-01, Instrument Checks – SBLC Level, Temperature and Boron Concentration

JPM NUMBER: 2.1.18-06

REV. 1

TASK NUMBER(S) / TASK TITLE(S): 1.07/
Perform Surveillance Test Procedures

K/A NUMBERS: 2.1.18

K/A VALUE: RO 3.4/ SRO 4.1

Justification (FOR K/A VALUES <3.0): N/A

TASK APPLICABILITY:

☒ RO ☒ SRO ☐ STA ☒ Non-Lic ☒ SRO CERT ☐ OTHER: _____

APPLICABLE METHOD OF TESTING: Simulate/Walkthrough: ☐ Perform: ☒

EVALUATION LOCATION: In-Plant: ☐ Control Room: ☐
Simulator: ☐ Other: ☒
Lab: ☐

Time for Completion: 10 Minutes Time Critical: No

Alternate Path [NRC]: No

Alternate Path [INPO]: No

Developed by: _____
Instructor/Developer Date

Reviewed by: _____
Instructor (Instructional Review) Date

Validated by: _____
SME (Technical Review) Date

Approved by: _____
Training Supervision Date

Approved by: _____
Training Program Owner Date

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All questions/statements must be answered "YES" or "N/A" or the JPM is not valid for use. If all questions/statements are answered "YES" or "N/A," then the JPM is considered valid and can be performed as written. The individual(s) performing the initial validation shall sign and date the cover sheet.

Protected Content: (CAPRs, corrective actions, licensing commitments, etc. associated with this material)

{C001}

[illegible]

SIMULATOR SET-UP: *(Only required for simulator JPMs)*

SIMULATOR SETUP INSTRUCTIONS: None

SIMULATOR MALFUNCTIONS: None

SIMULATOR OVERRIDES: None

SIMULATOR REMOTE FUNCTIONS: None

SETUP INSTRUCTIONS: In STP 3.0.0-01, Instrument Checks, Section SBLC Level, Temperature and Boron Concentration document the following:

- Boron Concentration: 12.9%
- Specific Gravity: 0.901
- LI2600B: 74"
- TIC2602 (Tank Temp.): 82F
- TI2619 (Pipe Temp.): 85F

Required Materials: STP 3.0.0-01, Section and Attachments Regarding SBLC Level, Temperature and Boron Concentration, Current Revision

General References: STP 3.0.0-01, Rev. 158

Task Standards: Determines and documents the Effective Tank Level in gallons.
Plots SBLC Effective Tank Level vs. Boron Conc on Attachment 6.
Plots SBLC Tank Temp and Pipe Temp vs. Boron Concentration on Attachment 7.

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

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- Plant is operating at 100% power.
- STP 3.0.0-01, Instrument Checks is being performed.

INITIATING CUES (IF APPLICABLE):

- You are directed to complete the SBLC Level, Temperature, and Boron Concentration section of STP 3.0.0-01, Instrument Checks.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JPM PERFORMANCE INFORMATION

Start Time: _____

NOTE: When providing “Evaluator Cues” to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee’s actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

NOTE: Critical steps are marked with a “Y” below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

| | |
|---|---|
| Performance Step: 1 Critical <u>N</u> (SEQ-) | Documents LI2600B reading. |
| Standard: | Documents LI2600B reading. |
| Evaluator Note: | The value for LI2600B, SBLC Tank Level is already populated by the 2 nd Assistant. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | _____ |

| | |
|--|---|
| Performance Step: 2 Critical Y (SEQ-) | Determines and documents the Effective Tank Level in gallons. |
| Standard: | Determines and documents the Effective Tank Level in gallons. |
| Evaluator Note: | The operator will substitute the values obtained for the unknowns in the equation to determine Effective Tank Level in gallons: 39.64 [(LI2600B reading x k) – 3.18] 39.64 [(74" x .901) – 3.18] |
| Evaluator Cue: | The operator should determine the value of Effective Tank Level in gallons is 2516.9 or 2517. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | _____ |

| | |
|--|--|
| Performance Step: 3 Critical Y (SEQ-) | Plots SBLC Effective Tank Level vs. Boron Conc on Attachment 6. |
| Standard: | Plots SBLC Effective Tank Level vs. Boron Conc on Attachment 6. Determines that the plot is outside of the acceptable area and reports this to the CRS. The operator initials the column. |
| Evaluator Note: | The candidate may not inform the CRS of the plot being outside of the acceptable area until the SBLC Level, Temperature and Boron Concentration section is completed. |
| Evaluator Cue: | When informed that the plot is outside of the acceptable area, acknowledge the information. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | _____ |

| | |
|---|---|
| Performance Step: 4 Critical <u>N</u> (SEQ-) | Determines and documents TIC2602 (Tank Temp.) value. |
| Standard: | Determines and documents TIC2602 (Tank Temp.) value. |
| Evaluator Cue: | The value for TIC2602, Tank Temperature is already documented by the 2 nd Assistant. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | _____ |

| | |
|---|---|
| Performance Step: 5 Critical <u>N</u> (SEQ-) | Determines and documents TI2619, Pipe Temperature value. |
| Standard: | Determines and documents TI2619, Pipe Temperature value. |
| Evaluator Cue: | The value for TIC2619, Pipe Temperature is already documented by the 2 nd Assistant. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | _____ |

| | |
|--|--|
| Performance Step: 6 Critical Y (SEQ-) | Plots SBLC Tank Temp and Pipe Temp vs. Boron Concentration on Attachment 7. |
| Standard: | Plots SBLC Tank Temp and Pipe Temp vs. Boron Concentration on Attachment 7. Determines that the plot is in the acceptable area. The operator initials the column. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | _____ |

Terminating Cues: When the operator informs the evaluator that the SBLC Level, Temperature and Boron Concentration section of STP 3.0.0-01, Instrument Checks is complete, with the exception of "Verification of the BLUE light on for the SBLC Heat Trace Temp Controller".

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

Stop Time: _____



2.1.18-06, Perform STP 3.0.0-01, Instrument Checks – SBLC Level,
Temperature and Boron Concentration, Rev. 1

JPM
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Examinee: _____

Evaluator: _____

☐ RO ☐ SRO ☐ STA ☐ Non-Lic ☐ SRO CERT

Date: _____

☐ LOIT RO ☐ LOIT SRO

PERFORMANCE RESULTS:

SAT:

UNSAT:

Remediation required:

YES

NO

COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).

**EXAMINER NOTE: ENSURE ALL EXAM MATERIAL IS COLLECTED AND PROCEDURES
CLEANED, AS APPROPRIATE.**

EVALUATOR'S SIGNATURE: _____

*NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If
unsatisfactory performance is demonstrated, the entire JPM should be retained.*

TURNOVER SHEET

INITIAL CONDITIONS:

- Plant is operating at 100% power.
- STP 3.0.0-01, Instrument Checks is being performed.

INITIATING CUES (IF APPLICABLE):

- You are directed to complete the SBLC Level, Temperature, and Boron Concentration section of STP 3.0.0-01, Instrument Checks.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

Usage Level
CONTINUOUS

Record the following: Date/Time: TODAY/ NOW Initials: AGY

NOTE: User shall perform and document a Temp Issue/Rev. Check to ensure revision is current, in accordance with procedure use and adherence requirements.

Prepared By: / Date:
Print Signature

CROSS-DISCIPLINE REVIEW (AS REQUIRED)

Reviewed By: / Date:
Print Signature

Reviewed By: / Date:
Print Signature

PROCEDURE APPROVAL

Approved By / Date:
Print Signature

1.0 PURPOSE

1.1 The purpose of this procedure is to perform the various Technical Specification, Technical Requirements Manual, 10 CFR 72 Certificate of Compliance, and other Plant Required Surveillances that are required on short term frequencies. This procedure includes the shiftly and daily requirements and frequencies less than every 12 hours.

1.2 This procedure FULLY or PARTIALLY satisfies the following various Technical Specification (SR), UFSAR (UF) and Technical Requirements Manual (TSR) surveillance requirements:

SR 3.1.3.1 SR 3.1.6.1 SR 3.1.7.1 SR 3.1.7.2 SR 3.1.7.3
SR 3.2.1.1 SR 3.2.2.1 SR 3.3.1.1.1-1.a SR 3.3.1.1.1-2.a SR 3.3.1.1.1-2.b
SR 3.3.1.1.1-4 SR 3.3.1.1.2-2.b SR 3.3.1.1.2-2.c SR 3.3.1.2.1-1 SR 3.3.1.2.3-1
SR 3.3.1.2.4-1 SR 3.3.4.2.1 SR 3.3.5.1.1-1.a SR 3.3.5.1.1-2.a SR 3.3.5.1.1-2.d
SR 3.3.5.1.1-2.g SR 3.3.5.1.1-2.i SR 3.3.5.1.1-2.j SR 3.3.5.1.1-3.a SR 3.3.5.1.1-3.c
SR 3.3.5.1.1-4.a SR 3.3.5.1.1-4.c SR 3.3.5.1.1-5.a SR 3.3.5.1.1-5.c SR 3.3.5.2.1-1
SR 3.3.5.2.1-2 SR 3.3.6.1.1-1.a SR 3.3.6.1.1-1.c SR 3.3.6.1.1-1.f SR 3.3.6.1.1-2.a
SR 3.3.6.1.1-5.e SR 3.3.6.1.1-6.b SR 3.3.6.1.2-1.e SR 3.3.6.1.2-1.f SR 3.3.6.1.2-2.e
SR 3.3.6.1.2-3.e SR 3.3.6.1.2-3.g SR 3.3.6.1.2-3.h SR 3.3.6.1.2-3.i SR 3.3.6.1.2-4.e
SR 3.3.6.1.2-4.g SR 3.3.6.1.2-4.h SR 3.3.6.1.2-4.i SR 3.3.6.1.2-5.a SR 3.3.6.1.2-5.b
SR 3.3.6.1.2-5.c SR 3.3.6.1.2-5.f SR 3.3.6.2.1-1 SR 3.3.6.2.2-4 SR 3.4.1.2
SR 3.4.4.1 SR 3.4.5.1 SR 3.4.5.2 SR 3.4.7.1 SR 3.4.8.1
SR 3.4.9.7 SR 3.4.10.1 SR 3.5.2.1 SR 3.5.2.2.a SR 3.5.2.2.b
SR 3.6.1.4.1 SR 3.6.2.1.1 SR 3.6.2.2.1 SR 3.7.2.1 SR 3.7.2.2
SR 3.10.2.1

TSR 3.3.1.1.a TSR 3.3.2.1-1.a TSR 3.3.2.1-1.b TSR 3.3.2.1-1.d TSR 3.3.2.1-2.b
TSR 3.3.2.1-2.d TSR 3.3.2.1-3.b TSR 3.3.2.1-3.d TSR 3.3.6.1-1 TSR 3.3.6.1-2
TSR 3.3.6.1-3 TSR 3.3.6.1-4 TSR 3.3.6.1-5 TSR 3.3.6.1-6 TSR 3.3.6.1-7
TSR 3.3.6.2-7

UF 5.4.6.3 UF 6.3.2.2.1

1.3 This procedure, when performed in its entirety, FULLY SATISFIES the DAEC Technical Requirements Manual surveillance requirement for verification of one Battery Exhaust Fan operating.

1.4 This STP verifies plant conditions are maintained as described in the following UFSAR sections:

6.2.5.3 T-Seal Leakage into Containment

9.2.3.2.1 RHRSW River Water Temperature Requirement

9.3.4.5 SBLC Tank Level

11.5.1.5 Main Steam Line Radiation Monitors

1.5 This STP records fuel pool pump inlet temperatures for trending purposes.

1.6 This STP verifies that total Well Water flow does not exceed the allowed flow of the Iowa Department of Natural Resources (DNR) Well Water Permit.

- 1.7 This STP PARTIALLY SATISFIES the following Certificate of Compliance No. 72-1004, Technical Specification requirements:
- 1.7.1 Section 1.3.1 Visual Inspection of Horizontal Storage Module (HSM) Air Inlets and Outlets (Front Wall and Roof Birdscreen)
- 1.8 This STP FULLY SATISFIES the following Certificate of Compliance No. 72-1004, Technical Specification requirements:
- 1.8.1 Section 1.3.2 Horizontal Storage Module (HSM) Thermal Performance

2.0 BRIEFING INFORMATION

2.1 PERFORMANCE INFORMATION

- 2.1.1 Alternate means of satisfying an instrument's Channel Check shall be documented in the Comment Section when a comparison cannot be made due to the other instrument(s) being inoperable or otherwise unavailable. See General Instruction 4.9 for additional information.
- 2.1.2 Personnel recommended to perform this procedure:
- 3 Operations
- 1 STA, CRS, or OSM
- 2.1.3 The following test equipment may be needed to perform this STP:
- 1 Fluke 187 Digital Multimeter or equivalent

2.2 GENERAL CAUTIONS

- 2.2.1 None

2.3 SPECIAL PRECAUTIONS

- 2.3.1 None

3.0 REFERENCES

3.1 Support documents:

- 3.1.1 Certificate of Compliance No. 72-1004 for NUHOMS 61BT Spent Fuel Storage Casks
- 3.1.2 Iowa Department of Natural Resources - Water Use Permit (3046-MR4)
- 3.1.3 GMP-INST-23 [HSM Manual Temperature Monitoring]

3.2 Commitment Items


- 3.2.1 **CATPR001:**RCE001057 - CA044655: Flag Rated Core Flow Limit of 49.0 Mlb/hr
- 3.2.2 **CATPR002:** RCE01884408 16: Clearly state that a qualitative assessment of instrument performance should be performed for ANY instrument included in the STP that is being assessed to meet its CHANNEL CHECK surveillance requirement, not just for cases when the specified quantitative assessment cannot be performed.

| | | |
|---|---|--|
| DAEC DUANE ARNOLD ENERGY CENTER | SURVEILLANCE TEST PROCEDURE TITLE: INSTRUMENT CHECKS | STP 3.0.0-01 Page 4 of 61 Rev. 158 |
|---|---|--|

4.0 GENERAL INSTRUCTIONS

- 4.1 Readings may be taken in any sequence desired.
 - 4.1.1 The previous day's 1900-0700 crew takes all readings designated shift 1.
 - 4.1.2 The 0700-1900 crew takes all readings designated shift 2.
 - 4.1.3 The 1900-0700 crew takes all readings designated shift 3.
- 4.2 For checks of conditions where the data blocks call for an Operator's initials, the Operator only initials the block if the Acceptance Criteria is met. For checks of conditions not requiring recorded data from an instrument or a calculation where the data blocks are blank, the operator has the option of initialing the block signifying that the Acceptance Criteria is met or they may write in the condition of the component. (For lights: ON/OFF)
- 4.3 Data marked with a "TS" or "TM" in the Acceptance Criteria column are required by Technical Specifications or the Technical Requirements Manual. Data marked with a "CoC" in the Acceptance Criteria column are required by the Certificate of Compliance Technical Specifications. If the data does not meet its acceptance criteria or cannot be recorded, a NRC reportable condition may exist. The data shall be circled and immediately reported to the Control Room Supervisor (CRS).
- 4.4 An Action Request (AR) shall be completed for any problems encountered with "TS", "TM", or CoC -marked steps during the test/inspection, unless it is noted that an AR is not required.
- 4.5 The CRS shall be immediately notified and the appropriate Limiting Condition for Operation section of Technical Specifications or the Technical Requirements Manual or the Certificate of Compliance Technical Specifications referred to whenever problems are encountered during the performance of this STP.
- 4.6 If a component does not meet the acceptance criteria of ASME, that component may or may not be considered inoperable. Refer to ACP 1407.3 (ASME) to determine system operability.
- 4.7 If any equipment or components are observed to be in a state of disrepair during the performance of this STP, appropriate corrective maintenance shall be initiated.
- 4.8 Some checks in this procedure are not required after the reactor has been placed in MODE 4 as defined in DAEC Technical Specifications. These checks are identified by a diamond (♦) in the Function and Data columns. Additionally, some Acceptance Criteria does not apply in MODE 4. This Acceptance Criteria is also identified by a ♦ preceding it. Whenever the reactor is in MODE 4, this data is not required to be taken and NR (Not Required) may be placed in all the data blocks for each parameter marked by a ♦ in the Function and Data columns of Data Tables. Whenever the reactor is in MODE 4, if data taken does not comply with Acceptance Criteria that is preceded with a ♦ , an Action Request (AR) is not required.
- 4.9 CHANNEL CHECKS [designated herein with ###] In addition to performing the specified quantitative instrument checks which includes a comparison of channel indication against other indications measuring the same parameter, a qualitative assessment of instrument performance should be performed for ANY instrument included in the STP that is being assessed to meet its CHANNEL CHECK surveillance requirement. Any such qualitative assessment should verify each instrument is free of erratic behavior, or changes not corroborated by other instrumentation. If any such erratic behavior or uncorroborated changes are noted, immediately inform the CRS.

{CATPR002}

| | | |
|---|---|--|
|  DUANE ARNOLD ENERGY CENTER | SURVEILLANCE TEST PROCEDURE TITLE: INSTRUMENT CHECKS | STP 3.0.0-01 Page 5 of 61 Rev. 158 |
|---|---|--|

- 4.10 GMP-INST-23 [HSM Manual Temperature Monitoring] provides an optional method that could be used to obtain HSM temperatures with a loss of power to the Temperature Monitoring Panel 1C604 using a Fluke Model 714 Thermocouple Calibrator or equivalent if desired or warranted.
- 4.11 For Barton level, flow, and differential pressure instruments, it is acceptable per vendor manual I204DPT to tap the instrument to relieve friction in the indicator assembly prior to obtaining the reading. If the reading changes from an unacceptable to an acceptable value, the acceptable value should be recorded, and no CR is necessary. If the reading remains or becomes unacceptable, or if a particular instrument frequently requires tapping, a CR should be initiated to document the issue.

5.0 APPENDICES

- 5.1 None

| | | |
|--|---|--|
| DAEC <small>DUANE ARNOLD ENERGY CENTER</small> | SURVEILLANCE TEST PROCEDURE TITLE: INSTRUMENT CHECKS | STP 3.0.0-01 Page 6 of 61 Rev. 158 |
| Prerequisites | Performance Date: <u>TODAY</u> | <u>INITIALS</u> |

6.0 PREREQUISITES

NOTE

If the plant is in Mode 5, shiftly checks are to be performed in accordance with STP 3.0.0-03 (Refueling Instrument Checks). This STP only supports required checks in Mode 1, 2, 3, or 4.

OPS

6.1 Plant is currently in Mode 1, 2, 3, 4, or will be exiting Mode 5.

OPS
OPS

| | | |
|--|---|--|
| DAEC <small>DUANE ARNOLD ENERGY CENTER</small> | SURVEILLANCE TEST PROCEDURE TITLE: INSTRUMENT CHECKS | STP 3.0.0-01 Page 7 of 61 Rev. 158 |
| Procedure | Performance Date: : _____ TODAY | <u>INITIALS</u> |

7.0 PROCEDURE

- 7.1 Every 4 hours, record the required data in the 4-Hour and Shiftly Instrument Checks data sheets.
- 7.2 Every 12 hours, record the required data in the Shiftly Instrument Checks data sheets.
- 7.3 Every 24 hours, record the required data in the Daily Instrument Checks data sheets.

| | | |
|------------------------------------|---|---|
| Daily Checks Date: <u>TODAY</u> | SURVEILLANCE TEST PROCEDURE TITLE: INSTRUMENT CHECKS | STP 3.0.0-01 Page 45 of 61 Rev. 158 |
|------------------------------------|---|---|

| PANEL NUMBER | FUNCTION | INSTRUMENT NUMBER | SHIFT 3 | ACCEPTANCE CRITERIA | TECH SPEC |
|--|--|--|--------------|---|--------------------------|
| Chemistry Status Board | SBLC Level, Temperature and Boron Concentration (Note 1) | Boron Concentration from most recent 3.1.7-03 as recorded on Chemistry Status Board | 12.9% | | |
| | | Specific Gravity Correction Factor (K) from most recent STP 3.1.7-03 as recorded on Chemistry Status Board | 0.901 | | |
| LI 2600B | | 74" | | | |
| Effective Tank Level in gallons = 39.64 [(LI2600B reading x K) - 3.18] | | | | | |
| 1C69 | | Plot SBLC Effective Tank Level vs Boron Cone on Attachment 6. | SANSOE Init. | Confirm Point plotted is within the Acceptable area of Attachment 6. (TS) | SR3.1.7.1 |
| | | TIC 2602 (Tank Temp.) | 82F | | |
| | | TI 2619 (Pipe Temp.) | 85F | | |
| | | Plot SBLC Tank Temp and Pipe Temp vs. Boron Concentration on Attachment 7. | SANSOE Init. | Confirm Point plotted is within the Acceptable area of Attachment 7. (TS) (Note: Failure of either SR will require the performance of SR 3.1.7.5 and SR 3.1.7.8 WITHIN 24 Hours.) | SR3.1.7.2 SR3.1.7.3 |
| | SBLC | SBLC Heat Trace Temp Controller | N/A | SANSOE Init. | Verify Blue light is on. |

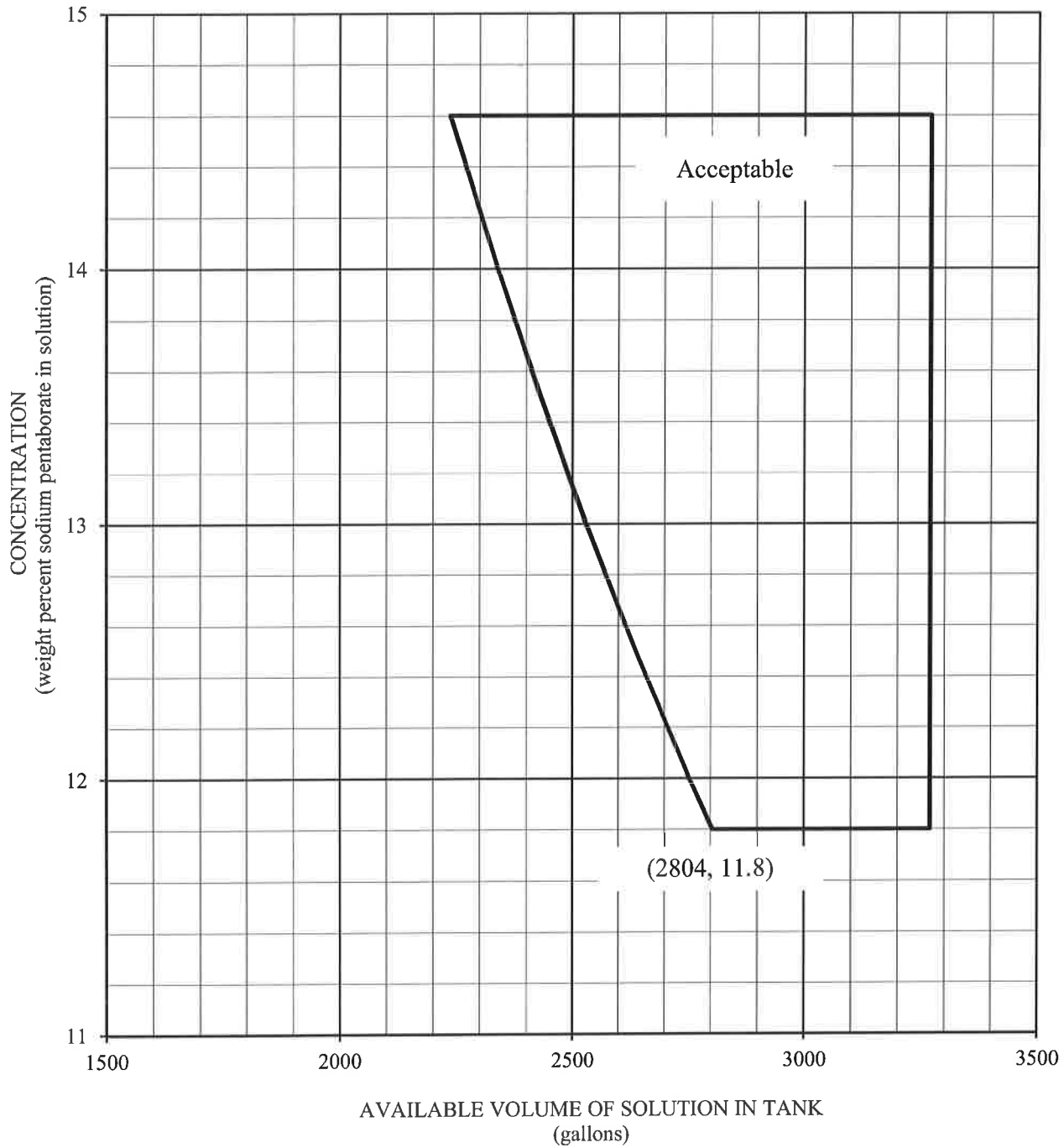
Note 1: SBLC is not required to be operable in Modes 3 and 4. However, to administratively maintain the system ready for Startup, these Surveillance Requirements will be maintained

| | | |
|-----------------------------|------------------------------------|---------------|
| Daily Checks Date: _____ | SURVEILLANCE TEST PROCEDURE | STP 3.0.0-01 |
| | TITLE: INSTRUMENT CHECKS | Page 48 of 61 |
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ATTACHMENT 6

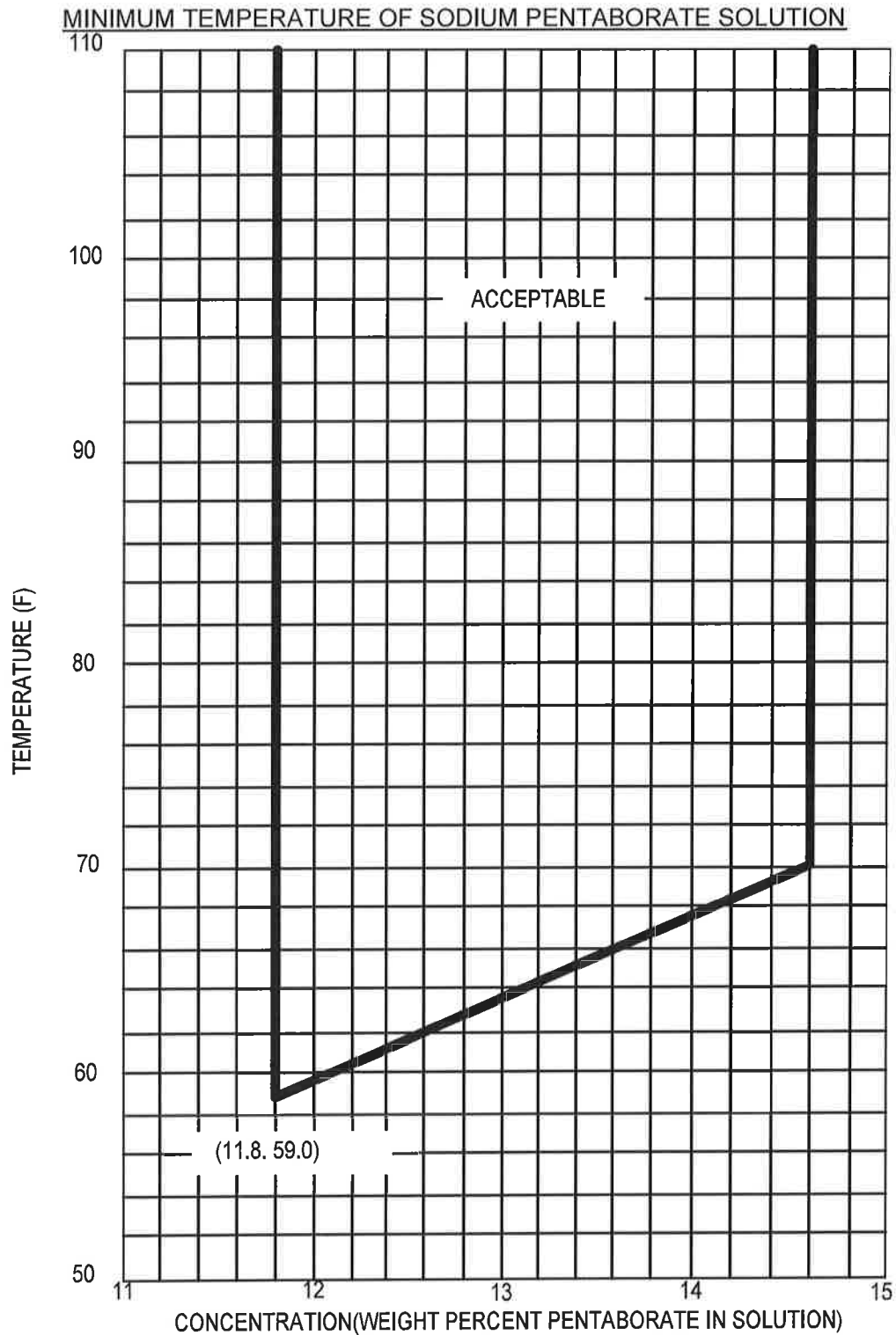
SODIUM PENTABORATE SOLUTION VOLUME CONCENTRATION



| | | |
|--------------|------------------------------------|---------------|
| Daily Checks | SURVEILLANCE TEST PROCEDURE | STP 3.0.0-01 |
| Date: _____ | TITLE: INSTRUMENT CHECKS | Page 49 of 61 |
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ATTACHMENT 7



JOB PERFORMANCE MEASURE

JPM TITLE: PEER CHECK STP 3.8.1-01, OFFSITE POWER SOURCES. DETERMINE THAT THE STP WAS DONE INCORRECTLY. RE-PERFORMS STP.

JPM NUMBER: 2.2.12-05 **REV.** 0

TASK NUMBER(S) / TASK TITLE(S): 1.07 (Reactor Operator)

K/A NUMBERS: Generic, 2.2.12 **K/A VALUE:** 3.7 / 4.1

Justification (FOR K/A VALUES <3.0):

TASK APPLICABILITY:

☐ RO ☐ SRO ☐ STA ☐ Non-Lic ☐ SRO CERT ☐ OTHER: _____

APPLICABLE METHOD OF TESTING: Simulate/Walkthrough: ☐ Perform: ☐

EVALUATION LOCATION: In-Plant: ☐ Control Room: ☐

Simulator: ☐ Other: ☐

Lab: ☐

Time for Completion: 15 Minutes Time Critical: NO

Alternate Path [NRC]: NO

Alternate Path [INPO]: NO

Developed by: _____
Instructor/Developer Date

Reviewed by: _____
Instructor (Instructional Review) Date

Validated by: _____
SME (Technical Review) Date

Approved by: _____
Training Supervision Date

Approved by: _____
Training Program Owner Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED PRIOR TO USE.

| REVIEW STATEMENTS | YES | NO | N/A |
|---|--------------------------|--------------------------|--------------------------|
| 1. Are all items on the signature page filled in correctly? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Has the JPM been reviewed and validated by SMEs? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Can the required conditions for the JPM be appropriately established in the simulator if required? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Has the completion time been established based on validation data or incumbent experience? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. If the task is time critical, is the time critical portion based upon actual task performance requirements? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Is the job level appropriate for the task being evaluated if required? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Is the K/A appropriate to the task and to the licensee level if required? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Is justification provided for tasks with K/A values less than 3.0? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Have all special tools and equipment needed to perform the task been identified and made available to the trainee? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Are all references identified, current, accurate, and available to the trainee? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Have all required cues (as anticipated) been identified for the evaluator to assist task completion? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. Are all critical steps supported by procedural guidance? (e.g., if licensing, EP or other groups were needed to determine correct actions, then the answer should be NO.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. If the JPM is to be administered to an LOIT student, has the required knowledge been taught to the individual prior to administering the JPM? TPE does not have to be completed, but the JPM evaluation may not be valid if they have not been taught the required knowledge. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

All questions/statements must be answered "YES" or "N/A" or the JPM is not valid for use. If all questions/statements are answered "YES" or "N/A," then the JPM is considered valid and can be performed as written. The individual(s) performing the initial validation shall sign and date the cover sheet.

Protected Content: (CAPRs, corrective actions, licensing commitments, etc. associated with this material)

{C001}

UPDATE LOG: Indicate in the following table any minor changes or major revisions (as defined in TR-AA-230-1003) made to the material after initial approval. Or use separate Update Log form TR-AA-230-1003-F16.

[illegible]

JPM SETUP INSTRUCTIONS:

1. Insert Simulator Overrides listed below
2. Place a "Maintenance In Progress" tag on the handswitch for the "J" breaker
3. **NOTE:** This JPM can be run either in the simulator using the 1C08 panel set up in normal full power lineup with the "J" Breaker de-energized, or in a classroom using the attached panel pictures
4. Mark up a copy of STP 3.8.1-01 as follows

General

In the **point-of-use** section, put the DATE as today, the TIME as 2 hours ago, in the printer ID, put TC-R1, and initial.

Mark TODAY in all pages in the Performance Date blanks.

Initial all notes and cautions in the body of the procedure.

Prerequisites

Initial steps 6.1 and 6.2.

X the 7.1 section

For section 7.1

Initial steps 7.1.1 a, b, and c.

Initial step 7.1.2 a

N/A step 7.1.2 b

Sign and initial the Performed By section

Place the Date as today or SUNDAY

For the time insert 4 X's

For section 7.2

N/A all of the steps

For section 8.1

Place an X in the "Routine with both offsite circuits available" section

For section 8.2

8.2.1 mark YES and initial

8.2.2 N/A

For section 8.3

8.3.1 mark YES and initial

8.3.2 N/A

For section 8.4

N/A all of the steps

For Attachment 1

With a blue pen, trace the lines from Power Supply "L1" (Hiawatha Sub), through T1, through the K breaker, to 1X3 to 1A302 and 402.

With another color (green), trace the lines from Power Supply L7 through T1 to 1X4 to 1A301 and 401.

With another color (red), trace the lines from 1A302 and 1A402 to buses 1A3 and 1A4.

SIMULATOR MALFUNCTIONS: NONE

TR-AA-230-1003-F10, Revision 2

SIMULATOR OVERRIDES:

| TIME | OVERRIDE ID | OVERRIDE DESCRIPTION | ET | DELAY | INITIAL | FINAL |
|-------|-------------|---|----|-------|---------|-------|
| Setup | DO-ED-193 | OCB5550(1) STARTUP XFMR "J" BREAKER OPEN (GREEN) | | | ON | OFF |
| Setup | DO-ED-194 | OCB5550(2) STARTUP XFMR "J" BREAKER OPEN (RED) | | | ON | OFF |

SIMULATOR REMOTE FUNCTIONS:NONE

Required Materials:

1. A marked up copy of STP 3.8.1-01
2. Pictures of 1C08 if not performing in the Simulator
3. Three colored pens (Red, Blue, and Green, preferably), for the filling out of a new offsite circuit power map.
4. One filled out offsite circuit power map that is wrong, (Attached).
5. A Clean copy of STP 3.8.1-01.

General References:

STP 3.8.1-01, Rev. 5

Task Standards:

- Determine that Attachment 1 is incorrect. Both offsite power sources running through the T1 transformer.
- CRS notified.
- The Candidate will trace offsite power from either L1 (Hiawatha) or L2 (Fairfax) or L3 (Dysart) or Line (6th Street) to 1X3 to 1A302 and 1A402, **without** going through T1.
- The Candidate will trace offsite power from either L1 (Hiawatha) or L2 (Fairfax) or L3 (Dysart) or Line (6th Street) to 1X3 or L6 (Hazelton) or L7 (Hills) to T1 to 1X4 to 1A301 and 1A401.
- The key thing here is that **NO** lines use the same portion of line at **any time**.
- Candidate will initial 7.1.2a and N/A 7.1.2b.

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

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- The plant is running at 100% electrical output. The only inoperable piece of equipment is the "J" Breaker (5550). It was tagged out for maintenance last Friday.
- Today is Sunday; and another operator has just finished the weekly STP 3.8.1-01, Offsite Power Sources.

INITIATING CUES (IF APPLICABLE):

- The CRS has directed you to perform an independent review of STP 3.8.1-01, Offsite Power Sources.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JPM PERFORMANCE INFORMATION

Start Time: _____

NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

NOTE: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

| | |
|--|--|
| Performance Step:1 Critical Y | Candidate will review STP 3.8.1-01. <ul style="list-style-type: none"> Determine that Attachment 1 is filled out improperly. Both Power Sources Line and L7 go through Transformer T1. |
| Standard: | Determine that Attachment 1 is filled out improperly. Both Power Sources Line and L7 go through Transformer T1. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|--|---|
| Performance Step:2 Critical Y | The way Attachment 1 is filled out, you are not in compliance with step 7.1.2a and b. |
| Standard: | The Candidate must notify the CRS that the STP was not properly filled out. |
| Evaluator Cue: | <p>Evaluator, when the candidate has determined that the current Attachment is incorrect, give him the following:</p> <ul style="list-style-type: none"> • Pictures of 1C08 • Switchyard map • Clean copy of STP 3.8.1-01 • Three colored pens • Straight edge <p>CUE him to re-perform the section 7.1.1 of STP 3.8.1-01.</p> |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |



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DETERMINE THAT THE STP WAS DONE INCORRECTLY. RE-
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| | |
|--|--|
| Performance Step:3 Critical N | <u>NOTE</u> Information from the Load Dispatcher may be needed to complete the following step. |
| | |
| Standard: | Read and sign the note. |
| | |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|--|--|
| Performance Step:4 Critical Y | 7.1.1 Using the guidance below and Attachment 1, identify two separate circuits available to transmit power from the offsite power sources to the essential buses. a. Based on equipment/system lineup and operational status, use a dark marking pen to trace an available circuit from an offsite power source to the Startup Transformer supply breakers, 1A302 and 1A402. |
| Standard: | The Candidate will trace offsite power from either: <ul style="list-style-type: none"> • L1, (Hiawatha) or • L2, (Fairfax) or • L3, (Dysart) or • Line, (6th Street), to 1X3, to 1A302 and 1A402, without going through T1, or without going through the H (0220), or I (4290) breakers. |
| Evaluator Cue: | Some of the breakers on the Attachment are not on 1C08; and if the candidate wants to know the position of any of these breakers, he will call the Load Dispatcher. If contacted role play as the Load Dispatcher and inform the candidate that the breakers that he is asking about are closed. |
| Performance: | SATISFACTORY ____ UNSATISFACTORY __ |
| Comments: | |

| | |
|--|--|
| Performance Step:5 Critical Y | <p>7.1.1 Using the guidance below and Attachment 1, identify two separate circuits available to transmit power from the offsite power sources to the essential buses.</p> <p>b. Based on equipment/system lineup and operational status, use a dark marking pen to trace a second circuit from another offsite power source to the Standby Transformer supply breakers, 1A301 and 1A401 such that it does not share any lines, buses, or transformers in common with the circuit to the Startup Transformer supply breakers.</p> |
| Standard: | <p>The Candidate will trace offsite power from either,</p> <ul style="list-style-type: none"> • L1, (Hiawatha) or • L2, (Fairfax) or • L3, (Dysart) or • Line, (6th Street) or • L6, (Hazelton) or • L7, (Hills) <p>to T1, to 1X4, to 1A301 and 1A401, or without going through the H, (0220), or I, (4290) breakers. The key thing here is that NO lines use the same portion of line at any time.</p> |
| Evaluator Cue: | <p>Some of the breakers on the Attachment are not on 1C08; and if the candidate wants to know the position of any of these breakers, he will call the Load Dispatcher. If contacted role play as the Load Dispatcher and inform the candidate that the breakers that he is asking about are closed.</p> |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|--|---|
| Performance Step:6 Critical Y | 7.1.1 Using the guidance below and Attachment 1, identify two separate circuits available to transmit power from the offsite power sources to the essential buses. c. Based on equipment/system lineup and operational status, complete the electrical lineup by using a dark marking pen to trace the connections from each Essential Bus (1A3 and 1A4) to the Startup or Standby Transformer supply breaker currently feeding the bus. |
| Standard: | Lines will be traced from buses 1A3 and 1A4 to the Startup transformer. |
| Performance: | SATISFACTORY ____ UNSATISFACTORY __ |
| Comments: | |

| | |
|---|--|
| Performance Step: 7 Critical Y | 7.1.2 Confirm two (2) independent offsite circuits are available by initialing one of the two sets of statements below and N/A'ing the other: <p style="text-align: center;">a. A circuit exists from an offsite power source, through the Startup Transformer and its supply breakers to both 1A3 and 1A4 essential buses;</p> <p style="text-align: center;"><u>AND</u></p> <p style="text-align: center;">A second independent circuit exists from a different offsite source, through the Standby Transformer to its supply breakers.</p> |
| Standard: | Candidate will Initial 7.1.2a. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|--|---|
| Performance Step:8 Critical N | <p>7.1.2 Confirm two (2) independent offsite circuits are available by initialing one of the two sets of statements below and N/A'ing the other:</p> <p>b. A circuit exists from an offsite power source, through the Startup Transformer and one of its supply breakers to either the 1A3 or 1A4 essential bus; <u>AND</u></p> <p>A second independent circuit exists from a different offsite source, through the Standby Transformer and one of its supply breakers to the other essential bus.</p> |
| Standard: | The Candidate will N/A step 7.1.2.b |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|--|---|
| Performance Step:9 Critical N | Will Sign, Date, and Time the last portion of Section 7.1.2. |
| Standard: | Will Sign, Date, and Time the last portion of Section 7.1.2. |
| Performance: | SATISFACTORY ____ UNSATISFACTORY __ |
| Comments: | |

| | |
|---|---|
| Performance Step:10 Critical N | Will fill out the ACCEPTANCE CRITERIA for Section 8.0: <ul style="list-style-type: none"> • 8.1: X the top box, or other and explain why he is re-performing the STP. • 8.2: X Yes for Section 7.1 • 8.3: X Yes for Section 7.1 • 8.4: N/A |
| Standard: | Will fill out the ACCEPTANCE CRITERIA for Section 8.0: <ul style="list-style-type: none"> • 8.1: X the top box, or other and explain why he is re-performing the STP. • 8.2: X Yes for Section 7.1 • 8.3: X Yes for Section 7.1 • 8.4: N/A |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

Terminating Cues: When the RO finishes with STP 3.8.1-01 and hands it back to the CRS, the JPM is over.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

Stop Time: _____



**2.2.12-05, PEER CHECK STP 3.8.1-01, OFFSITE POWER SOURCES.
DETERMINE THAT THE STP WAS DONE INCORRECTLY. RE-
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Examinee: _____

Evaluator: _____

☐ RO ☐ SRO ☐ STA ☐ Non-Lic ☐ SRO CERT

Date: _____

☐ LOIT RO ☐ LOIT SRO

PERFORMANCE RESULTS:

SAT:

UNSAT:

Remediation required:

YES

NO

COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).

**EXAMINER NOTE: ENSURE ALL EXAM MATERIAL IS COLLECTED AND PROCEDURES
CLEANED, AS APPROPRIATE.**

EVALUATOR'S SIGNATURE: _____

NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

TURNOVER SHEET

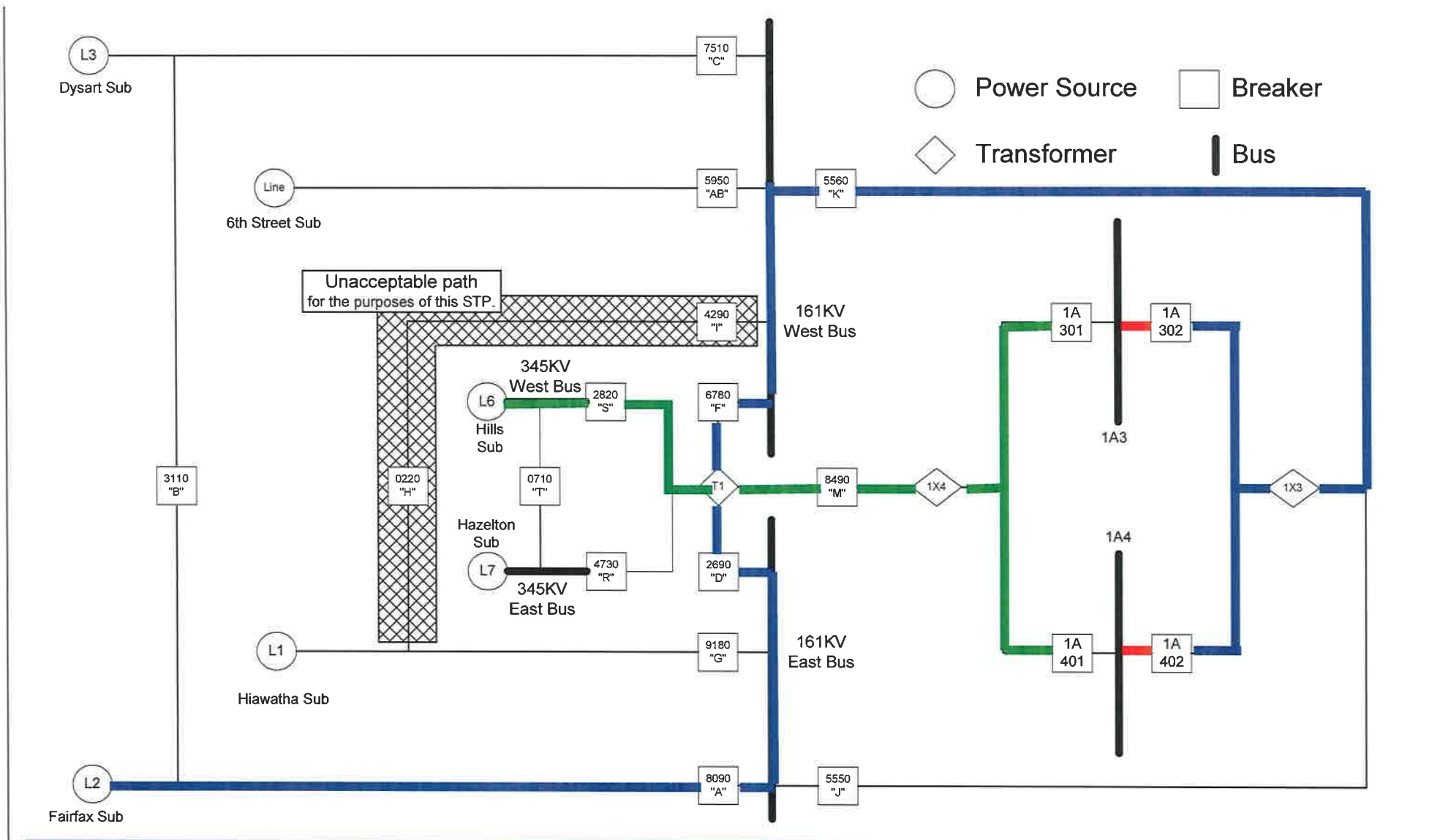
INITIAL CONDITIONS:

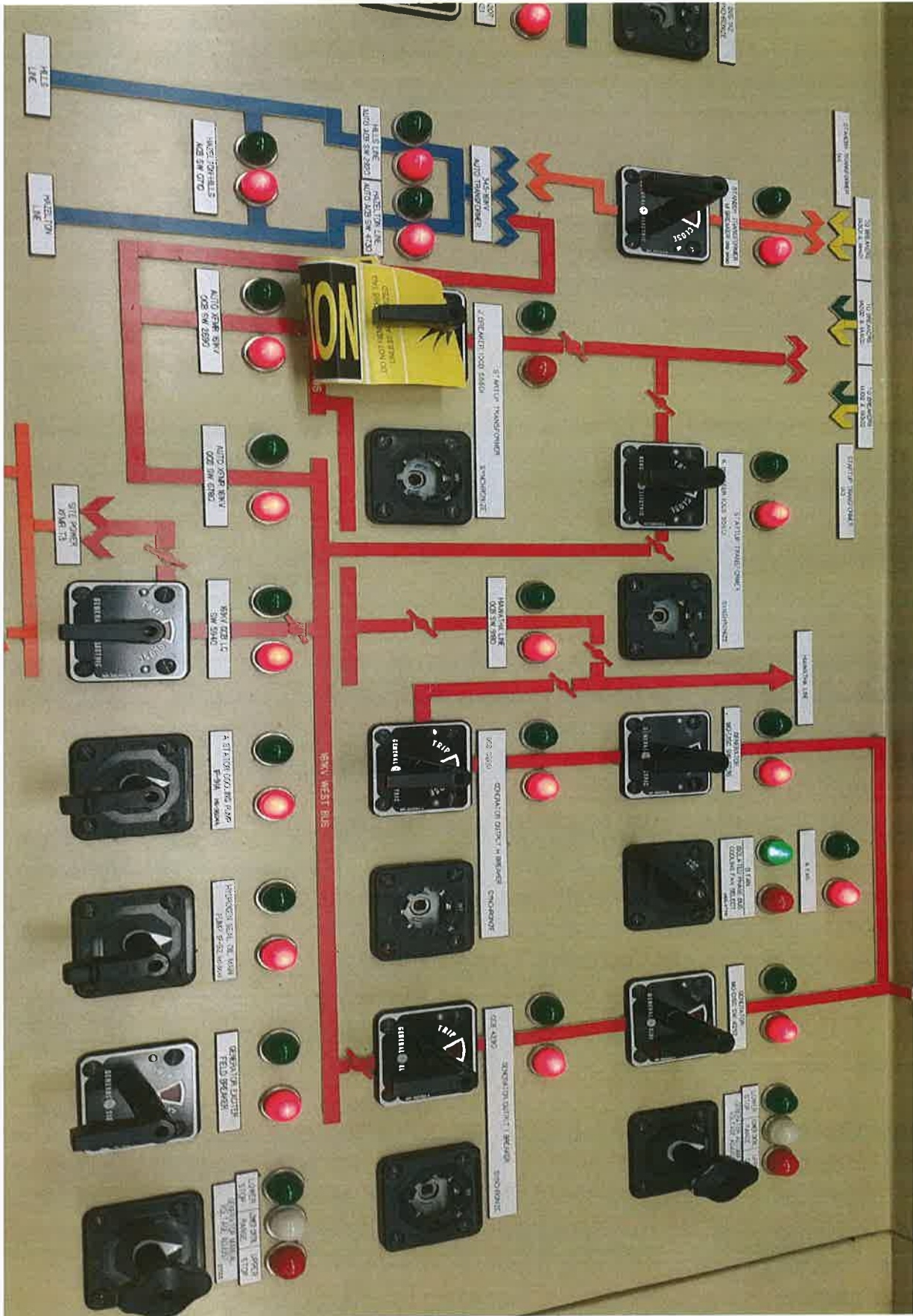
- The plant is running at 100% electrical output. The only inoperable piece of equipment is the "J" Breaker (5550). It was tagged out for maintenance last Friday.
- Today is Sunday; and another operator has just finished the weekly STP 3.8.1-01, Offsite Power Sources.

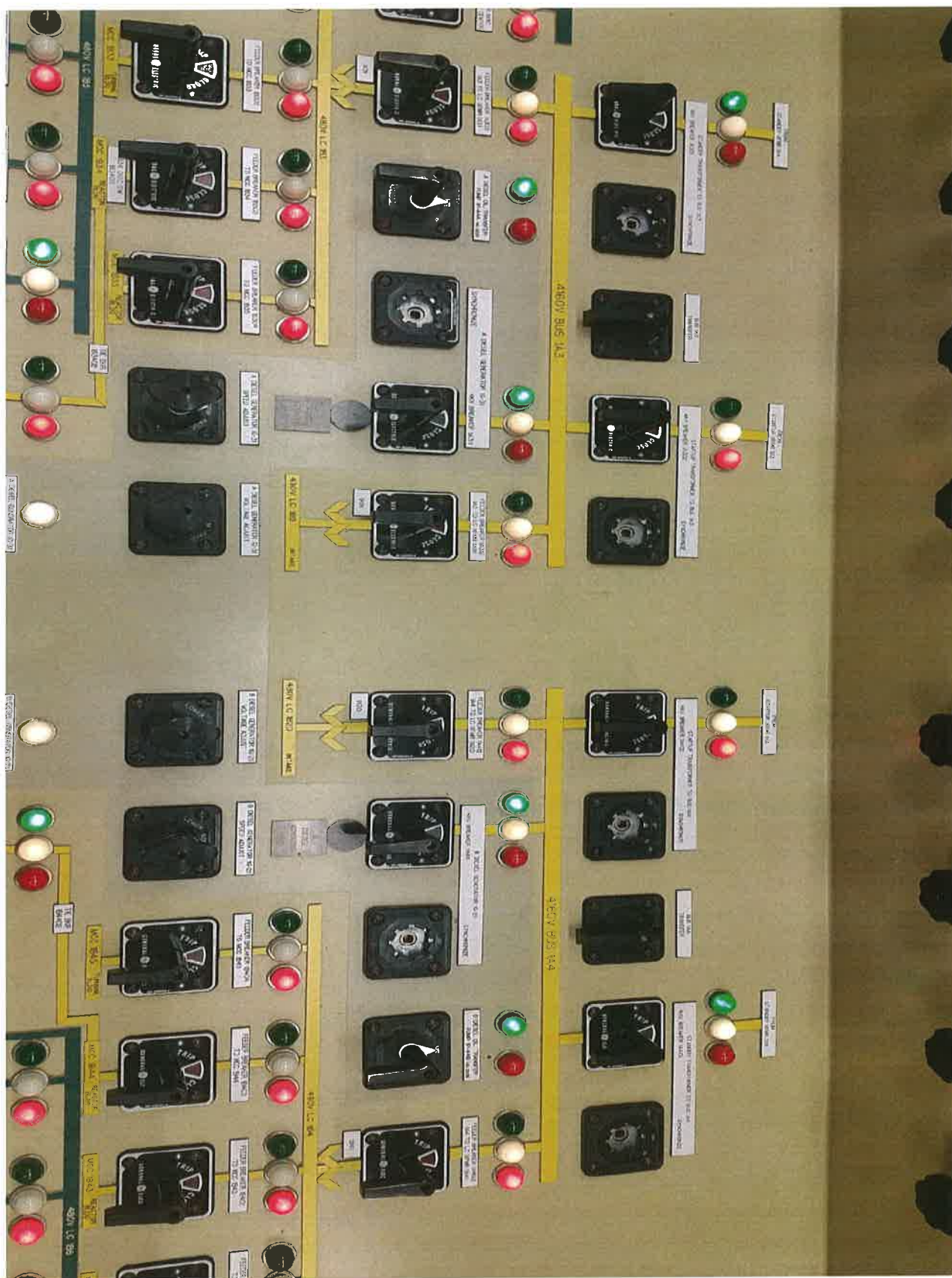
INITIATING CUES (IF APPLICABLE):

- The CRS has directed you to perform an independent review of STP 3.8.1-01, Offsite Power Sources.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.







Usage Level
CONTINUOUS

Record the following: Date / Time: TODAY / 2 HRS AGO Initials: POC

NOTE: User shall perform and document a Temp Issue / Rev. Check to ensure revision is current, in accordance with procedure use and adherence requirements.

Prepared By: _____ / _____ Date: _____
Print Signature

CROSS-DISCIPLINE REVIEW (AS REQUIRED)

Reviewed By: _____ / _____ Date: _____
Print Signature

Reviewed By: _____ / _____ Date: _____
Print Signature

Reviewed By: _____ / _____ Date: _____
Print Signature

PROCEDURE APPROVAL

Approved By _____ / _____ Date: _____
Print Signature

1.0 PURPOSE

- 1.1 This STP verifies correct breaker alignment and indicated power availability for each offsite circuit capable of supplying the onsite Class 1E AC Electrical Distribution System.
- 1.2 This STP is routinely performed with both offsite circuits available, or in response to the condition of one offsite circuit or one diesel generator inoperable.

2.0 BRIEFING INFORMATION**2.1 PERFORMANCE INFORMATION**

- 2.1.1 Section 7.0 of this STP contains two (2) sections that cover the anticipated conditions under which this STP will be performed. The STP is organized as follows:

| Sect. | Conditions |
|-------|---------------------------------|
| 7.1 | Both Offsite Circuits Available |
| 7.2 | One Offsite Circuit Available |

Only one of these sections should need to be performed to satisfy the performance requirements associated with this STP. All steps within a particular section are to be performed in sequence and the STP steps carried through to completion, unless stated otherwise.

- 2.1.2 Personnel recommended to perform this procedure:

1 Operations

- 2.1.3 Special Test Equipment required:

1 Marking Pen (Do not use light colored hi-lighters or markers. Use only dark colored pens or markers. See General Caution 2.2.1).

2.2 GENERAL CAUTIONS

- 2.2.1 If utilizing a paper copy of this surveillance, do not use light colored hi-lighters or markers to record data, outline configurations on drawings or to initial steps. Light-colored hi-lighters are not dark enough to reproduce adequately as the QA record. Not applicable when using electronic copies.

2.3 SPECIAL PRECAUTIONS

- 2.3.1 None

3.0 REFERENCES

- 3.1 Applicable drawings:
 - 3.1.1 BECH-E001<1>
 - 3.1.2 BECH-E005
 - 3.1.3 BECH-E023

- 3.2 Supporting documents:
 - 3.2.1 NG-97-2146

4.0 GENERAL INSTRUCTIONS

- 4.1 Steps marked with a "TS" immediately to the right of the step sign-off line are required by Technical Specifications. If these steps do not meet their acceptance criteria or cannot be performed, a NRC reportable condition may exist and shall be reported to the Control Room Supervisor (CRS) immediately.
- 4.2 If any equipment or components are observed to be in a state of disrepair during the performance of this STP, appropriate corrective maintenance shall be initiated.
- 4.3 An Action Request (AR) should be completed for any problems encountered with "TS" marked steps during the performance of this test.
- 4.4 The CRS shall be notified immediately and the appropriate Limiting Conditions for Operation section of Technical Specifications referred to whenever problems are encountered during the performance of this STP.

5.0 APPENDICES

None

| | | |
|--|---|--|
| DAEC <small>DUANE ARNOLD ENERGY CENTER</small> | SURVEILLANCE TEST PROCEDURE TITLE: OFFSITE POWER SOURCES | STP 3.8.1-01 Page 4 of 11 Rev. 5 |
| | Prerequisites | Performance Date: <u>TODAY</u> |

6.0 PREREQUISITES

6.1 Verify Offsite power is supplying essential buses 1A3 and 1A4 via either the startup transformer (normal source) or the standby transformer (alternate source). ANS

6.2 Evaluate electrical system status and select the STP section which is to be performed: ANS

☒ Section 7.1 - Both Offsite Circuits Available

☐ Section 7.2 - One Offsite Circuit Available

| | | |
|---|---|--|
| DAEC DUANE ARNOLD ENERGY CENTER | SURVEILLANCE TEST PROCEDURE TITLE: OFFSITE POWER SOURCES | STP 3.8.1-01 Page 5 of 11 Rev. 5 |
| | Performance Date: <u>TODAY</u> | <u>INITIALS</u> |

7.0 PROCEDURE

7.1 BOTH OFFSITE CIRCUITS AVAILABLE

AN

| |
|--|
| NOTE |
| Information from the Load Dispatcher may be needed to complete the following step. |

- 7.1.1 Using the guidance below and Attachment 1, identify two separate circuits available to transmit power from the offsite power sources to the essential buses.
- a. Based on equipment/system lineup and operational status, use a dark marking pen to trace an available circuit from an offsite power source to the Startup Transformer supply breakers, 1A302 and 1A402. AN
 - b. Based on equipment/system lineup and operational status, use a dark marking pen to trace a second circuit from another offsite power source to the Standby Transformer supply breakers, 1A301 and 1A401 such that it does not share any lines, buses, or transformers in common with the circuit to the Startup Transformer supply breakers. AN
 - c. Based on equipment/system lineup and operational status, complete the electrical lineup by using a dark marking pen to trace the connections from each Essential Bus (1A3 and 1A4) to the Startup or Standby Transformer supply breaker currently feeding the bus. AN

- 7.1.2 Confirm two (2) independent offsite circuits are available by initialing one of the two sets of statements below and N/A'ing the other:

- a. A circuit exists from an offsite power source, through the Startup Transformer and its supply breakers to both 1A3 and 1A4 essential buses; AN TS

AND

A second independent circuit exists from a different offsite source, through the Standby Transformer to its supply breakers.

| | | |
|--|---|--|
| DAEC <small>DUANE ARNOLD ENERGY CENTER</small> | SURVEILLANCE TEST PROCEDURE TITLE: OFFSITE POWER SOURCES | STP 3.8.1-01 Page 6 of 11 Rev. 5 |
| | Performance Date: <u>TODAY</u> | <u>INITIALS</u> |

- b. A circuit exists from an offsite power source, through the Startup Transformer and one of its supply breakers to either the 1A3 or 1A4 essential bus;

N/A TS

AND

A second independent circuit exists from a different offsite source, through the Standby Transformer and one of its supply breakers to the other essential bus.

(PRINT / SIGN)

A. NARROH / A. NARROH TODAY XXXX AN
 _____ / _____
 _____ / _____
 Performed by: _____ Date: _____ Time: _____ Init. _____

| | | |
|---|---|--|
| DAEC DUANE ARNOLD ENERGY CENTER | SURVEILLANCE TEST PROCEDURE TITLE: OFFSITE POWER SOURCES | STP 3.8.1-01 Page 7 of 11 Rev. 5 |
| | Performance Date: <u>TODAY</u> | <u>INITIALS</u> |

7.2 ONE OFFSITE CIRCUIT AVAILABLE

N/A

NOTE

Information from the Load Dispatcher may be needed to complete the following step.

7.2.1 Using the guidance below and Attachment 1, identify a circuit available to transmit power from an offsite power source to the essential buses.

a. Based on equipment/system lineup and operational status, use a dark marking pen to trace an available circuit from an offsite power source to the Startup Transformer supply breakers, 1A302 and 1A402 or Standby Transformer supply breakers, 1A301 and 1A401.

N/A

b. Based on equipment/system lineup and operational status, complete the electrical lineup by using a dark marking pen to trace the connections from the required Essential Bus(es) (1A3 and/or 1A4) to the Startup or Standby Transformer supply breakers.

N/A

7.2.2 If in Mode 1, 2 or 3, mark Step 7.2.4 "N/A" and proceed with the performance of Step 7.2.3.

N/A

OR

If in Mode 4 or 5, or during movement of irradiated fuel assemblies in the Secondary Containment, mark Step 7.2.3 "N/A" and proceed with the performance of Step 7.2.4.

7.2.3 Confirm an offsite circuit exists from an offsite power source, through either the Startup or Standby Transformer and its associated supply breakers to both 1A3 and 1A4 essential buses.

N/A TS

| | | |
|--|---|--|
| DAEC <small>DUANE ARNOLD ENERGY CENTER</small> | SURVEILLANCE TEST PROCEDURE TITLE: OFFSITE POWER SOURCES | STP 3.8.1-01 Page 8 of 11 Rev. 5 |
| | Performance Date: <u>TODAY</u> | <u>INITIALS</u> |

7.2.4 Confirm an offsite circuit exists from an offsite power source by Initialing one of the two statements below and "N/A'ing" the other:

- a. An offsite circuit exists from an offsite power source, through either the Startup or Standby Transformer and its associated supply breakers to both 1A3 and 1A4 essential buses. N/A TS
- b. An offsite circuit exists from an offsite power source, through either the Startup or Standby Transformer and one of its associated supply breakers to the required 1A3 or 1A4 essential bus. N/A TS

(PRINT / SIGN)

| | | | |
|---------------|-------|-------|-------|
| _____ / _____ | _____ | _____ | _____ |
| _____ / _____ | _____ | _____ | _____ |
| _____ / _____ | _____ | _____ | _____ |
| Performed by: | Date: | Time: | Init. |

| | | |
|---|---|--|
| DAEC DUANE ARNOLD ENERGY CENTER | SURVEILLANCE TEST PROCEDURE TITLE: OFFSITE POWER SOURCES | STP 3.8.1-01 Page 9 of 11 Rev. 5 |
| | Performance Date: <u>TODAY</u> | <u>INITIALS</u> |

8.0 ACCEPTANCE CRITERIA

8.1 Indicate the reason for performing the STP:

- ☒ Routine with both offsite circuits available
☐ Routine with one offsite circuit available while in Mode 4 or 5 or during movement of irradiated fuel assemblies in the secondary containment
☐ Action in response to one offsite circuit inoperable
☐ Action in response to one diesel generator inoperable
☐ Other, explain below:

8.2 All Technical Specification required items, as indicated by "TS", have been performed satisfactorily:

8.2.1 Section 7.1 (X) YES () NO ⇒ CRS notified AN

8.2.2 Section 7.2 () YES () NO ⇒ CRS notified N/A

8.3 All other items checked in this test have been performed satisfactorily:

8.3.1 Section 7.1 (X) YES () NO ⇒ CRS notified AN

8.3.2 Section 7.2 () YES () NO ⇒ CRS notified N/A

Usage Level
CONTINUOUS

Record the following: Date / Time: Today / Now Initials: AGY

NOTE: User shall perform and document a Temp Issue / Rev. Check to ensure revision is current, in accordance with procedure use and adherence requirements.

Prepared By: _____ / _____ Date: _____
Print Signature

CROSS-DISCIPLINE REVIEW (AS REQUIRED)

Reviewed By: _____ / _____ Date: _____
Print Signature

Reviewed By: _____ / _____ Date: _____
Print Signature

Reviewed By: _____ / _____ Date: _____
Print Signature

PROCEDURE APPROVAL

Approved By _____ / _____ Date: _____
Print Signature

1.0 PURPOSE

- 1.1 This STP verifies correct breaker alignment and indicated power availability for each offsite circuit capable of supplying the onsite Class 1E AC Electrical Distribution System.
- 1.2 This STP is routinely performed with both offsite circuits available, or in response to the condition of one offsite circuit or one diesel generator inoperable.

2.0 BRIEFING INFORMATION**2.1 PERFORMANCE INFORMATION**

- 2.1.1 Section 7.0 of this STP contains two (2) sections that cover the anticipated conditions under which this STP will be performed. The STP is organized as follows:

| Sect. | Conditions |
|-------|---------------------------------|
| 7.1 | Both Offsite Circuits Available |
| 7.2 | One Offsite Circuit Available |

Only one of these sections should need to be performed to satisfy the performance requirements associated with this STP. All steps within a particular section are to be performed in sequence and the STP steps carried through to completion, unless stated otherwise.

- 2.1.2 Personnel recommended to perform this procedure:

1 Operations

- 2.1.3 Special Test Equipment required:

1 Marking Pen (Do not use light colored hi-lighters or markers. Use only dark colored pens or markers. See General Caution 2.2.1).

2.2 GENERAL CAUTIONS

- 2.2.1 If utilizing a paper copy of this surveillance, do not use light colored hi-lighters or markers to record data, outline configurations on drawings or to initial steps. Light-colored hi-lighters are not dark enough to reproduce adequately as the QA record. Not applicable when using electronic copies.

2.3 SPECIAL PRECAUTIONS

- 2.3.1 None

3.0 REFERENCES

3.1 Applicable drawings:

- 3.1.1 BECH-E001<1>
- 3.1.2 BECH-E005
- 3.1.3 BECH-E023

3.2 Supporting documents:

- 3.2.1 NG-97-2146

4.0 GENERAL INSTRUCTIONS

- 4.1 Steps marked with a "TS" immediately to the right of the step sign-off line are required by Technical Specifications. If these steps do not meet their acceptance criteria or cannot be performed, a NRC reportable condition may exist and shall be reported to the Control Room Supervisor (CRS) immediately.
- 4.2 If any equipment or components are observed to be in a state of disrepair during the performance of this STP, appropriate corrective maintenance shall be initiated.
- 4.3 An Action Request (AR) should be completed for any problems encountered with "TS" marked steps during the performance of this test.
- 4.4 The CRS shall be notified immediately and the appropriate Limiting Conditions for Operation section of Technical Specifications referred to whenever problems are encountered during the performance of this STP.

5.0 APPENDICES

None

| | | |
|---|---|--|
| DAEC DUANE ARNOLD ENERGY CENTER | SURVEILLANCE TEST PROCEDURE TITLE: OFFSITE POWER SOURCES | STP 3.8.1-01 Page 4 of 11 Rev. 5 |
| | Prerequisites | Performance Date: _____ |
| | <u>INITIALS</u> | |

6.0 **PREREQUISITES**

- 6.1 Verify Offsite power is supplying essential buses 1A3 and 1A4 via either the startup transformer (normal source) or the standby transformer (alternate source). _____
- 6.2 Evaluate electrical system status and select the STP section which is to be performed: _____
- [] Section 7.1 - Both Offsite Circuits Available
- [] Section 7.2 - One Offsite Circuit Available

| | | |
|---|---|--|
| DAEC DUANE ARNOLD ENERGY CENTER | SURVEILLANCE TEST PROCEDURE TITLE: OFFSITE POWER SOURCES | STP 3.8.1-01 Page 5 of 11 Rev. 5 |
| | Performance Date: _____ | <u>INITIALS</u> |
| | | |

7.0 PROCEDURE

7.1 BOTH OFFSITE CIRCUITS AVAILABLE

NOTE

Information from the Load Dispatcher may be needed to complete the following step.

- 7.1.1 Using the guidance below and Attachment 1, identify two separate circuits available to transmit power from the offsite power sources to the essential buses.
- a. Based on equipment/system lineup and operational status, use a dark marking pen to trace an available circuit from an offsite power source to the Startup Transformer supply breakers, 1A302 and 1A402. _____
 - b. Based on equipment/system lineup and operational status, use a dark marking pen to trace a second circuit from another offsite power source to the Standby Transformer supply breakers, 1A301 and 1A401 such that it does not share any lines, buses, or transformers in common with the circuit to the Startup Transformer supply breakers. _____
 - c. Based on equipment/system lineup and operational status, complete the electrical lineup by using a dark marking pen to trace the connections from each Essential Bus (1A3 and 1A4) to the Startup or Standby Transformer supply breaker currently feeding the bus. _____
- 7.1.2 Confirm two (2) independent offsite circuits are available by initialing one of the two sets of statements below and N/A'ing the other:
- a. A circuit exists from an offsite power source, through the Startup Transformer and its supply breakers to both 1A3 and 1A4 essential buses; _____

TS

AND

A second independent circuit exists from a different offsite source, through the Standby Transformer to its supply breakers.

| | | |
|--|---|--|
| DAEC <small>DUANE ARNOLD ENERGY CENTER</small> | SURVEILLANCE TEST PROCEDURE TITLE: OFFSITE POWER SOURCES | STP 3.8.1-01 Page 6 of 11 Rev. 5 |
| | Performance Date: _____ | <u>INITIALS</u> |

- b. A circuit exists from an offsite power source, through the _____ TS
 Startup Transformer and one of its supply breakers to either
 the 1A3 or 1A4 essential bus;

AND

A second independent circuit exists from a different offsite
 source, through the Standby Transformer and one of its
 supply breakers to the other essential bus.

(PRINT / SIGN)

| | | | |
|---------------|-------|-------|-------|
| _____ / _____ | _____ | _____ | _____ |
| _____ / _____ | _____ | _____ | _____ |
| _____ / _____ | _____ | _____ | _____ |
| Performed by: | Date: | Time: | Init. |

| | | |
|---|---|--|
| DAEC DUANE ARNOLD ENERGY CENTER | SURVEILLANCE TEST PROCEDURE TITLE: OFFSITE POWER SOURCES | STP 3.8.1-01 Page 7 of 11 Rev. 5 |
| | Performance Date: _____ | <u>INITIALS</u> |
| | | |

7.2 ONE OFFSITE CIRCUIT AVAILABLE

NOTE

Information from the Load Dispatcher may be needed to complete the following step.

- 7.2.1 Using the guidance below and Attachment 1, identify a circuit available to transmit power from an offsite power source to the essential buses.
- a. Based on equipment/system lineup and operational status, use a dark marking pen to trace an available circuit from an offsite power source to the Startup Transformer supply breakers, 1A302 and 1A402 or Standby Transformer supply breakers, 1A301 and 1A401. _____
 - b. Based on equipment/system lineup and operational status, complete the electrical lineup by using a dark marking pen to trace the connections from the required Essential Bus(es) (1A3 and/or 1A4) to the Startup or Standby Transformer supply breakers. _____
- 7.2.2 If in Mode 1, 2 or 3, mark Step 7.2.4 "N/A" and proceed with the performance of Step 7.2.3. _____

OR

If in Mode 4 or 5, or during movement of irradiated fuel assemblies in the Secondary Containment, mark Step 7.2.3 "N/A" and proceed with the performance of Step 7.2.4.

- 7.2.3 Confirm an offsite circuit exists from an offsite power source, through either the Startup or Standby Transformer and its associated supply breakers to both 1A3 and 1A4 essential buses. _____

TS

| | | |
|--|---|--|
| DAEC <small>DUANE ARNOLD ENERGY CENTER</small> | SURVEILLANCE TEST PROCEDURE TITLE: OFFSITE POWER SOURCES | STP 3.8.1-01 Page 8 of 11 Rev. 5 |
| | Performance Date: _____ | <u>INITIALS</u> |

7.2.4 Confirm an offsite circuit exists from an offsite power source by initialing one of the two statements below and "N/A'ing" the other:

- a. An offsite circuit exists from an offsite power source, through _____ TS
 either the Startup or Standby Transformer and its associated supply breakers to both 1A3 and 1A4 essential buses.
- b. An offsite circuit exists from an offsite power source, through _____ TS
 either the Startup or Standby Transformer and one of its associated supply breakers to the required 1A3 or 1A4 essential bus.

(PRINT / SIGN)

| | | | |
|---------------|-------|-------|-------|
| _____ / _____ | _____ | _____ | _____ |
| _____ / _____ | _____ | _____ | _____ |
| _____ / _____ | _____ | _____ | _____ |
| Performed by: | Date: | Time: | Init. |

| | | |
|---|---|--|
| DAEC DUANE ARNOLD ENERGY CENTER | SURVEILLANCE TEST PROCEDURE TITLE: OFFSITE POWER SOURCES | STP 3.8.1-01 Page 9 of 11 Rev. 5 |
| | Performance Date: _____ | <u>INITIALS</u> |

8.0 ACCEPTANCE CRITERIA

8.1 Indicate the reason for performing the STP:

- ☐ Routine with both offsite circuits available
- ☐ Routine with one offsite circuit available while in Mode 4 or 5 or during movement of irradiated fuel assemblies in the secondary containment
- ☐ Action in response to one offsite circuit inoperable
- ☐ Action in response to one diesel generator inoperable
- ☐ Other, explain below:

8.2 All Technical Specification required items, as indicated by "TS", have been performed satisfactorily:

8.2.1 Section 7.1 () YES () NO ⇒ CRS notified _____

8.2.2 Section 7.2 () YES () NO ⇒ CRS notified _____

8.3 All other items checked in this test have been performed satisfactorily:

8.3.1 Section 7.1 () YES () NO ⇒ CRS notified _____

8.3.2 Section 7.2 () YES () NO ⇒ CRS notified _____

| | | |
|--|---|---|
| DAEC <small>DUANE ARNOLD ENERGY CENTER</small> | SURVEILLANCE TEST PROCEDURE TITLE: OFFSITE POWER SOURCES | STP 3.8.1-01 Page 10 of 11 Rev. 5 |
| | Performance Date: _____ | <u>INITIALS</u> |

8.4 Indicate any relevant test comments below, otherwise mark this step "N/A":

(PRINT / SIGN)

_____ / _____
 Operations Date

9.0 ATTACHMENTS

9.1 Attachment 1 - DAEC Offsite Power Circuits Feeding Essential Buses

DAEC

DUANE ARNOLD ENERGY CENTER

SURVEILLANCE TEST PROCEDURE

TITLE: OFFSITE POWER SOURCES

STP 3.8.1-01

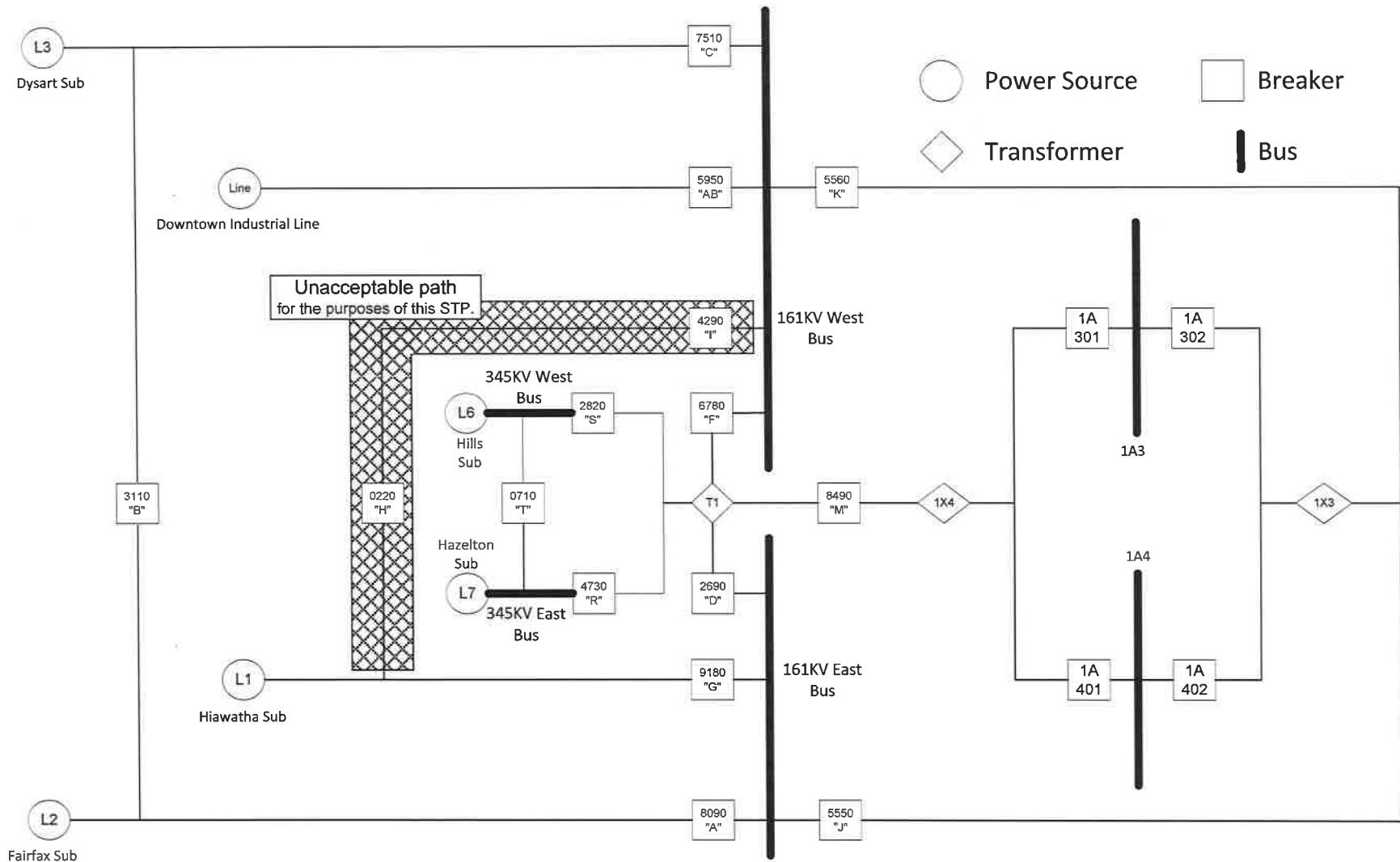
Page 11 of 11

Rev. 5

Attachment 1

DAEC OFFSITE POWER CIRCUITS FEEDING ESSENTIAL BUSES

Sheet 1 of 1



JOB PERFORMANCE MEASURE (JPM)

JPM TITLE: PEER CHECK STP 3.8.1-01, OFFSITE POWER SOURCES. DETERMINE THAT THE STP WAS DONE INCORRECTLY. RE-PERFORMS STP.

JPM NUMBER: 2.2.12-02 **REV.** 1

TASK NUMBER(S) / TASK TITLE(S): 1.07 (Reactor Operator)

K/A NUMBERS: Generic, 2.2.12 **K/A VALUE:** 3.7 / 4.1

Justification (FOR K/A VALUES <3.0):

TASK APPLICABILITY: ☒ RO ☒ SRO ☐ STA ☐ NSPEO ☒ SRO CERT

APPLICABLE METHOD OF TESTING: Simulate/Walkthrough: ☐ Perform: ☒

EVALUATION LOCATION: In-Plant: ☐ Control Room: ☐
 Simulator: ☒ Other: ☐
 Lab: ☐

Time for Completion: 15 Minutes **Time Critical:** ☐ Yes ☒ No

Alternate Path [NRC]: ☐ Yes ☒ No

Alternate Path [INPO]: ☐ Yes ☒ No

| | | |
|----------------------|-----------------------|------|
| Developed by: | Instructor | Date |
| Validated by: | Validation Instructor | Date |
| Reviewed by: | Plant Reviewer | Date |
| Approved by: | Training Supervisor | Date |

Commitments: {C001} ACE 001729, Review recommendation 4 of OE 001501.
 {C002} CA046394, Improvements needed for Operations Simulator JPMs.

2.2.12-02, Peer Check STP 3.8.1-01, Offsite Power Sources. Determine that the STP was Done Incorrectly.
Re-Performs STP, Rev. 1

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED PRIOR TO USE.

| REVIEW STATEMENTS | YES | NO | N/A |
|---|--------------------------|--------------------------|--------------------------|
| 1. Are all items on the signature page filled in correctly? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Has the JPM been reviewed and validated by SMEs? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Can the required conditions for the JPM be appropriately established in the simulator if required? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Has the completion time been established based on validation data or incumbent experience? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. If the task is time critical, is the time critical portion based upon actual task performance requirements? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Is the Licensee level appropriate for the task being evaluated if required? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Is the K/A appropriate to the task and to the licensee level if required? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Is justification provided for tasks with K/A values less than 3.0? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Have the performance steps been identified and typed (Critical / Sequence / Time Critical) appropriately? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Have all special tools and equipment needed to perform the task been identified and made available to the trainee? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Are all references identified, current, accurate, and available to the trainee? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Have all required cues (as anticipated) been identified for the evaluator to assist task completion? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. Are all critical steps clearly identified by procedural guidance? If licensing, EP or other groups were needed to determine correct actions, then the answer should be NO. {C001} | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. If the JPM is to be administered to an ILT student, has the required knowledge been taught to the individual prior to administering the JPM? TPE does not have to be completed, but the JPM evaluation may not be valid if they have not been taught the required knowledge. {C001} | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

All questions/statements must be answered "YES" or "N/A" or the JPM is not valid for use. If all questions/statements are answered "YES" or "N/A," then the JPM is considered valid and can be performed as written. The individual(s) performing the initial validation shall sign and date the cover sheet.

RE-VALIDATION SIGNATURE

JPMs must be re-validated prior to use. Verify the above Review Statements are "YES" or "N/A". When it is determined that the JPM is still valid and can be performed as written, sign and date the form below.

Re-Validation Personnel _____ Date _____ Re-Validation Personnel _____ Date _____

Re-Validation Personnel _____ Date _____ Re-Validation Personnel _____ Date _____

2.2.12-02, Peer Check STP 3.8.1-01, Offsite Power Sources. Determine that the STP was Done Incorrectly.
Re-Performs STP, Rev. 1

SIMULATOR SET UP:

Simulator Setup Instructions:

1. Insert the below overrides
2. Place a "Maintenance In Progress" tag on the handswitch for the "K" breaker
3. **NOTE**, this JPM can be run either in the simulator using the 1C08 panel set up in normal full power lineup with the "K" Breaker de-energized, or in a classroom using the attached panel pictures
4. Mark up a copy of STP 3.8.1-01 as follows

General

In the **point-of-use** section, put the DATE as today, the TIME as 2 hours ago, in the printer ID, put TC-R1, and initial.

Mark TODAY in all pages in the Performance Date blanks.

Initial all notes and cautions in the body of the procedure.

Prerequisites

Initial steps 6.1 and 6.2.

X the 7.1 section

For section 7.1

Initial steps 7.1.1 a, b, and c.

Initial step 7.1.2 a

N/A step 7.1.2 b

Sign and initial the Performed By section

Place the Date as today or SUNDAY

For the time insert 4 X's

For section 7.2

N/A all of the steps

For section 8.1

Place an X in the "Routine with both offsite circuits available" section

For section 8.2

N/A all of the steps

For section 8.3

8.3.1 mark YES and initial

8.3.2 N/A

For section 8.4

8.4.1 mark YES and initial

8.4.2 N/A

For section 8.5

N/A all of the steps

For Attachment 1

With a blue pen, trace the lines from Power Supply "Line" (6th Street Sub), through T1, down through the J breaker, to 1X3 to 1A302 and 402.

With another color (green), trace the lines from Power Supply L7 through T1 to 1X4 to 1A 301 and 401.

With another color (red), trace the lines from 1A302 and 1A402 to buses 1A3 and 1A4.

QF-1030-11 Rev. 7

2.2.12-02, Peer Check STP 3.8.1-01, Offsite Power Sources. Determine that the STP was Done Incorrectly.
Re-Performs STP, Rev. 1

SIMULATOR MALFUNCTIONS:

None

SIMULATOR OVERRIDES:

| TIME | OVERRIDE ID | OVERRIDE DESCRIPTION | ET | DELAY | VALUE | RAMP |
|------|---------------------|---|----|-------|-------|------|
| T=0 | LO ED OCB5560(2) | STARTUP XFMR "K" BREAKER OPEN (RED) | | | OFF | |
| T=0 | LO ED OCB5560(1) | STARTUP XFMR "K" BREAKER OPEN (GREEN) | | | OFF | |

SIMULATOR REMOTE FUNCTIONS:

None

Required Materials:

1. A marked up copy of STP 3.8.1-01, Rev. 2.
2. Pictures of 1C08, (part of this JPM)... (**NOTE**, this JPM can be run either in the simulator using the 1C08 panel set up in normal full power lineup with the "K" Breaker de-energized, or in a classroom using the attached panel pictures)
3. Three colored pens (Red, Blue, and Green, preferably), for the filling out of a new offsite circuit power map.
4. One filled out offsite circuit power map that is wrong, (Attached).
5. A Clean copy of STP 3.8.1-01.

General References:

STP 3.8.1-01, Rev. 3

Task Standards:

- Determine that Attachment 1 is incorrect. Both offsite power sources running through the T1 transformer.
- CRS notified.
- The Candidate will trace offsite power from either L1 (Hiawatha) or L2 (Fairfax) or L3 (Dysart) or Line (6th Street) to 1X3 to 1A302 and 1A402, **without** going through T1.
- The Candidate will trace offsite power from either L1 (Hiawatha) or L2 (Fairfax) or L3 (Dysart) or Line (6th Street) to 1X3 or L6 (Hazelton) or L7 (Hills) to T1 to 1X4 to 1A301 and 1A401.
- The key thing here is that **NO** lines use the same portion of line at **any time**.
- Candidate will initial 7.1.2a and N/A 7.1.2b.

TURNOVER SHEET

INITIAL CONDITIONS:

- The plant is running at 100% electrical output. The only inoperable piece of equipment is the "K" Breaker (5560). It was tagged out for maintenance last Friday.
- Today is Sunday; and another operator has just finished the weekly STP 3.8.1-01, Offsite Power Sources.

INITIATING CUES (IF APPLICABLE):

- The CRS has directed you to perform an independent review of STP 3.8.1-01, Offsite Power Sources.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator. {C002}

2.2.12-02, Peer Check STP 3.8.1-01, Offsite Power Sources. Determine that the STP was Done Incorrectly.
Re-Performs STP, Rev. 1

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

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- The plant is running at 100% electrical output. The only inoperable piece of equipment is the "K" Breaker (5560). It was tagged out for maintenance last Friday.
- Today is Sunday; and another operator has just finished the weekly STP 3.8.1-01, Offsite Power Sources.

INITIATING CUES (IF APPLICABLE):

- The CRS has directed you to perform an independent review of STP 3.8.1-01, Offsite Power Sources.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator. {C002}

2.2.12-02, Peer Check STP 3.8.1-01, Offsite Power Sources. Determine that the STP was Done Incorrectly.
Re-Performs STP, Rev. 1

JPM PERFORMANCE INFORMATION

Start Time: _____

NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

NOTE: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

| | |
|--|--|
| Performance Step: 1 Critical <u>Y</u>(SEQ-) | Candidate will review STP 3.8.1-01. <ul style="list-style-type: none"> Determine that Attachment 1 is filled out improperly. Both Power Sources Line and L7 go through Transformer T1. |
| Standard: | Determine that Attachment 1 is filled out improperly. Both Power Sources Line and L7 go through Transformer T1. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | _____ |

| | |
|--|---|
| Performance Step: 2 Critical <u>Y</u>(SEQ-) | The way Attachment 1 is filled out, you are not in compliance with step 7.1.2a and b. |
| Standard: | The Candidate must notify the CRS that the STP was not properly filled out. |
| Evaluator Note: | Evaluator, when the candidate has determined that the current Attachment is incorrect, give him the following: <ul style="list-style-type: none"> Pictures of 1C08 Switchyard map Clean copy of STP 3.8.1-01 Three colored pens Straight edge |
| Evaluator Cue: | CUE him to re-perform the section 7.1.1 of STP 3.8.1-01. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | _____ |

2.2.12-02, Peer Check STP 3.8.1-01, Offsite Power Sources. Determine that the STP was Done Incorrectly.
Re-Performs STP, Rev. 1

| | |
|---|---|
| Performance Step: 3 Critical N | NOTE Information from the Load Dispatcher may be needed to complete the following step. |
| Standard: | Read and sign the note. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | _____ |

| | |
|--|---|
| Performance Step: 4 Critical <u>Y</u>(SEQ-) | 7.1.1 Using the guidance below and Attachment 1, identify two separate circuits available to transmit power from the offsite power sources to the essential buses. a. Based on equipment/system lineup and operational status, use a dark marking pen to trace an available circuit from an offsite power source to the Startup Transformer supply breakers, 1A302 and 1A402. |
| Standard: | The Candidate will trace offsite power from either: <ul style="list-style-type: none"> • L1, (Hiawatha) or • L2, (Fairfax) or • L3, (Dysart) or • Line, (6th Street), to 1X3, to 1A302 and 1A402, without going through T1 , or without going through the H (0220), or I (4290) breakers. |
| Evaluator Note: | Some of the breakers on the Attachment are not on 1C08; and if the candidate wants to know the position of any of these breakers, he will call the Load Dispatcher. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | NOTE, Evaluator, role play as the Load Dispatcher and inform the candidate that the breakers that he is asking about are closed. _____ |

2.2.12-02, Peer Check STP 3.8.1-01, Offsite Power Sources. Determine that the STP was Done Incorrectly.
Re-Performs STP, Rev. 1

Performance Step: 5
Critical Y(SEQ-)

7.1.1 Using the guidance below and Attachment 1, identify two separate circuits available to transmit power from the offsite power sources to the essential buses

- b. Based on equipment/system lineup and operational status, use a dark marking pen to trace a second circuit from another offsite power source to the Standby Transformer supply breakers, 1A301 and 1A401 such that it does not share any lines, buses, or transformers in common with the circuit to the Startup Transformer supply breakers.

Standard:

The Candidate will trace offsite power from either,

- L1, (Hiawatha) or
- L2, (Fairfax) or
- L3, (Dysart) or
- Line, (6th Street) or
- L6, (Hazelton) or
- L7, (Hills)

to T1,

to 1X4,

to 1A301 and 1A401, or **without** going through the H, (0220), or I, (4290) breakers.

The key thing here is that **NO** lines use the same portion of line at **any time**.

Evaluator Note:

Some of the breakers on the Attachment are not on 1C08; and if the candidate wants to know the position of any of these breakers, he will call the Load Dispatcher.

Evaluator Note:

Evaluator, role play as the Load Dispatcher and inform the candidate that the breakers that he is asking about are closed.

Performance:

SATISFACTORY _____ UNSATISFACTORY _____

Comments:

2.2.12-02, Peer Check STP 3.8.1-01, Offsite Power Sources. Determine that the STP was Done Incorrectly.
Re-Performs STP, Rev. 1

Performance Step: 6
Critical Y(SEQ-)

- 7.1.1 Using the guidance below and Attachment 1, identify two separate circuits available to transmit power from the offsite power sources to the essential buses.
- c. Based on equipment/system lineup and operational status, complete the electrical lineup by using a dark marking pen to trace the connections from each Essential Bus (1A3 and 1A4) to the Startup or Standby Transformer supply breaker currently feeding the bus.

Standard:

Lines will be traced from buses 1A3 and 1A4 to the Startup transformer.

Performance:

SATISFACTORY _____ **UNSATISFACTORY** _____

Comments: _____

Performance Step: 7
Critical Y(SEQ-)

- 7.1.2 Confirm two (2) independent offsite circuits are available by initialing one of the two sets of statements below and N/A'ing the other:
- a. A circuit exists from an offsite power source, through the Startup Transformer and its supply breakers to both 1A3 and 1A4 essential buses;
- AND
- A second independent circuit exists from a different offsite source, through the Standby Transformer to its supply breakers.

Standard:

Candidate will Initial 7.1.2a.

Performance:

SATISFACTORY _____ **UNSATISFACTORY** _____

Comments: _____

2.2.12-02, Peer Check STP 3.8.1-01, Offsite Power Sources. Determine that the STP was Done Incorrectly.
Re-Performs STP, Rev. 1

| | |
|---|---|
| Performance Step: 8 Critical N | 7.1.2 Confirm two (2) independent offsite circuits are available by initialing one of the two sets of statements below and N/A'ing the other: b. A circuit exists from an offsite power source, through the Startup Transformer and one of its supply breakers to either the 1A3 or 1A4 essential bus; AND A second independent circuit exists from a different offsite source, through the Standby Transformer and one of its supply breakers to the other essential bus. |
| Standard: | The Candidate will N/A step 7.1.2.b |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | _____ |

| | |
|---|--|
| Performance Step: 9 Critical N | Will Sign, Date, and Time the last portion of Section 7.1.2. |
| Standard: | Will Sign, Date, and Time the last portion of Section 7.1.2. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | _____ |

2.2.12-02, Peer Check STP 3.8.1-01, Offsite Power Sources. Determine that the STP was Done Incorrectly.
Re-Performs STP, Rev. 1

Performance Step: 10
Critical N

Will fill out the ACCEPTANCE CRITERIA for Section 8.0:

- 8.1, X the top box, or other and explain why he is re-performing the STP.
- 8.2, N/A.
- 8.3, X the line for 7.1 and N/A the other.
- 8.4 X, the line for 7.1 and N/A the other.
- 8.5, may write that this is a re-do of the STP. Or may leave blank.

Standard:

Fill in the following for Section 8:

- 8.1, X the top box, or other and explain why he is re-performing the STP.
- 8.2, should change N/A to an AR on the mis-performance of the STP.
- 8.3, X the line for 7.1 and N/A the other.
- 8.4 X, the line for 7.1 and N/A the other.
- 8.5, may write that this is a re-do of the STP. Or may leave blank.

Evaluator Cue:

If the Candidate states that an AR is required, Cue him that you will write the AR.

Performance:

SATISFACTORY _____ UNSATISFACTORY _____

Comments:

Terminating Cues: When the RO finishes with STP 3.8.1-01 and hands it back to the CRS, the JPM is over.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator. {C002}

Stop Time: _____

Evaluator: _____

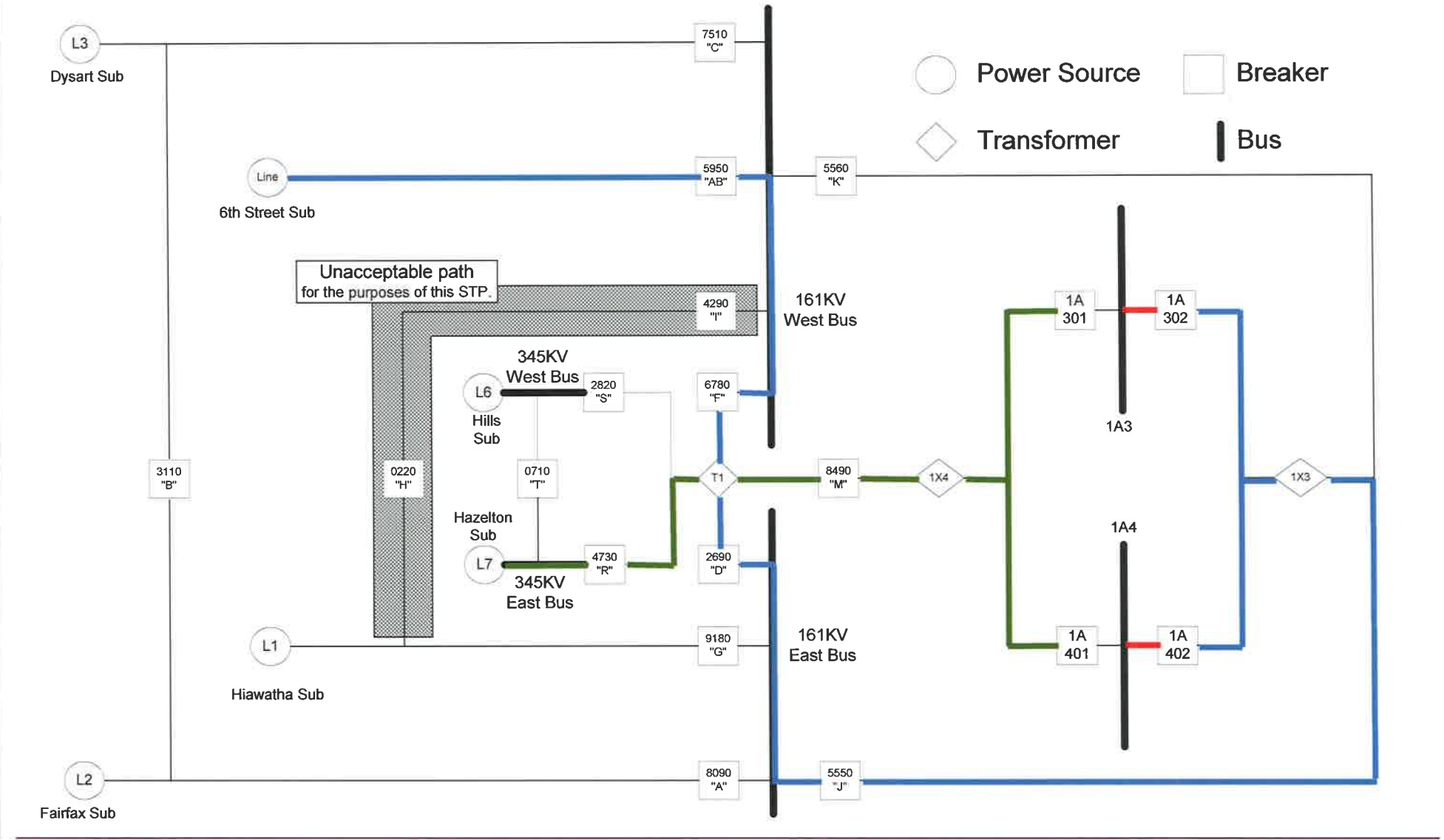
Date: _____

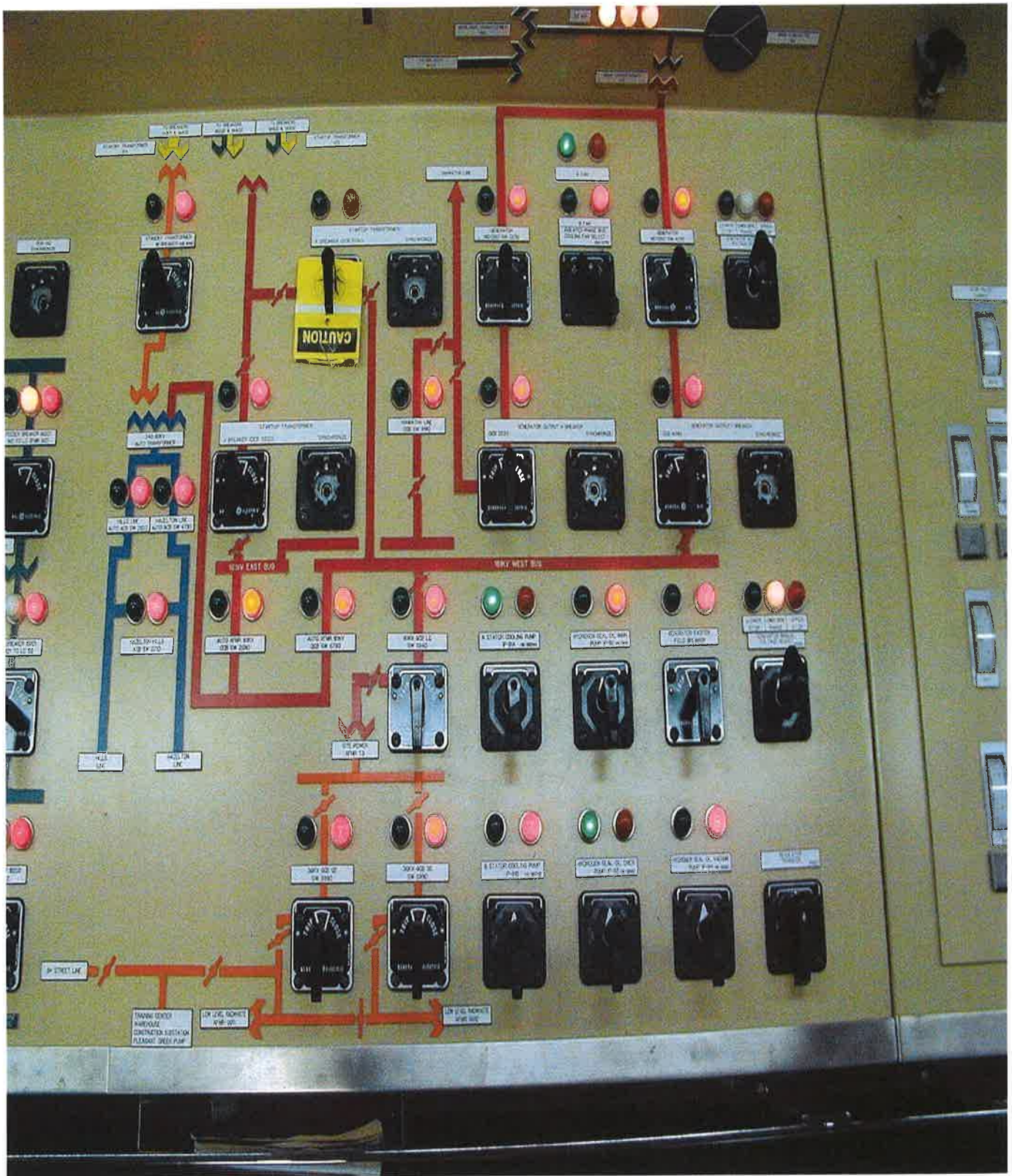
UNSAT: NO

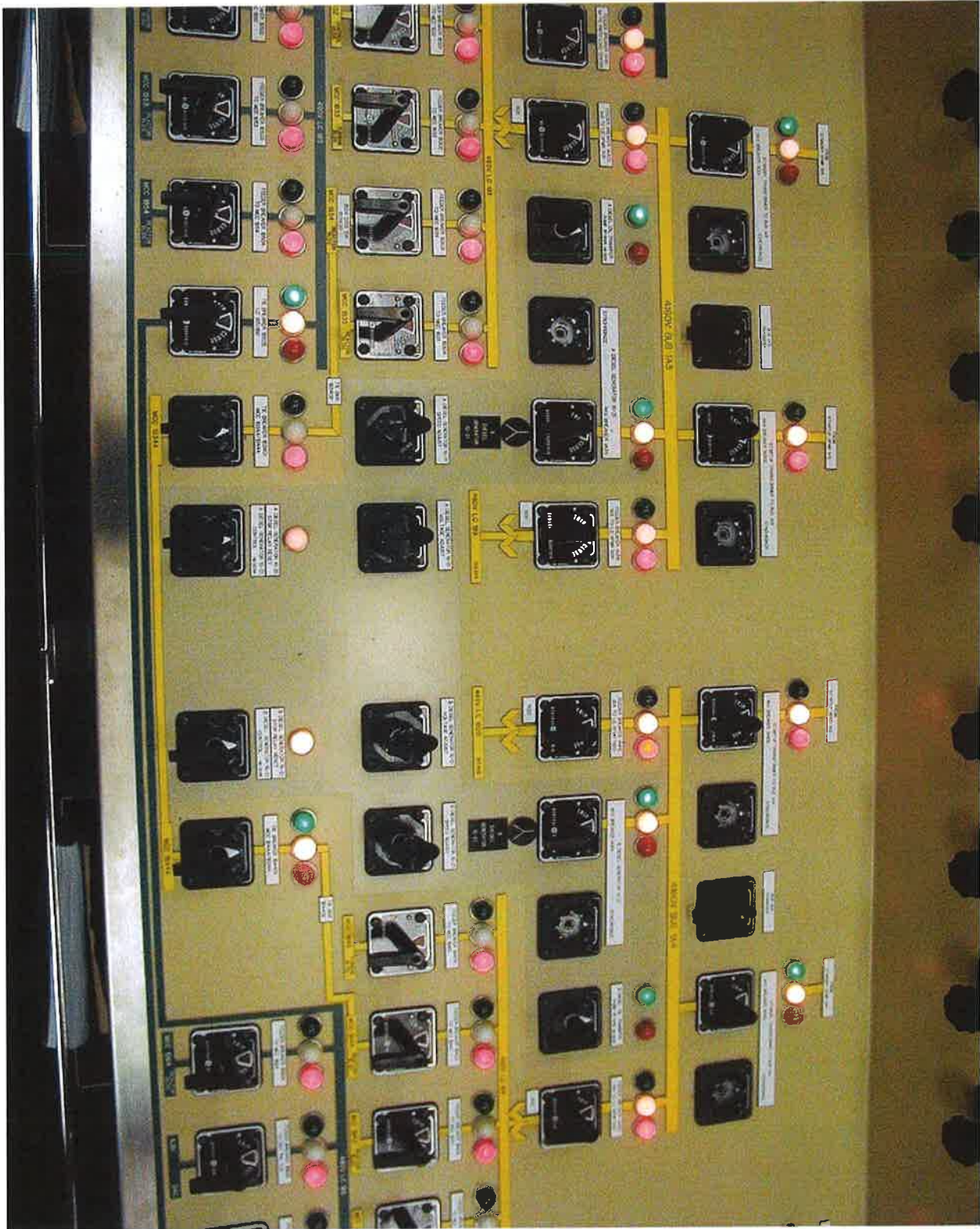
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This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

EVALUATOR'S SIGNATURE: _____







JPM TITLE: DETERMINE PERSONNEL AVAILABILITY TO PERFORM RAD AREA TASK

JPM NUMBER: 2.3.12-01 REV. 1

TASK NUMBER(S) / TASK TITLE(S): 96.05
CONDUCT PLANT OPERATIONS IN ACCORDANCE WITH ADMINISTRATIVE PROCEDURES

K/A NUMBERS: GENERIC 2.3.12 **K/A VALUE:** 3.2/3.7

Justification (FOR K/A VALUES <3.0):

TASK APPLICABILITY:

☒ RO ☒ SRO ☐ STA ☐ Non-Lic ☒ SRO CERT ☐ OTHER: _____

APPLICABLE METHOD OF TESTING: Simulate/Walkthrough: ☐ Perform: ☒

EVALUATION LOCATION: In-Plant: ☐ Control Room: ☐
Simulator: ☐ Other: ☒
Lab: ☐

Time for Completion: 10 Minutes Time Critical: NO

Alternate Path [NRC]: NO

Alternate Path [INPO]: NO

Developed by: _____ Instructor/Developer _____ Date

Reviewed by: _____ Instructor (Instructional Review) _____ Date

Validated by: _____ SME (Technical Review) _____ Date

Approved by: _____ Training Supervision _____ Date

Approved by: _____ Training Program Owner _____ Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED PRIOR TO USE.

| REVIEW STATEMENTS | YES | NO | N/A |
|---|--------------------------|--------------------------|--------------------------|
| 1. Are all items on the signature page filled in correctly? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Has the JPM been reviewed and validated by SMEs? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Can the required conditions for the JPM be appropriately established in the simulator if required? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Has the completion time been established based on validation data or incumbent experience? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. If the task is time critical, is the time critical portion based upon actual task performance requirements? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Is the job level appropriate for the task being evaluated if required? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Is the K/A appropriate to the task and to the licensee level if required? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Is justification provided for tasks with K/A values less than 3.0? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Have all special tools and equipment needed to perform the task been identified and made available to the trainee? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Are all references identified, current, accurate, and available to the trainee? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Have all required cues (as anticipated) been identified for the evaluator to assist task completion? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. Are all critical steps supported by procedural guidance? (e.g., if licensing, EP or other groups were needed to determine correct actions, then the answer should be NO.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. If the JPM is to be administered to an LOIT student, has the required knowledge been taught to the individual prior to administering the JPM? TPE does not have to be completed, but the JPM evaluation may not be valid if they have not been taught the required knowledge. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

All questions/statements must be answered "YES" or "N/A" or the JPM is not valid for use. If all questions/statements are answered "YES" or "N/A," then the JPM is considered valid and can be performed as written. The individual(s) performing the initial validation shall sign and date the cover sheet.

Protected Content: (CAPRs, corrective actions, licensing commitments, etc. associated with this material)

{C001}

UPDATE LOG: Indicate in the following table any minor changes or major revisions (as defined in TR-AA-230-1003) made to the material after initial approval. Or use separate Update Log form TR-AA-230-1003-F16.

[illegible]

SIMULATOR SET-UP: *(Only required for simulator JPMs)*

SIMULATOR SETUP INSTRUCTIONS:

SIMULATOR MALFUNCTIONS: None

SIMULATOR OVERRIDES: None

SIMULATOR REMOTE FUNCTIONS: None

| | |
|----------------------------|---|
| Required Materials: | Calculator Candidate may refer to ACP 1411.17, OCCUPATIONAL DOSE LIMITS AND UPGRADES (Level of Usage is "Information Use"). If he states he would refer to the ACP, provide him with a copy. |
| General References: | ACP 1411.17, OCCUPATIONAL DOSE LIMITS AND UPGRADES, Revision 25 |
| Task Standards: | <p>Determines the expected exposure for the task for an experienced operator and for an inexperienced operator..</p> <p>Determines Operator "A" CANNOT perform the task without exceeding DAEC limits.</p> <p>Determines Operator "B" CANNOT perform the task without exceeding DAEC limits.</p> <p>Determines Operator "C" CAN perform the task without exceeding DAEC limits.</p> <p>Determines Operator "D" CANNOT perform the task without exceeding DAEC limits.</p> |

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

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- Entry to the reactor building is required to manually close MO-2701, RWCU SUCTION OUTBOARD ISOLATION.
 - This valve failed to isolate remotely due to a steam leak from a cracked weld in RWCU.
- DAEC Management has decided that an operator will make the required area entry.
- Time to complete the task for an experienced operator will be approximately 24 minutes.
- Time to complete the task for a new operator will be approximately 30 minutes
- Radiation levels at the valve are as high as 1500 mR/hr.
- Four (4) individuals are available to perform the task.
 - A. Operator "A" is a volunteer who is an experienced Licensed Reactor Operator that received a planned special exposure, at another facility this year, of 4.5R TEDE (TLD #1, Employee # - 00001, SSN: 111-11-1111).
 - B. Operator "B" is a volunteer who is an experienced Licensed Reactor Operator and is a declared pregnant worker and has received a dose of 15 mR this year (TLD #2, Employee # - 00002, SSN: 222-22-2222).
 - C. Operator "C" is a volunteer who is a new Licensed Reactor Operator that has received a dose of 200 mR this year (TLD #3, Employee # 00003, SSN: 333-33-3333).
 - D. Operator "D" is a volunteer who is an experienced Licensed Reactor Operator that has received a dose of 600 mR this year (TLD #4, Employee # 00004, SSN: 444-44-4444).

INITIATING CUES (IF APPLICABLE):

- The CRS has directed you to determine, using the maximum dose rate expected, the expected radiation exposure.

-AND-

- Which, if any, of the individuals is available to close MO-2701 without exceeding DAEC Administrative Limits IAW ACP 1411.17, OCCUPATIONAL DOSE LIMITS AND UPGRADES.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JPM PERFORMANCE INFORMATION

Start Time: _____

NOTE: When providing “Evaluator Cues” to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee’s actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

NOTE: Critical steps are marked with a “Y” below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

| | |
|---|---|
| Performance Step: 1 Critical <u>N</u> ACP 1411.17 | Using turnover data, calculate the expected exposure for the task. |
| Standard: | For an experienced operator – Calculates that a 24 minute exposure in a 1500 mR/hr field will cause a dose of 600 mR. For a new operator – Calculates that a 30 minute exposure in a 1500 mR/hr field will cause a dose of 750 mR. |
| Evaluator Note: | Student may use paper or a calculator to calculate exposure: a. 24 minutes = 0.4 hours b. 0.4 hrs X 1500 mR/hr = 600 mR for experienced operator. c. 30 minutes = 0.5 hours d. 0.5 hrs X 1500 mR/hr = 750 mR For inexperienced operator. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | _____ |

| | |
|--|---|
| Performance Step: 2 Critical <u>Y</u> ACP 1411.17. Section 3.2 | Determine which, if any, of the four operators is available to close MO-2701 without exceeding his/her annual DAEC Administrative Limit. |
| Standard: | Determines Operator "A" is NOT available to close MO-2701 without exceeding DAEC Administrative Limits: <ul style="list-style-type: none"> Operator "A" has previously received a planned special exposure therefore 600 mR would cause him/her to exceed 5 R TEDE. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | _____ |

| | |
|--|---|
| Performance Step: 3 Critical <u>Y</u> ACP 1411.17. Section 3.2 | Determine which, if any, of the four operators is available to close MO-2701 without exceeding his annual DAEC Administrative Limit. |
| Standard: | Determines Operator "B" is NOT available to close MO-2701 without exceeding DAEC Administrative Limits: <ul style="list-style-type: none"> Operator "B" is a declared pregnant worker. 600 mR would cause her to exceed 500 mR. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | _____ |

| | |
|--|---|
| Performance Step: 4 Critical <u>Y</u> ACP 1411.17. Section 3.2 | Determine which, if any, of the four operators is available to close MO-2701 without exceeding his annual DAEC Administrative Limit. |
| Standard: | Determines Operator "C" is available to close MO-2701 without exceeding DAEC Administrative Limits: <ul style="list-style-type: none"> Operator "C" is a new Licensed Reactor Operator. 750 mR will cause him/her to have a total of 950 mR. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | _____ |

| | |
|--|---|
| Performance Step: 5 Critical <u>Y</u> ACP 1411.17. Section 3.2 | Determine which, if any, of the four operators is available to close MO-2701 without exceeding his annual DAEC Administrative Limit. |
| Standard: | Determines Operator "D" is NOT available to close MO-2701 without exceeding DAEC Administrative Limits: <ul style="list-style-type: none"> Operator "D" is an experienced Licensed Reactor Operator. 600 mR will cause him/her to exceed 1000 mR. |
| Instructor Note: | Even though the student determines that Operator "C" is available to close MO-2701 without exceeding DAEC Administrative Limits he should still make the determination if Operator "D" could also perform this task. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | _____ |

Terminating Cues: When the candidate has stated the expected dose for the task and states which operator(s), if any, is available for the task without exceeding DAEC Administrative limits, inform him that the JPM is complete.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

Stop Time: _____



Examinee: _____

Evaluator: _____

☐ RO ☐ SRO ☐ STA ☐ Non-Lic ☐ SRO CERT

Date: _____

☐ LOIT RO ☐ LOIT SRO

PERFORMANCE RESULTS:

SAT:

UNSAT:

Remediation required:

YES

NO

COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).

**EXAMINER NOTE: ENSURE ALL EXAM MATERIAL IS COLLECTED AND PROCEDURES
CLEANED, AS APPROPRIATE.**

EVALUATOR'S SIGNATURE: _____

*NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If
unsatisfactory performance is demonstrated, the entire JPM should be retained.*

TURNOVER SHEET

INITIAL CONDITIONS:

- Entry to the reactor building is required to manually close MO-2701, RWCU SUCTION OUTBOARD ISOLATION.
 - This valve failed to isolate remotely due to a steam leak from a cracked weld in RWCU.
- DAEC Management has decided that an operator will make the required area entry.
- Time to complete the task for an experienced operator will be approximately 24 minutes.
- Time to complete the task for a new operator will be approximately 30 minutes
- Radiation levels at the valve are as high as 1500 mR/hr.
- Four (4) individuals are available to perform the task.
 - A. Operator "A" is a volunteer who is an experienced Licensed Reactor Operator that received a planned special exposure, at another facility this year, of 4.5R TEDE (TLD #1, Employee # - 00001, SSN: 111-11-1111).
 - B. Operator "B" is a volunteer who is an experienced Licensed Reactor Operator and is a declared pregnant worker and has received a dose of 15 mR this year (TLD #2, Employee # - 00002, SSN: 222-22-2222).
 - C. Operator "C" is a volunteer who is a new Licensed Reactor Operator that has received a dose of 200 mR this year (TLD #3, Employee # 00003, SSN: 333-33-3333).
 - D. Operator "D" is a volunteer who is an experienced Licensed Reactor Operator that has received a dose of 600 mR this year (TLD #4, Employee # 00004, SSN: 444-44-4444).

INITIATING CUES (IF APPLICABLE):

- The CRS has directed you to determine, using the maximum dose rate expected, the expected radiation exposure.

-AND-

- Which, if any, of the individuals is available to close MO-2701 without exceeding DAEC Administrative Limits IAW ACP 1411.17, OCCUPATIONAL DOSE LIMITS AND UPGRADES.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JOB PERFORMANCE MEASURE

JPM TITLE: Determine Risk and the Resultant Protected Systems

JPM NUMBER: 2.1.2-05 **REV.** 1

TASK NUMBER(S) / TASK TITLE(S): SRO 1.11 Ensure the Conduct of Plant Operations and Maintenance are in Compliance with Administrative Procedures.

K/A NUMBERS: Generic 2.1.2 **K/A VALUE:** 4.4

Justification (FOR K/A VALUES <3.0):

TASK APPLICABILITY:

☐ RO ☒ SRO ☒ STA ☐ Non-Lic ☒ SRO CERT ☐ OTHER: _____

APPLICABLE METHOD OF TESTING: Simulate/Walkthrough: ☐ Perform: ☒

EVALUATION LOCATION: In-Plant: ☐ Control Room: ☐

Simulator: ☒ Other: ☐

Lab: ☐

Time for Completion: 15 Minutes Time Critical: NO

Alternate Path [NRC]: NO

Alternate Path [INPO]: NO

Developed by: _____ Instructor/Developer _____ Date

Reviewed by: _____ Instructor (Instructional Review) _____ Date

Validated by: _____ SME (Technical Review) _____ Date

Approved by: _____ Training Supervision _____ Date

Approved by: _____ Training Program Owner _____ Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED PRIOR TO USE.

| REVIEW STATEMENTS | YES | NO | N/A |
|---|--------------------------|--------------------------|--------------------------|
| 1. Are all items on the signature page filled in correctly? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Has the JPM been reviewed and validated by SMEs? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Can the required conditions for the JPM be appropriately established in the simulator if required? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Has the completion time been established based on validation data or incumbent experience? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. If the task is time critical, is the time critical portion based upon actual task performance requirements? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Is the job level appropriate for the task being evaluated if required? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Is the K/A appropriate to the task and to the licensee level if required? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Is justification provided for tasks with K/A values less than 3.0? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Have all special tools and equipment needed to perform the task been identified and made available to the trainee? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Are all references identified, current, accurate, and available to the trainee? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Have all required cues (as anticipated) been identified for the evaluator to assist task completion? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. Are all critical steps supported by procedural guidance? (e.g., if licensing, EP or other groups were needed to determine correct actions, then the answer should be NO.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. If the JPM is to be administered to an LOIT student, has the required knowledge been taught to the individual prior to administering the JPM? TPE does not have to be completed, but the JPM evaluation may not be valid if they have not been taught the required knowledge. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

All questions/statements must be answered "YES" or "N/A" or the JPM is not valid for use. If all questions/statements are answered "YES" or "N/A," then the JPM is considered valid and can be performed as written. The individual(s) performing the initial validation shall sign and date the cover sheet.

Protected Content: (CAPRs, corrective actions, licensing commitments, etc. associated with this material)

{C001}

[illegible]

SIMULATOR SET-UP: *(Only required for simulator JPMs)***SIMULATOR SETUP INSTRUCTIONS:**

1. Ensure the OSM office computer is logged in.
2. Ensure EOOS is operational.
3. Ensure all systems/components on EOOS are available.
4. Ensure NAMS software is operational.

SIMULATOR MALFUNCTIONS:NONE**SIMULATOR OVERRIDES:**NONE**SIMULATOR REMOTE FUNCTIONS:** NONE

- Required Materials:**
1. Computer with EOOS and NAMS.
 2. OP-AA-102-1003, Guarded Equipment (DAEC Specific Information), Current Revision.

- General References:**
1. OP-AA-102-1003, Guarded Equipment, Revision 20.
 2. OI 150, RCIC Rev 85
 3. Technical Specifications

- Task Standards:**
1. Candidate toggles 1D120 and XR1 LLRPSF Transformer to unavailable and runs EOOS
 2. Determines the recommended protected systems in accordance with OP-AA-102-1003.
 - 1D12
 - 1D22
 - XR2
 - 1VAC015B

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

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- You are the Work Control Center Supervisor.
- The plant is operating at 100% power.
- The following equipment will be tagged out and unavailable due to emergent repairs during your shift
 - "A" RCIC Room Cooler, 1VAC015A
 - XR1 LLRPSF Transformer
 - 125VDC Swing Charger, 1D120

INITIATING CUES (IF APPLICABLE):

- The Shift Manager directs you to determine:
 - PRA risk color, core damage frequency (CDF), large early release frequency (LERF) **AND**
 - Determine the equipment to be guarded in accordance with OP-AA-102-1003.
 - Assume all of the above equipment will be unavailable at the same time.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JPM PERFORMANCE INFORMATION

Start Time: _____

NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

NOTE: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

| | |
|----------------------------------|--|
| Performance Step:1 Critical Y | Candidate consults OP-AA-102-1003 and toggles 1D120, XR1 LLRPSF Transformer to unavailable and runs a Risk Case using EOOS. |
| Standard: | Candidate toggles 1D120 and XR1 LLRPSF Transformer to unavailable and runs EOOS and reports overall risk is GREEN with a CDF of 1.72E-6 and a LERF of 4.67E-7 |
| Evaluator Cue: | IF the Candidate toggle RCIC to Unavailable, then this step is UNSAT as per TRM 3.5.2 and OI 150 P&L #7, both room coolers unavailable would leave RCIC Unavailable. With one room available, RCIC is available. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|--|--|
| Performance Step:2 Critical Y | OP-AA-102-1003 is consulted to determine the recommended guarded systems/areas for the 1D120, XR1 LLRPSF Transformer, and 1VAC015A being UNAVAILABLE. |
| Standard: | The Candidate determines that the recommended guarded equipment designated in OP-AA-102-1003 (DAEC) is: <ul style="list-style-type: none"> • 1D12 • 1D22 • XR2 • 1VAC015B |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

Terminating Cues: Once the candidate gives you the report on the risk status and the protected systems, the JPM is complete.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

Stop Time: _____



**2.1.2-05, Determine Risk and the Resultant Protected Systems,
Rev. 1**

JPM
Page 8 of 9

Examinee: _____

Evaluator: _____

☐ RO ☐ SRO ☐ STA ☐ Non-Lic ☐ SRO CERT

Date: _____

☐ LOIT RO ☐ LOIT SRO

PERFORMANCE RESULTS:

SAT:

UNSAT:

Remediation required:

YES

NO

COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).

**EXAMINER NOTE: ENSURE ALL EXAM MATERIAL IS COLLECTED AND PROCEDURES
CLEANED, AS APPROPRIATE.**

EVALUATOR'S SIGNATURE: _____

*NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If
unsatisfactory performance is demonstrated, the entire JPM should be retained.*

TURNOVER SHEET

INITIAL CONDITIONS:

- You are the Work Control Center Supervisor.
- The plant is operating at 100% power.
- The following equipment will be tagged out and unavailable due to emergent repairs during your shift
 - "A" RCIC Room Cooler, 1VAC015A
 - XR1 LLRPSF Transformer
 - 125VDC Swing Charger, 1D120

INITIATING CUES (IF APPLICABLE):

- The Shift Manager directs you to determine:
 - PRA risk color, core damage frequency (CDF), large early release frequency (LERF) **AND**
 - Determine the equipment to be guarded in accordance with OP-AA-102-1003.
 - Assume all of the above equipment will be unavailable at the same time.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JOB PERFORMANCE MEASURE

JPM TITLE: DETERMINE REPORTABILITY - UNUSUAL EVENT AND PLANT SHUTDOWN REQUIRED BY T.S.

JPM NUMBER: 2.1.18-02

REV. 2

TASK NUMBER(S) / TASK TITLE(S): 1.03
DETERMINE REPORTABILITY

K/A NUMBERS: 2.1.18 (GENERIC) **K/A VALUE:** 3.8

Justification (FOR K/A VALUES <3.0):

TASK APPLICABILITY:

☐ RO ☒ SRO ☒ STA ☐ Non-Lic ☒ SRO CERT ☐ OTHER: _____

APPLICABLE METHOD OF TESTING: Simulate/Walkthrough: ☐ Perform: ☒

EVALUATION LOCATION: In-Plant: ☐ Control Room: ☐

Simulator: ☒ Other: ☐

Lab: ☐

Time for Completion: 15 Minutes Time Critical: NO

Alternate Path [NRC]: NO

Alternate Path [INPO]: NO

Developed by: _____
Instructor/Developer Date

Reviewed by: _____
Instructor (Instructional Review) Date

Validated by: _____
SME (Technical Review) Date

Approved by: _____
Training Supervision Date

Approved by: _____
Training Program Owner Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED PRIOR TO USE.

| REVIEW STATEMENTS | YES | NO | N/A |
|---|--------------------------|--------------------------|--------------------------|
| 1. Are all items on the signature page filled in correctly? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Has the JPM been reviewed and validated by SMEs? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Can the required conditions for the JPM be appropriately established in the simulator if required? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Has the completion time been established based on validation data or incumbent experience? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. If the task is time critical, is the time critical portion based upon actual task performance requirements? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Is the job level appropriate for the task being evaluated if required? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Is the K/A appropriate to the task and to the licensee level if required? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Is justification provided for tasks with K/A values less than 3.0? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
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| 12. Have all special tools and equipment needed to perform the task been identified and made available to the trainee? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Are all references identified, current, accurate, and available to the trainee? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Have all required cues (as anticipated) been identified for the evaluator to assist task completion? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. Are all critical steps supported by procedural guidance? (e.g., if licensing, EP or other groups were needed to determine correct actions, then the answer should be NO.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. If the JPM is to be administered to an LOIT student, has the required knowledge been taught to the individual prior to administering the JPM? TPE does not have to be completed, but the JPM evaluation may not be valid if they have not been taught the required knowledge. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

All questions/statements must be answered "YES" or "N/A" or the JPM is not valid for use. If all questions/statements are answered "YES" or "N/A," then the JPM is considered valid and can be performed as written. The individual(s) performing the initial validation shall sign and date the cover sheet.

Protected Content: (CAPRs, corrective actions, licensing commitments, etc. associated with this material)

{C001}

UPDATE LOG: Indicate in the following table any minor changes or major revisions (as defined in TR-AA-230-1003) made to the material after initial approval. Or use separate Update Log form TR-AA-230-1003-F16.

[illegible]

SIMULATOR SET-UP: *(Only required for simulator JPMs)*

SIMULATOR SETUP INSTRUCTIONS: None

SIMULATOR MALFUNCTIONS: None

SIMULATOR OVERRIDES: None

SIMULATOR REMOTE FUNCTIONS: None

Required Materials: 1. LI-AA-102-1001, Regulatory Reporting.

OR

2. NUREG 1022

General References: 1. LI-AA-102-1001, Regulatory Reporting, Revision 16

2. NUREG 1022, REV.3

3. Event #47129, Nine Mile Point Unusual Event.

Task Standards:

1. Determines that this event requires the following INEs:

- 1 Hour Report § 50.72(a)(1)(i) "The declaration of any of the Emergency Classes specified in the licensee's approved Emergency Plan."
- 4 Hour Report § 50.72(b)(2)(i) "The initiation of any nuclear plant shutdown required by the plant's Technical Specifications."

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

INITIAL CONDITIONS:

- The plant was at 100% power.
- Four hours ago, the operating crew entered T.S. action statement 3.4.4 Condition A due to unidentified leakage greater 5 gpm.
- An Unusual Event was declared 10 minutes ago after unidentified leakage rose to 28 gpm.
- At this time, the crew entered T.S. action statement 3.4.4 Condition C because the required action and associated completion time was not met.
- Plant shutdown has commenced.
- There has been no ECCS actuation.
- State and Local authorities have been notified of the Unusual Event per EPIP 1.2.
- The Shift Communicator is performing notifications for the Unusual Event.

INITIATING CUES (IF APPLICABLE):

- You are the Shift Manager.
- Determine **ALL** of the Immediate Notification Event (INE) time requirements for this event.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JPM PERFORMANCE INFORMATION

Start Time: _____

NOTE: When providing “Evaluator Cues” to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee’s actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

NOTE: Critical steps are marked with a “Y” below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

NOTE: This JPM is written using a new procedure. Additional consideration and time maybe required for completion.

| | |
|--|--|
| Performance Step: 1 Critical <u>Y</u> LI-AA-102-1001 Attachment 1 | Use LI-AA-102-1001 to determine the Immediate Notification Event (INE) time requirement for the event. |
| Standard: | The candidate determines that the following Immediate Notification Event (INE) time requirements apply: For EAL Declaration: <ul style="list-style-type: none"> • 1 Hour Report § 50.72(a)(1)(i) “The declaration of any of the Emergency Classes specified in the licensee’s approved Emergency Plan.” |
| Evaluator Note: | An INE is an incident that requires a 1, 4, 8, or 24 hour telephone notification. (See procedure definitions) There are other LER requirements associated with this event, and the candidate may provide information on those also – those LER items are NOT critical to this JPM. |
| Evaluator Cue: | If the candidate provides information for other LER requirements, Cue the candidate that another person will complete the other items. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|--|--|
| Performance Step: 2 Critical <u>Y</u> LI-AA-102-1001 Attachment 1 | Use LI-AA-102-1001 to determine any additional Immediate Notification Event (INE) time requirements for the event. |
| Standard: | The candidate determines that the following Immediate Notification Event (INE) time requirements apply: For the initiation of a plant shutdown required by Tech Specs: <ul style="list-style-type: none"> • 4 Hour Report § 50.72(b)(2)(i) “The initiation of any nuclear plant shutdown required by the plant’s Technical Specifications.” |
| Evaluator Note: | An INE is an incident that requires a 1, 4, 8, or 24 hour telephone notification. (See procedure definitions) There are other LER requirements associated with this event, and the candidate may provide information on those also – those LER items are NOT critical to this JPM. |
| Evaluator Cue: | If the candidate provides information for other LER requirements, Cue the candidate that another person will complete the other LER items. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

Terminating Cues: When the candidate makes his determination and reports it to the evaluator, inform the candidate the JPM is complete.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

Stop Time: _____



**2.1.18-02, Determine Reportability – Unusual Event and Plant Shutdown
required by T.S., Rev. 2**

JPM
Page 8 of 9

Examinee: _____

Evaluator: _____

☐ RO ☐ SRO ☐ STA ☐ Non-Lic ☐ SRO CERT

Date: _____

☐ LOIT RO ☐ LOIT SRO

PERFORMANCE RESULTS:

SAT:

UNSAT:

Remediation required:

YES

NO

COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).

**EXAMINER NOTE: ENSURE ALL EXAM MATERIAL IS COLLECTED AND PROCEDURES
CLEANED, AS APPROPRIATE.**

EVALUATOR'S SIGNATURE: _____

*NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If
unsatisfactory performance is demonstrated, the entire JPM should be retained.*

TURNOVER SHEET

INITIAL CONDITIONS:

- The plant was at 100% power.
- Four hours ago, the operating crew entered T.S. action statement 3.4.4 Condition A due to unidentified leakage greater 5 gpm.
- An Unusual Event was declared 10 minutes ago after unidentified leakage rose to 28 gpm.
- At this time, the crew entered T.S. action statement 3.4.4 Condition C because the required action and associated completion time was not met.
- Plant shutdown has commenced.
- There has been no ECCS actuation.
- State and Local authorities have been notified of the Unusual Event per EPIP 1.2.
- The Shift Communicator is performing notifications for the Unusual Event.

INITIATING CUES (IF APPLICABLE):

- You are the Shift Manager.
- Determine **ALL** of the Immediate Notification Event (INE) time requirements for this event.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JOB PERFORMANCE MEASURE

JPM TITLE: Review a Work Order for closure

JPM NUMBER: 2.2.19-01

REV. 2

TASK NUMBER(S) / TASK TITLE(S): 1.13 Ensure plant activities are performed in accordance with Work Management Processes, Procedures and Policies

K/A NUMBERS: Generic 2.2.19

K/A VALUE: 3.4

Justification (FOR K/A VALUES <3.0):

TASK APPLICABILITY:

☐ RO ☒ SRO ☒ STA ☐ Non-Lic ☒ SRO CERT ☐ OTHER: _____

APPLICABLE METHOD OF TESTING: Simulate/Walkthrough: ☐ Perform: ☒

EVALUATION LOCATION: In-Plant: ☐ Control Room: ☐

Simulator: ☒ Other: ☐

Lab: ☐

Time for Completion: 20 Minutes Time Critical: NO

Alternate Path [NRC]: NO

Alternate Path [INPO]: NO

Developed by: _____
Instructor/Developer Date

Reviewed by: _____
Instructor (Instructional Review) Date

Validated by: _____
SME (Technical Review) Date

Approved by: _____
Training Supervision Date

Approved by: _____
Training Program Owner Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED PRIOR TO USE.

| REVIEW STATEMENTS | YES | NO | N/A |
|---|--------------------------|--------------------------|--------------------------|
| 1. Are all items on the signature page filled in correctly? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
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| 10. Is justification provided for tasks with K/A values less than 3.0? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Have all special tools and equipment needed to perform the task been identified and made available to the trainee? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Are all references identified, current, accurate, and available to the trainee? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Have all required cues (as anticipated) been identified for the evaluator to assist task completion? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. Are all critical steps supported by procedural guidance? (e.g., if licensing, EP or other groups were needed to determine correct actions, then the answer should be NO.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. If the JPM is to be administered to an LOIT student, has the required knowledge been taught to the individual prior to administering the JPM? TPE does not have to be completed, but the JPM evaluation may not be valid if they have not been taught the required knowledge. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

All questions/statements must be answered "YES" or "N/A" or the JPM is not valid for use. If all questions/statements are answered "YES" or "N/A," then the JPM is considered valid and can be performed as written. The individual(s) performing the initial validation shall sign and date the cover sheet.

Protected Content: (CAPRs, corrective actions, licensing commitments, etc. associated with this material)

{C001}

UPDATE LOG: Indicate in the following table any minor changes or major revisions (as defined in TR-AA-230-1003) made to the material after initial approval. Or use separate Update Log form TR-AA-230-1003-F16.

[illegible]

SIMULATOR SET-UP: *(Only required for simulator JPMs)*

SIMULATOR SETUP INSTRUCTIONS: NONE

- Required Materials:**
1. Marked up copy of Work Order PM TASK 01(PMRQ 21005-5).
 2. Marked up copy of STP 3.5.1-05

- General References:**
- MD-062, Rev. 15
 - STP 3.5.1-05 Rev. 73

- Task Standards:**
- Determines that there are no initials for the QC step 3.
 - Using the STP, determines that the MO-2239 did **not** stroke within the ASME limits in the CLOSE direction.
 - Determine that he will not sign the WO as it has not been completed satisfactorily,
OR
Based on the unsatisfactory stroking of the MO, he will say that he will sign the WO off and write a new WRC to fix the problem. The new WRC number should be written on the closed out WO.

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

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- You are the Shift Manager.
- Work Order PM TASK 01(PMRQ 21005-5) is ready for review.

INITIATING CUES (IF APPLICABLE):

- You are to review Work Order PM TASK 01(PMRQ 21005-5) for closure.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JPM PERFORMANCE INFORMATION

Start Time: _____

NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

NOTE: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

| | |
|----------------------------------|--|
| Performance Step:1 Critical Y | 3. INSPECT per procedure VALVOP-L200-08. • Work this step with the electrical and mechanical steps as needed for job completion |
| Standard: | Review step for completion |
| Evaluator Cue: | Candidate should note that this was not signed off as required. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|--|---|
| Performance Step:2 Critical Y | 8. STROKE the valve per the applicable steps in STP 3.5.1-05 or 3.5.1-06 per the CRS direction and RECORD the stroke times in this work task. If sat, REMOVE entries from Inop TS Equip Log. |
| Standard: | Candidate should review applicable portions of STP 3.5.1-05 |
| Evaluator Cue: | Candidate should determine that the ASME stroke time for MO-2239 is not met (ASME time is 12.1 seconds. Documented time is 12.5 seconds.) |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|--|--|
| Performance Step:3 Critical Y | PM TASK 01(PMRQ 21005-5) |
| Standard: | Candidate review WO in its entirety. |
| Evaluator Cue: | Candidate determines that stroke time testing was inadequate and will not sign of the WO due to incompleteness or sign WO and state that another needs to be performed to address issues. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

Terminating Cues: The JPM is complete when the candidate has reviewed the WO IAW MD-062 and STP 3.5.1-05, and it is determined that a WO is not complete and MO-2239 did not meet its ASME close times.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

Stop Time: _____

Examinee: _____

Evaluator: _____

☐ RO ☐ SRO ☐ STA ☐ Non-Lic ☐ SRO CERT

Date: _____

☐ LOIT RO ☐ LOIT SRO

PERFORMANCE RESULTS:

SAT: UNSAT: ☐

Remediation required:

| | |
|-----|--|
| YES | |
|-----|--|

| | |
|----|--|
| NO | |
|----|--|

COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).

EXAMINER NOTE: ENSURE ALL EXAM MATERIAL IS COLLECTED AND PROCEDURES CLEANED, AS APPROPRIATE.

EVALUATOR'S SIGNATURE: _____

NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If unsatisfactory performance is demonstrated, the entire JPM should be retained.

TURNOVER SHEET

INITIAL CONDITIONS:

- You are the Shift Manager.
- Work Order PM TASK 01(PMRQ 21005-5) is ready for review.

INITIATING CUES (IF APPLICABLE):

- You are to review Work Order PM TASK 01(PMRQ 21005-5) for closure.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

WORK PLAN

Work Control Document: PM TASK 01(PMRQ 21005-5)
Equipment ID: MO2239-O
Equipment Description: HPCI Steam Supply OutBoard Isol Valve Opr

UNIT: PDA
 Page 2 of 2
Date: 10-28-2011

| STEP SIGNIFICANCE | Step No | Work Plan Description | Worker | Date |
|-------------------|---------|--|-------------------|----------------------|
| FMC | 1. | VERIFY that work is about to be performed per FME requirements. | <u>EC</u> ELEC | <u>TODAY</u> DATE |
| | 2. | CAUTION: LS-6 will be energized. PERFORM lube & inspect per procedure VALVOP-L200-08. <ul style="list-style-type: none"> Work this step with the QC and mechanical steps as needed for job completion. NOTE: OK to use QL4 Gaskets, O-Rings, Limiter Plate per CSM 90-0002. | <u>EC</u> ELEC | <u>TODAY</u> DATE |
| QC | 3. | INSPECT per procedure VALVOP-L200-08. <ul style="list-style-type: none"> Work this step with the electrical and mechanical steps as needed for job completion. | <u>QC</u> | <u>DATE</u> |
| | 4. | PERFORM the mechanical portion of the lube & inspect per VALVOP-L200-08. <ul style="list-style-type: none"> Work this step with the electrical and QC steps as needed for job completion. | <u>ME</u> MECH | <u>TODAY</u> DATE |
| | 5. | REQUEST that Ops verify/place HS2229B in override position on board 1C039. | <u>EC</u> ELEC | <u>TODAY</u> DATE |
| MFT | 6. | PERFORM operability check per procedure VALVOP-L200-08. | <u>EC</u> ELEC | <u>TODAY</u> DATE |
| FMC | 7. | VERIFY that work was performed per FME requirements. | <u>EC</u> ELEC | <u>TODAY</u> DATE |
| PMT | 8. | STROKE the valve per the applicable steps in STP 3.5.1-05 or 3.5.1-06 per the CRS direction and RECORD the stroke times in this work task. If sat, REMOVE entries from Inop TS Equip Log. | <u>OPS</u> | <u>DATE</u> |
| | 9. | RETURN switch HS2229B to the normal position or as directed by the CRS. | <u>OPS</u> | <u>DATE</u> |

FEEDBACK

Please complete the PM feedback Attributes. If there is any Planner feedback, then document in the work order completion comments and notify the Planner

Craft

DATE

| | | |
|---|--|--|
| DAEC DUANE ARNOLD ENERGY CENTER | SURVEILLANCE TEST PROCEDURE TITLE: HPCI SYSTEM OPERABILITY TEST | STP 3.5.1-05 Page 19 of 62 Rev. 73 |
| | Performance Date: <u>TODAY</u> | <u>INITIALS</u> |
| | | |

7.1.16 Time close MO-2239, HPCI OUTBD STEAM LINE ISOL valve and record the closing time:

Closed in 12.5 seconds

a. Open MO-2239.

b. Confirm closure time less than or equal to (\leq) 13 seconds.

c. Confirm closure time is greater than or equal to (\geq) 7.3 and less than or equal to (\leq) 12.1 seconds. (ASME)

7.1.17 Close MO-2311, PUMP DISCHARGE valve.

NOTE

Due to valve interlocks, once MO-2312 is open, it will close automatically. Opening time will be from switch operation to full open indication. Closing time will be from full open indication to full closed indication.

7.1.18 Using two stopwatches to time the opening and closing of MO-2312, cycle MO-2312, HPCI INJECT valve and record the operating times:

Opened in _____ seconds

Closed in _____ seconds

a. Confirm opening time is greater than or equal to (\geq) 19.6 and less than or equal to (\leq) 26.4 seconds. (ASME)

b. Confirm closure time is greater than or equal to (\geq) 19.2 and less than or equal to (\leq) 25.8 seconds. (ASME)

7.1.19 Open MO-2316, REDUNDANT SHUTOFF valve.

7.1.20 Performance of Step 7.1.21 makes the HPCI System inoperable. Ensure Steps 7.1.21 through 7.2.84 are completed within the time allowed by Prerequisite 6.10. Record the date and time below, and inform the CRS of the start of the inoperability condition.

Date / Time: _____ / _____

7.1.21 Open CV-2315, TEST BYPASS valve to 46-48% as indicated on valve position ZI-2315.

7.1.22 Open MO-2311, PUMP DISCHARGE valve.

TS

JOB PERFORMANCE MEASURE

JPM TITLE: VENT PRIMARY CONTAINMENT WITH TORUS HARD PIPE VENT

JPM NUMBER: 2.3.11-01 **REV.** 0

TASK NUMBER(S) / TASK TITLE(S): 6.30 Direct Crew Response to Vent the Torus via Hard Pipe Vent

K/A NUMBERS: 2.3.11 **K/A VALUE:** 4.3

Justification (FOR K/A VALUES <3.0):

TASK APPLICABILITY:

☐ RO ☐ SRO ☐ STA ☐ Non-Lic ☐ SRO CERT ☐ OTHER: _____

APPLICABLE METHOD OF TESTING: Simulate/Walkthrough: ☐ Perform: ☒

EVALUATION LOCATION: In-Plant: ☐ Control Room: ☐

Simulator: ☒ Other: ☐

Lab: ☐

Time for Completion: 10 Minutes Time Critical: NO

Alternate Path [NRC]: NO

Alternate Path [INPO]: NO

Developed by: _____ Instructor/Developer _____ Date

Reviewed by: _____ Instructor (Instructional Review) _____ Date

Validated by: _____ SME (Technical Review) _____ Date

Approved by: _____ Training Supervision _____ Date

Approved by: _____ Training Program Owner _____ Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED PRIOR TO USE.

| REVIEW STATEMENTS | YES | NO | N/A |
|---|--------------------------|--------------------------|--------------------------|
| 1. Are all items on the signature page filled in correctly? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Has the JPM been reviewed and validated by SMEs? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Can the required conditions for the JPM be appropriately established in the simulator if required? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Has the completion time been established based on validation data or incumbent experience? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. If the task is time critical, is the time critical portion based upon actual task performance requirements? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Is the job level appropriate for the task being evaluated if required? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Is the K/A appropriate to the task and to the licensee level if required? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Is justification provided for tasks with K/A values less than 3.0? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Have all special tools and equipment needed to perform the task been identified and made available to the trainee? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Are all references identified, current, accurate, and available to the trainee? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Have all required cues (as anticipated) been identified for the evaluator to assist task completion? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. Are all critical steps supported by procedural guidance? (e.g., if licensing, EP or other groups were needed to determine correct actions, then the answer should be NO.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. If the JPM is to be administered to an LOIT student, has the required knowledge been taught to the individual prior to administering the JPM? TPE does not have to be completed, but the JPM evaluation may not be valid if they have not been taught the required knowledge. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

All questions/statements must be answered "YES" or "N/A" or the JPM is not valid for use. If all questions/statements are answered "YES" or "N/A," then the JPM is considered valid and can be performed as written. The individual(s) performing the initial validation shall sign and date the cover sheet.

Protected Content: (CAPRs, corrective actions, licensing commitments, etc. associated with this material)

{C001}

SIMULATOR SET-UP: *(Only required for simulator JPMs)*

SIMULATOR SETUP INSTRUCTIONS:NONE

PROCEDURAL MARKUPS:

- SEP 301.3, TORUS VENT VIA HARDPIPE VENT, SECTION 1.1 INITIATION OF HARD PIPE VENT FROM CONTROL ROOM
 - MARK AS COMPLETE:
 - NOTE AND CONTINUOUS RECHECK STATEMENT PRIOR TO STEP (1)
 - STEP (1) THROUGH (5)

Required Materials: SEP 301.3
Calculator

General References: SEP 301.3, Rev. 11

Task Standards: Calculate actual Torus level using SEP 301.3 Appendix 1
Determine if venting via the Hard Pipe Vent is allowed per SEP 301.3 section 1.1 is allowed

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

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS:

- A severe accident has occurred
- An Extended Loss of AC Power, (ELAP), has been declared
- It has been determined that SEP 301.3, TORUS VENT VIA HARDPIPE VENT, is required
- The readings on 1C03 as reported by the Balance of Plant Operator are:
 - Drywell Pressure: 24 psig
 - Torus pressure: 22 psig
 - Torus water level as read on LI-4396A: 17 feet

INITIATING CUES (IF APPLICABLE):

- As a support SRO you are to continue with SEP 301.3 section 1.1 INITIATION OF HARD PIPE VENT FROM CONTROL ROOM, and determine:
 - Actual Torus level

AND

- Report to the CRS if venting via the hard pipe vent is allowed.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JPM PERFORMANCE INFORMATION

Start Time: _____

NOTE: When providing "Evaluator Cues" to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee's actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

NOTE: Critical steps are marked with a "Y" below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

| | |
|----------------------------------|---|
| Performance Step:1 Critical N | <u>NOTE</u> If the plant is in an Extended Loss of AC Power, (ELAP), it may be necessary to vent the Torus with a Torus level greater than 16 feet. The guidance of EC 0000285475 Evaluation 16-M01 will allow venting of the Torus up to a Torus level of 24' by using LI-4396A or B, Containment Water Level Indicator, 0-98 feet, at 1C03. |
| Standard: | Operator placekeeps NOTE |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|----------------------------------|--|
| Performance Step:2 Critical N | <u>CONTINUOUS RECHECK STATEMENT</u> IF the plant is in an ELAP condition AND Torus level is greater than 16 feet, THEN using Appendix 1, verify that Torus water level is less than 24 feet. |
| Standard: | The Operator will mark the Continuous Recheck Statement and proceed to Appendix 1. |
| Evaluator Cue: | Operator will determine from the turnover that current Torus level is greater than 16 feet and an ELAP is occurring. . |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|--|--|
| Performance Step:3 Critical Y | Applying a Correction Factor To LI-4396 A or B Containment Water Level Indicator, 0-98 Feet |
| Standard: | Calculate Actual Torus water level IAW SEP 301.3 Appendix 1 |
| Evaluator Cue: | Operator will use turnover information to calculate actual Torus water level as 21.96 feet |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|--|--|
| Performance Step:4 Critical Y | Applying a Correction Factor To LI-4396 A or B Containment Water Level Indicator, 0-98 Feet |
| Standard: | Operator determines that Torus water level is not below 16 feet |
| Evaluator Cue: | Operator will report to the CRS that water level is not below 16 feet but venting is allowed per SEP 301.3 NOTE |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

Terminating Cues: When the actual Torus level and determination of venting is reported to the CRS, the JPM is complete.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

Stop Time: _____



2.3.11-01, VENT PRIMARY CONTAINMENT WITH TORUS HARD
PIPE VENT, Rev. 0

JPM
Page 8 of 9

Examinee: _____

Evaluator: _____

☐ RO ☐ SRO ☐ STA ☐ Non-Lic ☐ SRO CERT

Date: _____

☐ LOIT RO ☐ LOIT SRO

PERFORMANCE RESULTS:

SAT:

UNSAT:

Remediation required:

YES

NO

COMMENTS/FEEDBACK: (Comments shall be made for any steps graded unsatisfactory).

**EXAMINER NOTE: ENSURE ALL EXAM MATERIAL IS COLLECTED AND PROCEDURES
CLEANED, AS APPROPRIATE.**

EVALUATOR'S SIGNATURE: _____

*NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If
unsatisfactory performance is demonstrated, the entire JPM should be retained.*

TURNOVER SHEET

INITIAL CONDITIONS:

- A severe accident has occurred
- An Extended Loss of AC Power, (ELAP), has been declared
- It has been determined that SEP 301.3, TORUS VENT VIA HARDPIPE VENT, is required
- The readings on 1C03 as reported by the Balance of Plant Operator are:
 - Drywell Pressure: 24 psig
 - Torus pressure: 22 psig
 - Torus water level as read on LI-4396A: 17 feet

INITIATING CUES (IF APPLICABLE):

- As a support SRO you are to continue with SEP 301.3 section 1.1 INITIATION OF HARD PIPE VENT FROM CONTROL ROOM, and determine:
 - Actual Torus level

AND

- Report to the CRS if venting via the hard pipe vent is allowed.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

SEP 301.3

TORUS VENT VIA HARDPIPE VENT

Purpose: To vent the Torus air space using the hard pipe vent line when the normal Torus vent path is unavailable (e.g., equipment failures or high containment pressures).

Authorization is provided to vent irrespective of the offsite radioactivity release rate because the consequences of not doing so may be the loss of:

- Adequate Core Cooling
- Primary Containment integrity and subsequent uncontrolled offsite radioactivity release

Location: Controls to Vent and Purge the hard pipe vent line are located in:

Control Room at 1C14

Section 1.1 Initiation Of Hard Pipe Vent From Control Room

Section 1.2 Initiation Of Hard Pipe Vent With Fuel Failure From Control Room

1A3 Essential Switchgear Room on the South wall

Section 2.1 Initiation Of Hard Pipe Vent From 1A3 Switchgear Room

Section 2.2 Initiation Of Hard Pipe Vent With Fuel Failure From 1A3 Switchgear Room

Section 3.0 Installation Of Spare Nitrogen Bottles At Remote Operating Station

The main bank of 11 nitrogen bottles is located in the CRD Repair room. If more nitrogen is necessary, there are two flexible hose connections located at the ROS. Spare nitrogen bottles are located on the west side of the Mechanics shop.

Equipment Required: In the Control Room:

(2) #2235 keys

In the 1A3 Switchgear Room:

(1) #2081 key

SEP 301.3 TORUS VENT VIA HARDPIPE VENT

Instructions:

NOTE

Reducing primary containment pressure will reduce available NPSH for ECCS pumps taking suction from the Torus. Analysis shows that maintaining primary containment pressure above 6 psig provides adequate NPSH for all design bases events.

The nitrogen bottle bank is sized to cycle the hard pipe vent CVs at a minimum of 8 times, and to provide 6 purges of the hard pipe vent line.

To rupture the Hard Pipe Vent Rupture disk HS-4362 HCVS Purge Supply Handswitch must be taken to open position for 12 seconds. This time frame is sufficient to pressurize the piping between outboard vent CV, CV-4361 Torus Hard Pipe Vent Outboard Isolation, and the rupture disk PSE-4362 and burst the rupture disk.

If venting with indication of fuel failure, a purge of the hard pipe vent must be performed before venting. If the rupture disk is not ruptured, this will rupture it and purge the hard pipe vent line of any oxygen prior to opening the torus vent valves

If venting with indication of fuel failure, a purge of the hard pipe vent must be performed following the venting process. This will require opening SV-4362 for 75 seconds (this will clear the line of hydrogen).

The hard pipe vent does not have to be purged in between vent cycles if there is no indication of fuel damage,

CAUTION

If fuel damage has occurred, area radiation levels may increase suddenly while venting. All unnecessary personnel should be evacuated from the Reactor and Turbine Buildings prior to venting.



CONTINUOUS RECHECK STATEMENT



IF the ERO is operational,

THEN containment venting should be coordinated with the TSC Accident Management Team to ensure that due consideration is given to the benefits and consequences of venting (e.g., maintaining containment integrity, environmental conditions, optimum vent path, vent duration, etc.).

IF Nitrogen supply pressure as indicated on PI-4364, HCVS Nitrogen Supply Pressure At 1A3 ROS indicates < 575 psig,

THEN Place the Backup Nitrogen Supply bottles in service per Section 3.0 of this procedure,

OR

6 Hard Pipe Vent Purges have been performed

OR

Replace the 11 bottle Nitrogen Supply Rack located in the CRD Repair Room per OI 573, Containment Atmosphere Control System.

SEP 301.3 TORUS VENT VIA HARDPIPE VENT

1.0 OPERATION OF HARD PIPE VENT FROM CONTROL ROOM

1.1 INITIATION OF HARD PIPE VENT FROM CONTROL ROOM

NOTE

V-43-642 HCVS Nitrogen Supply Isolation At 1A3 ROS Is locked closed. This is to ensure that CV-4360 Torus Hard Pipe Vent Inboard Isolation and CV-4361 Torus Hard Pipe Vent Outboard Isolation will not be inadvertently opened. To be able to vent the containment per this procedure, V-43-642 must first be unlocked and opened.

If PCV-4360 and PCV-4361 are subject to a RAPID pressure increase of greater than 500 psig, the PCV will be damaged. Therefore PCV-4360 and PCV-4361 will be Closed (fully counter clockwise in the Decrease direction).



CONTINUOUS RECHECK STATEMENT



| | | |
|--|----------------|--|
| IF the Torus is being vented with indication of fuel failure, | | THEN the Torus vent line must be purged prior to venting. Exit this section and go to Section 1.2 to purge and vent the Torus |
|--|----------------|--|

- (1) At ROS in 1A3 Switchgear Room, verify PCV-4361 HCVS Purge Dome Pressure Control valve is CLOSED by turning the hand wheel in the Decrease (counter clockwise) direction until it free wheels.
- (2) At ROS in 1A3 Switchgear Room, verify PCV-4360 HCVS Pneumatic Supply Pressure Control valve is CLOSED by turning the hand wheel in the Decrease (counter clockwise) direction until it free wheels.
- (3) Unlock and OPEN V-43-642 HCVS Nitrogen Supply Isolation At 1A3 ROS.
- (4) At ROS in 1A3 Switchgear Room, slowly OPEN PCV-4361 HCVS Purge Dome Pressure Control valve by turning the hand wheel in the Increase (clockwise) direction to achieve 240 psig as indicated on PI-4361 HCVS Purge Dome Supply Regulated Pressure.
- (5) At ROS in 1A3 Switchgear Room, slowly OPEN PCV-4360 HCVS Pneumatic Supply Pressure Control valve by turning the hand wheel in the Increase (clockwise) direction to achieve 100 psig as indicated on PI-4360 HCVS Pneumatic Supply Regulated Pressure.

SEP 301.3

TORUS VENT VIA HARDPIPE VENT

NOTE

If the plant is in an Extended Loss of AC Power, (ELAP), it may be necessary to vent the Torus with a Torus level greater than 16 feet. The guidance of EC 0000285475 Evaluation 16-M01 will allow venting of the Torus up to a Torus level of 24' by using LI-4396A or B, Containment Water Level Indicator, 0-98 feet, at 1C03.



CONTINUOUS RECHECK STATEMENT



| | |
|---|---|
| IF the plant is in an ELAP condition AND Torus level is greater than 16 feet, | THEN using Appendix 1, verify that Torus water level is less than 24 feet. |
|---|---|

(6) Verify Torus water level is below 16 feet.

NOTE

If performing anticipatory venting and the Primary Containment is < 53 psig, it is necessary to rupture the Hard Pipe Vent rupture disk before establishing a Primary Containment vent path.

(7) **IF** Hard Pipe Vent rupture disk has been ruptured, **THEN** proceed to Step (11). Otherwise, continue with Step (8).

NOTE

There are no indications of nitrogen purge process in the control room. The expected response of PI-4362 HCVS Purge Supply Regulated Pressure during this evolution is as follows:

- When HS-4362 HCVS Purge SV4362 is opened, the indicated pressure will rise to approximately 50 psig.
- When rupture disk ruptures, the pressure on PI-4362 will lower initially. Due to the flow rate of the nitrogen during the purge, and the restrictions in the supply piping, after the rupture disk ruptures, the pressure at PI-4362 may rise up above 50 psig.
- When HS-4362 is reclosed, PI-4362 will slowly de-pressurize to approximately 0 psig.

(8) **IF** conditions permit and an Operator is available, **THEN** at ROS monitor PI-4362 HCVS Purge Supply Regulated Pressure during the purge process.

SEP 301.3

TORUS VENT VIA HARDPIPE VENT

(9) At 1C14, OPEN HS-4362 HCVS PURGE SV4362 for 12 seconds and then
CLOSE HS-4362.

(10) **IF** monitored, **THEN** confirm PI-4362 HCVS PURGE SUPPLY REGULATED
PRESSURE responded as follows:

- When HS-4362 HCVS Purge SV4362 is opened, the indicated pressure will rise to approximately 50 psig.
- When rupture disk ruptures, the pressure on PI-4362 will lower initially. Due to the flow rate of the nitrogen during the purge, and the restrictions in the supply piping, after the rupture disk ruptures, the pressure at PI-4362 may rise up above 50 psig.
- When HS-4362 is reclosed, PI-4362 will slowly de-pressurize to approximately 0 psig.

NOTE

The following steps will begin a vent of the Primary Containment.

(11) At 1C14, open the following valves using HS-4360 HCVS VENT
CV4360/CV4361:

- CV-4360 TORUS Hard Pipe Vent Inboard Isolation
- CV-4361 TORUS Hard Pipe Vent Outboard Isolation

(12) In the Control Room, monitor flow through the hard pipe vent by observing
ANY of the following parameters:

- Temperature rise on TI-4361 HCVS EFFLUENT TEMP.
- Lowering Drywell or Torus pressure.
- A potential rise in Hard Pipe Vent radiation on RM-4362 HCVS EFFLUENT RAD MON.

SEP 301.3 TORUS VENT VIA HARDCPIPE VENT

NOTE

Based on the events that occurred at Fukushima, it has been determined that RCIC should remain functional with a Torus temperature of approximately 250°F. If performing anticipatory venting due to an Extended Loss of AC Power (ELAP), the venting pressure band of 5 to 10 psig will maintain the Torus temperature between approximately 227°F and approximately 239°F

Use of the vent may impact NPSH. If venting due to an ELAP or LUHS, the suggested pressure band may be varied to maintain the required NPSH for RCIC and/or HPCI as identified in the EOP graphs. (See Figure 3 and 4 for RCIC and HPCI NPSH curves).

(13) Monitor and control containment venting as follows:

- **IF** venting due to an ELAP and a LUHS, **THEN** attempt to establish a Primary Containment pressure band between 5 and 10 psig, or as necessary to maintain RCIC or HPCI NPSH.
- **IF** venting for containment pressure control only, **THEN** vent as necessary to maintain pressure below the Primary Containment Pressure Limit (53 psig). Establish a pressure band for venting between 45 psig and 53 psig, unless otherwise directed by the TSC.
- **IF** venting for containment hydrogen control, **THEN** vent and purge to maintain primary containment H₂ and O₂ concentrations below limits as directed by SAG 3.
- **IF** venting for control of multiple parameters, **THEN** guidelines for the control of hydrogen should take precedence.



CONTINUOUS RECHECK STATEMENT



IF flooding the primary containment,

THEN isolate the vent line prior to the water level in the Torus reaching 16 feet.

- **IF** venting to support containment flooding, **THEN** establish a pressure band that maximizes injection with due consideration given to minimizing the offsite radioactivity release.

(14) **WHEN** it is desired to secure the Torus vent, **THEN** at 1C14 close the following valves using HS-4360 HCVS VENT CV4360/CV4361:

- CV-4360 TORUS Hard Pipe Vent Inboard Isolation
- CV-4361 TORUS Hard Pipe Vent Outboard Isolation

SEP 301.3

TORUS VENT VIA HARDPIPE VENT

(15) **IF** it is necessary to recommence the Torus vent process, **THEN** perform the following as applicable:

- **IF** there is no indication of fuel failure, **THEN** restart the venting process at Step (6) of Section 1.1 of this procedure. _____
- **IF** there is indication of fuel failure, **THEN** go to Section 1.2 of this procedure. _____

(16) **IF** venting is complete, **THEN** go to Restoration Section. _____

SEP 301.3 TORUS VENT VIA HARDPIPE VENT

1.2 INITIATION OF HARD PIPE VENT WITH FUEL FAILURE FROM CONTROL ROOM

NOTE

Figure 1 is one line drawing of the Hard Pipe Vent and Purge paths.

Figure 2 is a plant location drawing for the Remote Operating Station for the hard pipe vent and Backup Nitrogen Bottle Rack.

If venting the primary containment with fuel failure, the hard pipe vent system must be purged prior to venting and following venting.

This initial purge process will rupture the hard pipe vent rupture disk if it is still intact, and remove all Oxygen from the HPV piping.

The nitrogen bottle bank is sized to cycle the hard pipe vent CVs at a minimum of 8 times, and to provide 6 purges of the hard pipe vent line.

If PCV-4360 and PCV-4361 are subject to a RAPID pressure increase of greater than 500 psig, the PCV will be damaged. Therefore, PCV-4360 and PCV-4361 will be Closed (fully counter clockwise in the Decrease direction).

- (1) At ROS in 1A3 Switchgear Room, verify PCV-4361 HCVS Purge Dome Pressure Control valve is CLOSED by turning the hand wheel in the Decrease (counter clockwise) direction until it free wheels.
- (2) At ROS in 1A3 Switchgear Room, verify PCV-4360 HCVS Pneumatic Supply Pressure Control valve is CLOSED by turning the hand wheel in the Decrease (counter clockwise) direction until it free wheels.
- (3) Unlock and OPEN V-43-642 HCVS Nitrogen Supply Isolation At 1A3 ROS.
- (4) At ROS in 1A3 Switchgear Room, slowly OPEN PCV-4361 HCVS Purge Dome Pressure Control valve by turning the hand wheel in the Increase (clockwise) direction to achieve 240 psig as indicated on PI-4361 HCVS Purge Dome Supply Regulated Pressure.
- (5) At ROS in 1A3 Switchgear Room, slowly OPEN PCV-4360 HCVS Pneumatic Supply Pressure Control valve by turning the hand wheel in the Increase (clockwise) direction to achieve 100 psig as indicated on PI-4360 HCVS Pneumatic Supply Regulated Pressure.

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TORUS VENT VIA HARDBPIPE VENT

NOTE

There are no indications of nitrogen purge process in the control room. The expected response of PI-4362 HCVS Purge Supply Regulated Pressure during this evolution is as follows:

- When HS-4362 HCVS Purge SV4362 is opened, the indicated pressure will rise to approximately 50 psig.
- When rupture disk ruptures, the pressure on PI-4362 will lower initially. Due to the flow rate of the nitrogen during the purge, and the restrictions in the supply piping, after the rupture disk ruptures, the pressure at PI-4362 may rise up above 50 psig.
- When HS-4362 is reclosed, PI-4362 will slowly de-pressurize to approximately 0 psig.

(6) **IF** conditions permit and an Operator is available, **THEN** at ROS monitor PI-4362 HCVS Purge Supply Regulated Pressure during the purge process.

(7) At 1C14, OPEN HS-4362 HCVS PURGE SV4362 for 12 seconds and then CLOSE HS-4362.

(8) **IF** monitored, **THEN** confirm PI-4362 HCVS PURGE SUPPLY REGULATED PRESSURE responded as follows:

- When HS-4362 HCVS Purge SV4362 is opened, the indicated pressure will rise to approximately 50 psig.
- When rupture disk ruptures, the pressure on PI-4362 will lower initially. Due to the flow rate of the nitrogen during the purge, and the restrictions in the supply piping, after the rupture disk ruptures, the pressure at PI-4362 may rise up above 50 psig.
- When HS-4362 is reclosed, PI-4362 will slowly de-pressurize to approximately 0 psig.

SEP 301.3 TORUS VENT VIA HARDPIPE VENT

NOTE

If the plant is in an Extended Loss of AC Power, (ELAP), it may be necessary to vent the Torus with a Torus level greater than 16 feet. The guidance of EC 0000285475 Evaluation 16-M01 will allow venting of the Torus up to a Torus level of 24' by using LI-4396A or B, Containment Water Level Indicator, 0-98 feet, at 1C03.



CONTINUOUS RECHECK STATEMENT



| | |
|--|--|
| IF the plant is in an ELAP condition AND Torus level is greater than 16 feet, | THEN using Appendix 1, verify that Torus water level is less than 24 feet. |
|--|--|

(9) Verify Torus water level is below 16 feet.

NOTE

The following steps will begin a vent of the Primary Containment.

(10) At 1C14, open the following valves using HS-4360 HCVS VENT CV4360/CV4361:

- CV-4360 TORUS Hard Pipe Vent Inboard Isolation
- CV-4361 TORUS Hard Pipe Vent Outboard Isolation

(11) In the Control Room, monitor flow through the hard pipe vent by observing ANY of the following parameters:

- Temperature rise on TI-4361 HCVS EFFLUENT TEMP.
- Lowering Drywell or Torus pressure.
- A potential rise in Hard Pipe Vent radiation on RM-4362 HCVS EFFLUENT RAD MON.

SEP 301.3 TORUS VENT VIA HARDPIPE VENT

NOTE

Based on the events that occurred at Fukushima, it has been determined that RCIC should remain functional with a Torus temperature of approximately 250°F.

If performing anticipatory venting due to an Extended Loss of AC Power (ELAP), the venting pressure band of 5 to 10 psig will maintain the Torus temperature between approximately 227°F and approximately 239°F

Use of the vent may impact NPSH. If venting due to an ELAP or LUHS, the suggested pressure band may be varied to maintain the required NPSH for RCIC and/or HPCI as identified in the EOP graphs. (See Figure 3 and 4 for RCIC and HPCI NPSH curves).

(12) Monitor and control containment venting as follows:

- **IF** venting due to an ELAP and a LUHS, **THEN** attempt to establish a Primary Containment pressure band between 5 and 10 psig, or as necessary to maintain RCIC or HPCI NPSH.
- **IF** venting for containment pressure control only, **THEN** vent as necessary to maintain pressure below the Primary Containment Pressure Limit (53 psig). Establish a pressure band for venting between 45 psig and 53 psig, unless otherwise directed by the TSC.
- **IF** venting for containment hydrogen control, **THEN** vent and purge to maintain primary containment H₂ and O₂ concentrations below limits as directed by SAG 3.
- **IF** venting for control of multiple parameters, **THEN** guidelines for the control of hydrogen should take precedence.



CONTINUOUS RECHECK STATEMENT



IF flooding the primary containment, **THEN** isolate the vent line prior to the water level in the Torus reaching 16 feet.

- **IF** venting to support containment flooding, **THEN** establish a pressure band that maximizes injection with due consideration given to minimizing the offsite radioactivity release.

(13) **WHEN** it is desired to secure the Torus vent, **THEN** at 1C14 close the following valves using HS-4360 HCVS VENT CV4360/CV4361:

- CV-4360 TORUS Hard Pipe Vent Inboard Isolation
- CV-4361 TORUS Hard Pipe Vent Outboard Isolation

(14) At 1C14, perform a post vent purge of the hard pipe vent by OPENING HS-4362 HCVS SV4362 for 75 seconds and then CLOSING HS-4362.

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TORUS VENT VIA HARDPIPE VENT

(15) **IF** it is necessary to recommence the Torus vent process, **THEN** restart the venting process at Step (9) of Section 1.2. _____

(16) **IF** venting is complete, **THEN** go to Restoration Section. _____

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TORUS VENT VIA HARDPIPE VENT

2.1 MANUAL INITIATION OF HARD PIPE VENT FROM 1A3 SWITCHGEAR ROOM

NOTE

If PCV-4360 and PCV-4361 are subject to a RAPID pressure increase of greater than 500 psig, the PCV will be damaged. Therefore, PCV-4360 and PCV-4361 will be Closed (fully counter clockwise in the Decrease direction).



IF the Torus is being vented with indication of fuel failure,

THEN the Torus vent line must be purged prior to venting. Exit this section and go to Section 2.2 to purge and vent the Torus

- (1) At ROS in 1A3 Switchgear Room, verify PCV-4361 HCVS Purge Dome Pressure Control valve is CLOSED by turning the hand wheel in the Decrease (counter clockwise) direction until it free wheels.
- (2) At ROS in 1A3 Switchgear Room, verify PCV-4360 HCVS Pneumatic Supply Pressure Control valve is CLOSED by turning the hand wheel in the Decrease (counter clockwise) direction until it free wheels.
- (3) Unlock and OPEN V-43-642 HCVS Nitrogen Supply Isolation At 1A3 ROS.
- (4) At ROS in 1A3 Switchgear Room, slowly OPEN PCV-4361 HCVS Purge Dome Pressure Control valve by turning the hand wheel in the Increase (clockwise) direction to achieve 240 psig as indicated on PI-4361 HCVS Purge Dome Supply Regulated Pressure.
- (5) At ROS in 1A3 Switchgear Room, slowly OPEN PCV-4360 HCVS Pneumatic Supply Pressure Control valve by turning the hand wheel in the Increase (clockwise) direction to achieve 100 psig as indicated on PI-4360 HCVS Pneumatic Supply Regulated Pressure.

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TORUS VENT VIA HARDBPIPE VENT

NOTE

If the plant is in an Extended Loss of AC Power, (ELAP), it may be necessary to vent the Torus with a Torus level greater than 16 feet. The guidance of EC 0000285475 Evaluation 16-M01 will allow venting of the Torus up to a Torus level of 24' by using LI-4396A or B, Containment Water Level Indicator, 0-98 feet, at 1C03.



CONTINUOUS RECHECK STATEMENT



| | |
|---|---|
| IF the plant is in an ELAP condition AND Torus level is greater than 16 feet, | THEN using Appendix 1, verify that Torus water level is less than 24 feet. |
|---|---|

(6) Verify Torus water level is below 16 feet.

NOTE

If performing anticipatory venting and the Primary Containment is < 53 psig, it is necessary to rupture the Hard Pipe Vent rupture disk before establishing a Primary Containment vent path.

The nitrogen bottle bank is sized to cycle the hard pipe vent CVs at a minimum of 8 times, and to provide 6 purges of the hard pipe vent line.

(7) **IF** Hard Pipe Vent rupture disk has been ruptured, **THEN** proceed to Step (11). Otherwise, continue with Step (8).

NOTE

The expected response of PI-4362 HCVS Purge Supply Regulated Pressure during this evolution is as follows:

- When V-43-643, HCVS Purge Supply Bypass is opened, the indicated pressure will rise to approximately 50 psig.
- When rupture disk ruptures, the pressure on PI-4362 will lower.
- When V-43-643 is reclosed, PI-4362 will slowly de-pressurize to approximately 0 psig.

(8) Notify Control Room that hard pipe rupture disk will be ruptured.

(9) At ROS, OPEN V-43-643, HCVS Purge Supply Bypass for 12 seconds and then CLOSE V-43-643.

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TORUS VENT VIA HARDPIPE VENT

- (10) Notify Control Room that PSE 4362, Torus Hard Pipe Vent Line Rupture Disc has been ruptured and that you are going to vent the Torus. _____

NOTE

The following steps will begin a vent of the Primary Containment. The following steps will admit nitrogen to both CV-4360, Inbd Hard Pipe Vent Isolation and CV-4361, Outbd Hard Pipe Vent Isolation. Both CVs will open and remain open until the nitrogen supply is vented off. _____

- (11) At ROS, unlock and CLOSE V-43-635, HCVS Pneumatic Supply Vent Isolation. _____
- (12) At ROS, verify CLOSED V-43-636, HCVS Pneumatic Supply Vent Bypass Isolation. _____
- (13) At ROS, OPEN V-43-633, HCVS Pneumatic Supply Bypass Isolation. _____
- (14) If possible, have Control Room confirm at 1C14 that the following valves indicate OPEN:
- CV-4360 TORUS Hard Pipe Vent Inboard Isolation _____
 - CV-4361 TORUS Hard Pipe Vent Outboard Isolation _____
- (15) In the Control Room, monitor flow through the hard pipe vent by observing ANY of the following parameters: _____
- Temperature rise on TI-4361 HCVS EFFLUENT TEMP.
 - Lowering Drywell or Torus pressure.
 - A potential rise in Hard Pipe Vent radiation on RM-4362 HCVS EFFLUENT RAD MON.

SEP 301.3 TORUS VENT VIA HARDBPIPE VENT

NOTE

Based on the events that occurred at Fukushima, it has been determined that RCIC should remain functional with a Torus temperature of approximately 250°F. If performing anticipatory venting due to an Extended Loss of AC Power (ELAP), the venting pressure band of 5 to 10 psig will maintain the Torus temperature between approximately 227°F and approximately 239°F

Use of the vent may impact NPSH. If venting due to an ELAP or LUHS, the suggested pressure band may be varied to maintain the required NPSH for RCIC and/or HPCI as identified in the EOP graphs. (See Figure 3 and 4 for RCIC and HPCI NPSH curves).

(16) Monitor and control containment venting as follows:

- **IF** venting due to an ELAP and a LUHS, **THEN** attempt to establish a Primary Containment pressure band between 5 and 10 psig, or as necessary to maintain RCIC or HPCI NPSH.
- **IF** venting for containment pressure control only, **THEN** vent as necessary to maintain pressure below the Primary Containment Pressure Limit (53 psig). Establish a pressure band for venting between 45 psig and 53 psig, unless otherwise directed by the TSC.
- **IF** venting for containment hydrogen control, **THEN** vent and purge to maintain primary containment H₂ and O₂ concentrations below limits as directed by SAG 3.
- **IF** venting for control of multiple parameters, **THEN** guidelines for the control of hydrogen should take precedence.



CONTINUOUS RECHECK STATEMENT



IF flooding the primary containment,

THEN isolate the vent line prior to the water level in the Torus reaching 16 feet.

- **IF** venting to support containment flooding, **THEN** establish a pressure band that maximizes injection with due consideration given to minimizing the offsite radioactivity release.

(17) **WHEN** it is desired to secure the Torus vent, **THEN** at ROS:

- CLOSE V-43-633, HCVS Pneumatic Supply Bypass Isolation.
- OPEN V-43-636, HCVS Pneumatic Supply Vent Bypass Isolation.

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(18) **IF** it is necessary to recommence the Torus vent process, **THEN** perform the following as applicable:

- **IF** there is no indication of fuel failure, **THEN** restart the venting process at Step (6) of Section 2.1 of this procedure. _____
- **IF** there is indication of fuel failure, **THEN** go to Section 2.2 of this procedure. _____

(19) **IF** venting is complete **THEN** go to Restoration Section. _____

SEP 301.3 TORUS VENT VIA HARDPIPE VENT

2.2 MANUAL INITIATION OF HARD PIPE VENT WITH FUEL FAILURE FROM 1A3 SWITCHGEAR ROOM

NOTE

Figure 1 is one line drawing of the Hard Pipe Vent and Purge paths.

Figure 2 is a plant location drawing for the Remote Operating Station for the hard pipe vent and Backup Nitrogen Bottle Rack.

If venting the primary containment with fuel failure, the hard pipe vent system must be purged prior to venting and following venting.

This initial purge process will rupture the hard pipe vent rupture disk if it is still intact, and remove all Oxygen from the HPV piping.

If PCV-4360 and PCV-4361 are subject to a RAPID pressure increase of greater than 500 psig, the PCV will be damaged. Therefore, PCV-4360 and PCV-4361 will be Closed (fully counter clockwise in the Decrease direction).

- (1) At ROS in 1A3 Switchgear Room, verify PCV-4361 HCVS Purge Dome Pressure Control valve is CLOSED by turning the hand wheel in the Decrease (counter clockwise) direction until it free wheels.
- (2) At ROS in 1A3 Switchgear Room, verify PCV-4360 HCVS Pneumatic Supply Pressure Control valve is CLOSED by turning the hand wheel in the Decrease (counter clockwise) direction until it free wheels.
- (3) Unlock and OPEN V-43-642 HCVS Nitrogen Supply Isolation At 1A3 ROS.
- (4) At ROS in 1A3 Switchgear Room, slowly OPEN PCV-4361 HCVS Purge Dome Pressure Control valve by turning the hand wheel in the Increase (clockwise) direction to achieve 240 psig as indicated on PI-4361 HCVS Purge Dome Supply Regulated Pressure.
- (5) At ROS in 1A3 Switchgear Room, slowly OPEN PCV-4360 HCVS Pneumatic Supply Pressure Control valve by turning the hand wheel in the Increase (clockwise) direction to achieve 100 psig as indicated on PI-4360 HCVS Pneumatic Supply Regulated Pressure.

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TORUS VENT VIA HARDPIPE VENT

NOTE

There are no indications of nitrogen purge process in the control room. The expected response of PI-4362 HCVS Purge Supply Regulated Pressure during this evolution is as follows:

- When HS-4362 HCVS Purge Supply Handswitch is opened, the indicated pressure will rise to approximately 50 psig.
- When rupture disk ruptures, the pressure on PI-4362 will lower initially. Due to the flow rate of the nitrogen during the purge, and the restrictions in the supply piping, after the rupture disk ruptures, the pressure at PI-4362 may rise up above 50 psig.
- When HS-4362 is reclosed, PI-4362 will slowly de-pressurize to approximately 0 psig.

(6) Notify Control Room that hard pipe rupture disk will be ruptured.

(7) At ROS, OPEN V-43-643, HCVS Purge Supply Bypass for 12 seconds and then CLOSE V-43-643.

(8) Notify Control Room that:

- PSE-4362 Torus Hard Pipe Vent Line Rupture Disc has been ruptured.
- The Torus Vent line have been purged
- That you are going to vent the Torus

NOTE

If the plant is in an Extended Loss of AC Power, (ELAP), it may be necessary to vent the Torus with a Torus level greater than 16 feet.

The guidance of EC 0000285475 Evaluation 16-M01 will allow venting of the Torus up to a Torus level of 24' by using LI-4396A or B, Containment Water Level Indicator, 0-98 feet, at 1C03.



CONTINUOUS RECHECK STATEMENT



IF the plant is in an ELAP condition **AND** Torus level is greater than 16 feet,

THEN using Appendix 1, verify that Torus water level is less than 24 feet.

(9) Verify Torus water level is below 16 feet.

SEP 301.3 TORUS VENT VIA HARDPIPE VENT

NOTE

The following steps will begin a vent of the Primary Containment. The following steps will admit nitrogen to both CV-4360, Inbd Hard Pipe Vent Isolation and CV-4361, Outbd Hard Pipe Vent Isolation. Both CVs will open and remain open until the nitrogen supply is vented off.

- (10) At ROS, unlock and CLOSE V-43-635, HCVS Pneumatic Supply Vent Isolation. _____
- (11) At ROS, verify CLOSED V-43-636, HCVS Pneumatic Supply Vent Bypass Isolation. _____
- (12) At ROS, OPEN V-43-633, HCVS Pneumatic Supply Bypass Isolation. _____
- (13) If possible, have Control Room confirm at 1C14 that the following valves indicate OPEN:
 - CV-4360 TORUS Hard Pipe Vent Inboard Isolation _____
 - CV-4361 TORUS Hard Pipe Vent Outboard Isolation _____
- (14) In the Control Room, monitor flow through the hard pipe vent by observing ANY of the following parameters: _____
 - Temperature rise on TI-4361 HCVS EFFLUENT TEMP.
 - Lowering Drywell or Torus pressure.
 - A potential rise in Hard Pipe Vent radiation on RM-4362 HCVS EFFLUENT RAD MON.

SEP 301.3 TORUS VENT VIA HARDBPIPE VENT

NOTE

Based on the events that occurred at Fukushima, it has been determined that RCIC should remain functional with a Torus temperature of approximately 250°F.

If performing anticipatory venting due to an Extended Loss of AC Power (ELAP), the venting pressure band of 5 to 10 psig will maintain the Torus temperature between approximately 227°F and approximately 239°F

Use of the vent may impact NPSH. If venting due to an ELAP or LUHS, the suggested pressure band may be varied to maintain the required NPSH for RCIC and/or HPCI as identified in the EOP graphs. (See Figure 3 and 4 for RCIC and HPCI NPSH curves).

(15) Monitor and control containment venting as follows:

- **IF** venting due to an ELAP and a LUHS, **THEN** attempt to establish a Primary Containment pressure band between 5 and 10 psig, or as necessary to maintain RCIC or HPCI NPSH.
- **IF** venting for containment pressure control only, **THEN** vent as necessary to maintain pressure below the Primary Containment Pressure Limit (53 psig). Establish a pressure band for venting between 45 psig and 53 psig, unless otherwise directed by the TSC.
- **IF** venting for containment hydrogen control, **THEN** vent and purge to maintain primary containment H₂ and O₂ concentrations below limits as directed by SAG 3.
- **IF** venting for control of multiple parameters, **THEN** guidelines for the control of hydrogen should take precedence.



CONTINUOUS RECHECK STATEMENT



IF flooding the primary containment,

THEN isolate the vent line prior to the water level in the Torus reaching 16 feet.

- **IF** venting to support containment flooding, **THEN** establish a pressure band that maximizes injection with due consideration given to minimizing the offsite radioactivity release.

(16) **WHEN** it is desired to secure the Torus vent, **THEN** at ROS:

- CLOSE V-43-633, HCVS Pneumatic Supply Bypass Isolation.
- OPEN V-43-636, HCVS Pneumatic Supply Vent Bypass Isolation.

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TORUS VENT VIA HARDPIPE VENT

- (17) Perform a post vent purge of the hard pipe vent, by OPENING V-43-643
HCVS Purge Supply Bypass for 75 seconds and then CLOSING V-43-643. _____
- (18) **IF** it is necessary to recommence the Torus vent process, **THEN** restart the
venting process at Step (6) of Section 2.2.
- (19) **IF** venting is complete **THEN** go to Restoration Section. _____

SEP 301.3 TORUS VENT VIA HARDPIPE VENT

3.0 INSTALLATION OF SPARE NITROGEN BOTTLES AT REMOTE OPERATING STATION

NOTE

The two bottle backup nitrogen supply will be sufficient to provide 1 purge cycle of the hard pipe vent (75 second purge cycle).

Consider replacing the 11 bottle nitrogen rack in the CRD Repair Room. Actions should be based on the Reactor Building temperature and radiations conditions.

Instructions for replacing the Hard Pipe Vent main nitrogen bank in OI 573, Containment Atmosphere Control System, Section 7.0, Infrequent Operations.

Spare nitrogen bottles are located on the west side of the Mechanics Building.

All valves operated in this section are located in 1A3 Switchgear Room Remote Operating Station.

Spare nitrogen bottles will have to be secured in the 1A3 Switchgear Room. Ensure chain on cable is available.

- (1) Direct an Operator or the TSC personnel to obtain two charged nitrogen bottles. _____
- (2) Transport the nitrogen bottles to the Backup Nitrogen Supply rack in the 1A3 Switchgear room. _____
- (3) Secure the spare nitrogen bottles. _____
- (4) Verify the following valves are CLOSED:
 - V-43-638 HCVS ROS Backup Nitrogen Supply Bottle Isolation #1 _____
 - V-43-639 HCVS ROS Backup Nitrogen Supply Bottle Isolation #2 _____
- (5) Attach the flexible connection hoses to the backup nitrogen bottles. _____
- (6) Open the left nitrogen supply bottle isolation valve. _____
- (7) Open the right nitrogen supply bottle isolation valve. _____
- (8) OPEN V-43-638 HCVS ROS Backup Nitrogen Supply Bottle Isolation #1. _____
- (9) OPEN V-43-639 HCVS ROS Backup Nitrogen Supply Bottle Isolation #2. _____
- (10) CLOSE V-43-642, HCVS Nitrogen Supply Isolation At 1A3 ROS. _____
- (11) OPEN V-43-628 HCVS Backup Nitrogen Supply Inboard Isolation. _____

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NOTE

Performance of the following step will admit the backup nitrogen to the hard pipe vent system.

- (12) OPEN V-43-629 HCVS Backup Nitrogen Supply Outboard Isolation.
- (13) At PI-4364 HCVS Nitrogen Supply Pressure At 1A3 ROS, perform the following as applicable:
 - (a) Verify that the nitrogen supply pressure is > 2100 psig.
 - (b) If PI-4364 is reading < 2000 psig, notify Control Room.
 - (c) If PI-4364 is reading < 2000 psig, make preparations to have 2 fully charged nitrogen bottles brought to the Hard Pipe Vent Remote Operating Station
- (14) Inform the Control Room that nitrogen has been restored to the Hard Pipe Vent System via the backup nitrogen supply header.

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Restoration:

- (1) Further restoration should proceed according to the EOF/TSC recovery process.

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Appendix 1

Applying a Correction Factor To LI-4396 A or B Containment Water Level Indicator, 0-98 Feet

During a severe accident, Drywell pressure will exceed Torus pressure. When Drywell pressure is greater than Torus pressure, the wide range level instrument will indicate **lower** than actual level.

To determine the actual Torus level using LI-4396A or B Containment Water Level Indicator, 0-98 Feet during an Extended Loss of AC Power, (ELAP), use the below equation.

$$L_{\text{actual}} = L_{\text{indicated}} + (P_{\text{dw}} - P_{\text{torus}}) (\text{ECF})$$

Where,

$L_{\text{indicated}}$ = Torus water level as indicated on LI-4396 A or B

P_{dw} = Drywell pressure (psig)

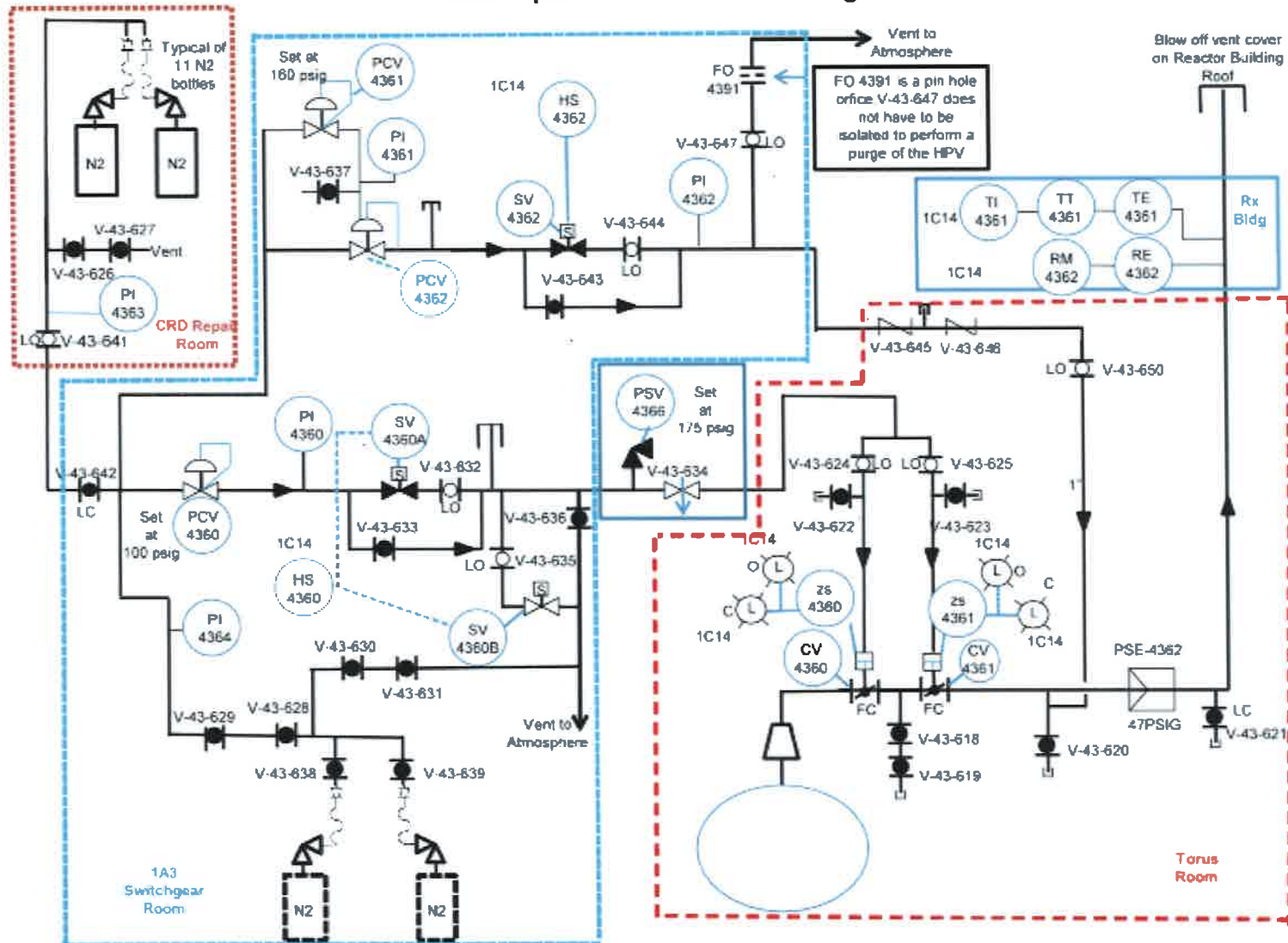
P_{torus} = Torus pressure (psig)

ECF = Elevation Correction Factor = 2.48 feet/psig

L_{actual} = Actual Torus water level

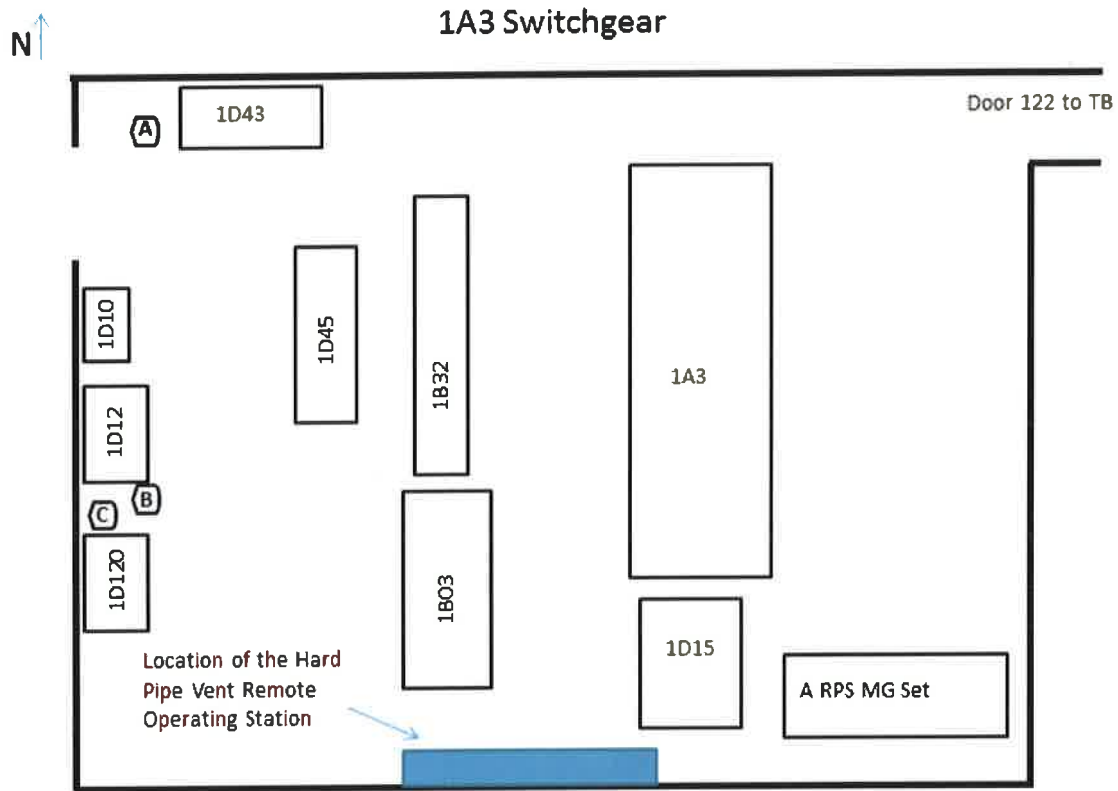
SEP 301.3 TORUS VENT VIA HARDPIPE VENT

Figure 1
Hard Pipe Vent One Line Drawing



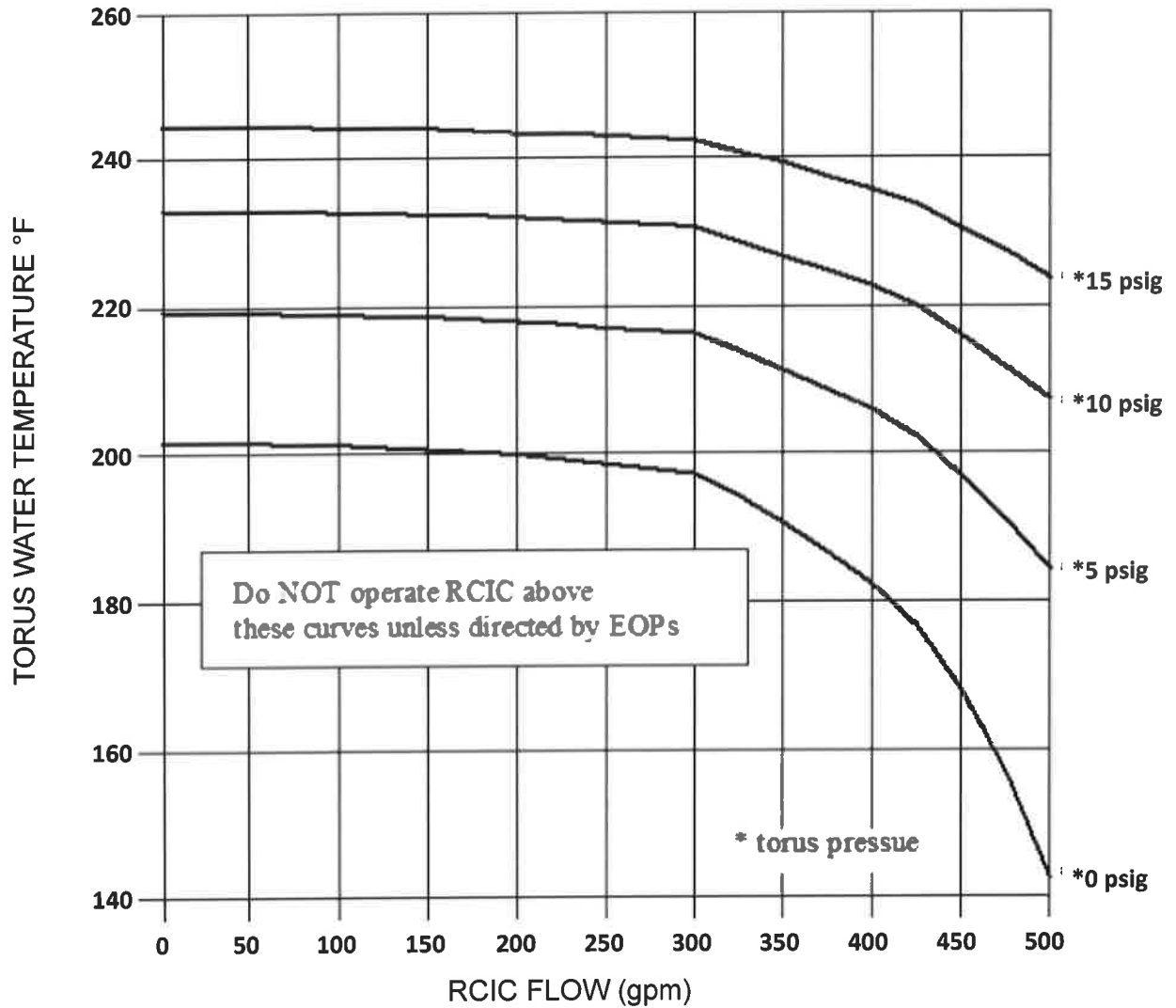
SEP 301.3 TORUS VENT VIA HARDPIPE VENT

Figure 2
Plant Location Drawing for the Remote Operating Station and Backup Nitrogen
Bottle Rack



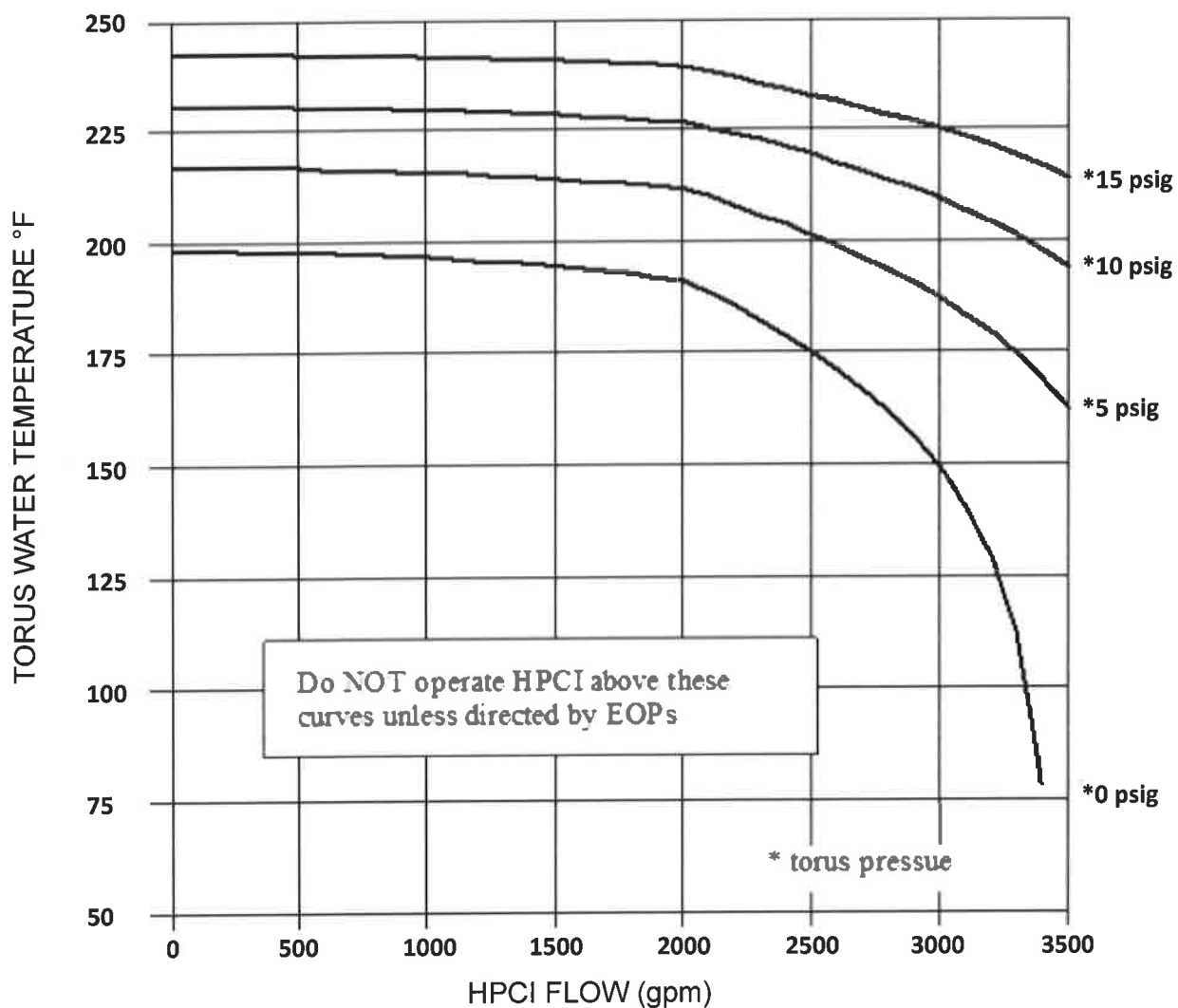
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Figure 3
NPSH for the RCIC Turbine



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Figure 4
NPSH for the HPCI Turbine



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References:

- (1) BECH-M143<1, 5>
- (2) NEI 12-06, Diverse and Flexible Coping Strategies (FLEX) Implementation Guide
- (3) NEI 13-02, [Rev. 1], Industry Guidance for Compliance With Order EA-13-109
- (4) EC 281991 Reliable Hardened Containment Vent – Wetwell NRC Order EA-13-109
- (5) EOP Bases Document, EOP Curves and Limits
- (6) EOP Bases Document, EOP-2 Primary Containment Control Guideline
- (7) BWROG Fukushima Response Committee, Beyond Design Basis RCIC Elevated Temperature Functionality Assessment
- (8) EC 0000285475, Evaluation # EVAL-16-M01
- (9) CAL-M15-014

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Usage Level
Continuous Use

Record the following: Date/Time: _____ / _____ Initials: _____

NOTE: User shall perform and document a Temp Issue/Rev. Check to ensure revision is current, in accordance with procedure use and adherence requirements.

Prepared By: _____ / _____ Date: _____
Print Signature

CROSS-DISCIPLINE REVIEW (AS REQUIRED)

Reviewed By: _____ / _____ Date: _____
Print Signature

Reviewed By: _____ / _____ Date: _____
Print Signature

PROCEDURE APPROVAL

Approved By _____ / _____ Date: _____
Print Signature

JOB PERFORMANCE MEASURE

JPM TITLE: EVALUATE PARS WHEN CONDITIONS CHANGE

JPM NUMBER: 2.4.44-01 **REV.** 1

TASK NUMBER(S) / TASK TITLE(S): 3.01
IMPLEMENT THE EMERGENCY PLAN

K/A NUMBERS: 2.4.44 **K/A VALUE:** SRO 4.4

Justification (FOR K/A VALUES <3.0):

TASK APPLICABILITY:

☐ RO ☒ SRO ☐ STA ☐ Non-Lic ☒ SRO CERT ☐ OTHER: _____

APPLICABLE METHOD OF TESTING: Simulate/Walkthrough: ☐ Perform: ☒

EVALUATION LOCATION: In-Plant: ☐ Control Room: ☐

Simulator: ☒ Other: ☒

Lab: ☐

Time for Completion: 20 Minutes Time Critical: YES

Alternate Path [NRC]: NO

Alternate Path [INPO]: NO

Developed by: _____
Instructor/Developer Date

Reviewed by: _____
Instructor (Instructional Review) Date

Validated by: _____
SME (Technical Review) Date

Approved by: _____
Training Supervision Date

Approved by: _____
Training Program Owner Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

ALL STEPS IN THIS CHECKLIST ARE TO BE PERFORMED PRIOR TO USE.

| REVIEW STATEMENTS | YES | NO | N/A |
|---|--------------------------|--------------------------|--------------------------|
| 1. Are all items on the signature page filled in correctly? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Has the JPM been reviewed and validated by SMEs? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Can the required conditions for the JPM be appropriately established in the simulator if required? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Do the performance steps accurately reflect trainee's actions in accordance with plant procedures? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Is the standard for each performance item specific as to what controls, indications and ranges are required to evaluate if the trainee properly performed the step? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Has the completion time been established based on validation data or incumbent experience? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. If the task is time critical, is the time critical portion based upon actual task performance requirements? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Is the job level appropriate for the task being evaluated if required? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Is the K/A appropriate to the task and to the licensee level if required? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Is justification provided for tasks with K/A values less than 3.0? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Have the performance steps been identified and classified (Critical / Sequence / Time Critical) appropriately? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Have all special tools and equipment needed to perform the task been identified and made available to the trainee? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Are all references identified, current, accurate, and available to the trainee? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Have all required cues (as anticipated) been identified for the evaluator to assist task completion? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. Are all critical steps supported by procedural guidance? (e.g., if licensing, EP or other groups were needed to determine correct actions, then the answer should be NO.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. If the JPM is to be administered to an LOIT student, has the required knowledge been taught to the individual prior to administering the JPM? TPE does not have to be completed, but the JPM evaluation may not be valid if they have not been taught the required knowledge. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

All questions/statements must be answered "YES" or "N/A" or the JPM is not valid for use. If all questions/statements are answered "YES" or "N/A," then the JPM is considered valid and can be performed as written. The individual(s) performing the initial validation shall sign and date the cover sheet.

Protected Content: None



2.4.44-01, Evaluate PARs when Conditions Change, Rev. 1

JPM
Page 3 of 20

UPDATE LOG: Indicate in the following table any minor changes or major revisions (as defined in TR-AA-230-1003) made to the material after initial approval. Or use separate Update Log form TR-AA-230-1003-F16.

| # | DESCRIPTION OF CHANGE | REASON FOR CHANGE | AR/TWR# | PREPARER | DATE |
|--------|---|-------------------|----------|------------|------|
| | | | | SUPERVISOR | DATE |
| Rev. 0 | New JPM | | | | |
| Rev. 1 | Revised for 2016 LOCT Annual Exam. JPM required revision due to new NOTE-5. | | 02107035 | | |
| | | | | | |
| | | | | | |

SIMULATOR SET-UP: *(Only required for simulator JPMs)*

SIMULATOR SETUP INSTRUCTIONS: No setup required.

SIMULATOR MALFUNCTIONS: None

SIMULATOR OVERRIDES: None

SIMULATOR REMOTE FUNCTIONS: None

Required Materials:

EPIP 3.3
EPIP Form NOTE 5
EPIP Form PAR-01

General References:

EPIP chapter 1.1, Rev. 29
EPIP chapter 1.2, Rev. 48
EPIP chapter 2.5, Rev. 21
EPIP chapter 3.3, Rev. 33
EPIP Form NOTE-5, Rev. 18
EPIP Form PAR-01, Rev. 4

Task Standards:

1. PAR upgrade determined
2. EPIP Form-05 - Box 4 - Student marks **Drill**.
3. EPIP Form-05 - Box 11 - Student writes in **15** mph.
4. EPIP Form-05 - Box 12 - Student writes in **185** degrees.
5. EPIP Form-05 - Box 14 - SRO checks "Is occurring (go to block 15)"
6. EPIP Form-05 – Box 18 – SRO enters today's date and time
7. EPIP Form-05 – Box 19 – SRO checks [] E
8. When filled out, the student submits the EPIP FORM NOTE-05 to the OSM to sign within the 15 minutes from the PARS change determination.
9. The student contacts Linn, Benton Counties and the state via the ALL CALL phone within 15 minutes from the PARS change determination.

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

DURING THE JPM, ENSURE PROPER SAFETY PRECAUTIONS, FME, AND/OR RADIOLOGICAL CONCERNS AS APPLICABLE ARE FOLLOWED.

INITIAL CONDITIONS: (GIVE the Student Turnover Sheet #1 and the completed in EAL form)

- It's Saturday evening and a severe accident has occurred at DAEC.
- The ERO cannot respond to the plant due to a major ice storm that has ALL Roads in Eastern Iowa closed due to 100% ice covered conditions and multiple accidents.
- RPV level was at -110 inches for a considerable time, it is now at 30 inches and stable.
- Emergency Depressurization has been performed.
- The "C" Main Steam Line is not isolated.
- The TSC is NOT staffed at this time.
- An EAL declaration of GENERAL EMERGENCY has been made.
- State, Local, and National Governmental notifications have been made for this GENERAL EMERGENCY (EAL form that was used for notifications is provided).

Once the student has looked over the previous information, provide Turnover Sheet #2

Since the GENERAL EMERGENCY has been declared and notifications made, the following has occurred

- The Shift Chemist has just run a Midas Dose Assessment, and has reported the following results:
 - The dose assessment predicts the following readings for the area outside the Site Boundary:
 - At 3 miles, the projected TEDE Dose will be 2.5R and the projected CDE Dose will be 4.8R.
 - At 5 miles, the projected TEDE Dose will be 0.9R and the projected CDE Dose will be 2R.
- The STA has completed a "Fuel Damage Assessment" worksheet, which shows that approximately 25% of fuel damage has occurred.
- The current wind speed is 15 mph, from 185 degrees
- The Off Gas Stack KAMAN HIGH alarm is activated. A filtered release is in progress. It is unknown how long the release will last.
- The state has just arrived at the EOF and has NOT determined the Protective Action Requirements.
- The state is requesting a new EPIP FORM NOTE 5 be filled out prior to the state setting Protective Actions.

INITIATING CUES:

- You are an extra SRO on shift.
- Determine if any changes need to be made to the Protective Action Recommendations based upon the new information.
- If required, fill out a new EPIP FORM NOTE 5 for the state.

This task IS time critical.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

JPM PERFORMANCE INFORMATION

Start Time: _____

NOTE: When providing “Evaluator Cues” to the examinee, care must be exercised to avoid prompting the examinee. Typically cues are only provided when the examinee’s actions warrant receiving the information (i.e., the examinee looks or asks for the indication).

NOTE: Critical steps are marked with a “Y” below the performance step number. Failure to meet the standard for any critical step shall result in failure of this JPM.

| | |
|--|--|
| Performance Step: 1 Critical <u>N</u> PAR-01 | Reviews the PROTECTIVE ACTION DECISION MAKING RECOMMENDATIONS, table PAR-01. |
| Standard: | Reviews and placekeeps table PAR-01. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | _____ |
| | |
| | |

| | |
|--|---|
| Performance Step: 2 Critical <u>N</u> | Based on Midas dose assessment conditions, determines that the Protective Action Recommendations should be Upgraded from the Default Recommendations. |
| Standard: | Determines the need to upgrade the Protective Action Recommendations from the default Protective Action Recommendations. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | _____ |

| | |
|--|--|
| Performance Step: 3 Critical <u>Y</u> PAR-01 | Determines that the Protective Action Recommendations are to: Evacuate, (or shelter if release duration is 1 hour or less), within a 2 mile radius and to 5 miles in the downwind subareas, and shelter downwind subareas from 5 miles to EPZ edge. All others monitor and prepare. |
| Standard: | Determines that the PAR block "E" should be recommended to the state. This should be determined within 15 minutes from Turnover #2 (start of JPM). |
| Evaluator Note: | 15 minute Notification Clock starts now, Note the Time _____. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | _____ |

| | |
|--|---|
| Performance Step: 4 Critical <u>N</u> PAR-02 | Recommend that the state initially shelter rather than evacuate the population until conditions improve, based upon given weather conditions. |
| Standard: | RECOMMEND that the state initially shelter 2-mile radius and 5 mile down wind sub-areas, based on weather conditions. |
| Evaluator Note: | The student should recommend shelter vice evacuation. However, this is the State of Iowa's decision, it does not constitute failure if not recommended, but should be noted as a competency. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | _____ |

| | |
|--|--|
| Performance Step: 5 Critical <u>Y</u> | 4. STATUS: [] ACTUAL [] DRILL |
| Standard: EPIP NOTE-05 Block 4 | SRO marks [X] DRILL |
| Evaluator NOTE: | Boxes 1, 2, 3, and 6 are marked during the notification process |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|---|--|
| Performance Step: 6 Critical N | 5. IF an EAL is being declared, THEN provide the following message to the offsite agencies, otherwise: <input type="checkbox"/> N/A (and go to step 8) "This is the Duane Arnold Energy Center. We have declared a(n) _____", standby for additional information." **State one of the following: <input type="checkbox"/> Unusual Event <input type="checkbox"/> Alert <input type="checkbox"/> Site Area Emergency <input type="checkbox"/> General Emergency |
| Standard: EPIP NOTE-05 Block 5 | SRO marks <input checked="" type="checkbox"/> N/A (and go to step 8) |
| Evaluator NOTE: | Message confirmation check marks are marked during the notification process |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

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|---|--|
| Performance Step: 7 Critical N | 8. Plant Status: <input type="checkbox"/> At Power <input type="checkbox"/> Shutdown |
| Standard: EPIP NOTE-05 Block 8 | SRO marks <input checked="" type="checkbox"/> Shutdown |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|---|---|
| Performance Step: 8 Critical N | 9. <input type="checkbox"/> PAR Change Only <input type="checkbox"/> EAL Termination <input type="checkbox"/> Recovery <input type="checkbox"/> N/A |
| Standard: EPIP NOTE-05 Block 9 | SRO marks <input checked="" type="checkbox"/> PAR Change Only |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|---|--|
| Performance Step: 9 Critical N | 10. Facility in Command and Control: <input type="checkbox"/> CR <input type="checkbox"/> TSC <input type="checkbox"/> EOF |
| Standard: EPIP NOTE-05 Block 10 | SRO marks <input checked="" type="checkbox"/> CR |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|--|---|
| Performance Step: 10 Critical Y | 11. Wind Speed (50m preferred) _____ mph |
| Standard: EPIP NOTE-05 Block 11 | SRO writes in wind speed as 15 mph |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|--|---|
| Performance Step: 11 Critical Y | 12. Wind Direction (50m preferred) from _____ degrees |
| Standard: EPIP NOTE-05 Block 12 | SRO writes in wind direction as 185 degrees |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|--|---|
| Performance Step: 12 Critical N | 13. Category "F" EAL declaration only, otherwise: <input type="checkbox"/> N/A Fuel cladding Barrier <input type="checkbox"/> Loss <input type="checkbox"/> Pot. Loss RCS Barrier <input type="checkbox"/> Loss <input type="checkbox"/> Pot. Loss Primary Containment Loss <input type="checkbox"/> Loss <input type="checkbox"/> Pot. Loss |
| Standard: EPIP NOTE-05 Block 13 | SRO marks: Fuel cladding Barrier <input checked="" type="checkbox"/> Loss <input type="checkbox"/> Pot. Loss RCS Barrier <input checked="" type="checkbox"/> Loss <input type="checkbox"/> Pot. Loss Primary Containment Loss <input checked="" type="checkbox"/> Loss <input type="checkbox"/> Pot. Loss |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|--|--|
| Performance Step: 13 Critical Y | 14. Abnormal Release due to the event? <input type="checkbox"/> Has not occurred (go to block 18) <input type="checkbox"/> Has occurred but is terminated (go to block 15) <input type="checkbox"/> Is occurring (go to block 15) |
| Standard: EPIP NOTE-05 Block 14 | SRO marks <input checked="" type="checkbox"/> Is occurring (go to block 15) |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|--|--|
| Performance Step: 14 Critical N | 15. Airborne Release to the Environment <input type="checkbox"/> Below Federal Limits (no Kaman Hi-Hi) <input type="checkbox"/> At or Above Federal limits (Kaman Hi-Hi) |
| Standard: EPIP NOTE-05 Block 15 | SRO checks <input checked="" type="checkbox"/> Below Federal Limits (no Kaman Hi-Hi) |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|--|--|
| Performance Step: 15 Critical N | 16. Type of Release <input type="checkbox"/> Airborne Filtered <input type="checkbox"/> Airborne Unfiltered <input type="checkbox"/> Radioactive Liquid |
| Standard: EPIP NOTE-05 Block 16 | SRO checks <input checked="" type="checkbox"/> Airborne Filtered |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|--|---|
| Performance Step: 16 Critical N | 17. Projected Duration of Release <input type="checkbox"/> Unknown (4hour default) <input type="checkbox"/> 1 hour or less <input type="checkbox"/> Release Duration estimate: _____ hour(s) |
| Standard: EPIP NOTE-05 Block 17 | SRO checks <input checked="" type="checkbox"/> Unknown (4hour default) |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|--|--|
| Performance Step: 17 Critical Y | 18. Time / Date of PAR Change determination or N/A: Time: _____ Date: _____ [] N/A |
| Standard: EPIP NOTE-05 Block 18 | SRO fills in PAR change Date and Time |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|--|--|
| Performance Step: 18 Critical Y | 19. Utility Protective Action Recommendations <u>General Emergency</u> [] E |
| Standard: EPIP NOTE-05 Block 19 | SRO marks <u>General Emergency</u> [X] E |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|--|--|
| Performance Step: 19 Critical N | 20. Additional Information |
| Standard: EPIP NOTE-05 Block 20 | SRO leaves block 20 blank, may write "none", or may provide a clarifying note. |
| Evaluator NOTE: | It is not necessary to repeat information from previous blocks |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|--|--|
| Performance Step: 20 Critical N | Approval |
| Standard: EPIP NOTE-05 Block 20 | SRO states that the NOTE-05 is ready for approval. |
| Evaluator CUE: | Print a name and write a signature, date and time. DO NOT correct anything. Return the NOTE-05 to the SRO and tell him to perform the notification. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|--|--|
| Performance Step: 21 Critical N | 1. Using the "All-Call" phone press "All Call" to contact the offsite agencies (<i>inform personnel to standby</i>) |
| Standard: EPIP NOTE-05 Block 1 | SRO presses "All Call" on the "All-Call" phone to contact the offsite agencies (<i>inform personnel to standby</i>) – OR – uses alternate numbers |
| Evaluator CUE: | Have the SRO simulate using the phone and act as each agency contacted. If the SRO presses "All Call" respond as "Linn County", initials "LC" then "Benton County" initials "BC" then as "State of Iowa" initials "IA" |
| Evaluator NOTE: | Write down the time _____ you replied as the first agency. This will be the TIME CRITICAL information required for step 18 below. The 15 minute NRC requirement still applies even if alternate phone numbers are used. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | |

| | |
|--|---|
| Performance Step: 22 Critical Y | 2. First offsite agency contacted: Time: _____ |
| Standard: EPIP NOTE-05 Block 2 | SRO Documents the time in box 2 the first agency was contacted. |
| Evaluator NOTE: | The first agency contacted is required to be complete 15 minutes after the event is declared. This initial notification satisfies the time requirement for the NRC DEP-PI. |
| Performance: | SATISFACTORY _____ UNSATISFACTORY _____ |
| Comments: | Time SRO acknowledged the initial turnover: _____ Time recorded for the PAR Change: _____ Elapsed Time: _____ Time recorded for the PAR Change: _____ Time recorded for notification in block 2: _____ Elapsed Time: _____ IF both elapsed times are < 15 minutes, then the TIME CRITICAL requirement of this JPM is satisfied. |

Terminating Cues: When "All Call" is simulated, Cue the operator that you are Linn, Benton and state, and that the JPM is complete.

NOTE: Ensure the turnover sheet that was given to the examinee is returned to the evaluator.

Stop Time: _____



Examinee: _____

Evaluator: _____

☐ RO ☐ SRO ☐ STA ☐ Non-Lic ☐ SRO CERT

Date: _____

☐ LOIT RO ☐ LOIT SRO

PERFORMANCE RESULTS:

SAT: UNSAT:

Remediation required:

YES NO **COMMENTS/FEEDBACK:** (Comments shall be made for any steps graded unsatisfactory).**EXAMINER NOTE:** ENSURE ALL EXAM MATERIAL IS COLLECTED AND PROCEDURES
CLEANED, AS APPROPRIATE.**EVALUATOR'S SIGNATURE:** _____*NOTE: Only this page needs to be retained in examinee's record if completed satisfactorily. If
unsatisfactory performance is demonstrated, the entire JPM should be retained.*

TURNOVER SHEET #1

INITIAL CONDITIONS:

- It's Saturday evening and a severe accident has occurred at DAEC.
- The ERO cannot respond to the plant due to a major ice storm that has ALL Roads in Eastern Iowa closed due to 100% ice covered conditions and multiple accidents.
- RPV level was at -110 inches for a considerable time, it is now at -30 inches and stable.
- Emergency Depressurization has been performed.
- The "C" Main Steam Line is not isolated.
- The TSC is NOT staffed at this time.
- An EAL declaration of GENERAL EMERGENCY has been made.
- State, Local, and National Governmental notifications have been made for this GENERAL EMERGENCY (The EAL form that was used for notifications is provided.).

• **TURNOVER SHEET #2**

Continuing INITIAL CONDITIONS:

Since the GENERAL EMERGENCY has been declared and notifications made, the following has occurred

- The Shift Chemist has just run a Midas Dose Assessment, and has reported the following results:
 - The dose assessment predicts the following readings for the area outside the Site Boundary:
 - At 3 miles, the projected TEDE Dose will be 2.5R and the projected CDE Dose will be 4.8R.
 - At 5 miles, the projected TEDE Dose will be 0.9R and the projected CDE Dose will be 2R.
- The STA has completed a "Fuel Damage Assessment" worksheet, which shows that approximately 25% of fuel damage has occurred.
- The current wind speed is 15 mph, from 185 degrees.
- The Off Gas Stack KAMAN HIGH alarm is activated. A filtered release is in progress. It is unknown how long the release will last.
- The state has just arrived at the EOF and has NOT determined the Protective Action Requirements.
- The state is requesting a new EPIP FORM NOTE 5 be filled out prior to the state setting Protective Actions.

INITIATING CUES:

- You are an extra SRO on shift.
- Determine if any changes need to be made to the Protective Action Recommendations based upon the new information.
- If required, fill out a new EPIP FORM NOTE 5 for the state.

This task IS TIME CRITICAL.

NOTE-05
DUANE ARNOLD ENERGY CENTER EMERGENCY NOTIFICATION

Signature Page

Record the following: Date/Time: _____ / _____ Initials: _____

NOTE: User shall perform and document a Temp Issue/Rev. Check to ensure revision is current, in accordance with procedure use and adherence requirements.

Prepared By: _____ / _____ Date: _____
Print Signature

CROSS-DISCIPLINE REVIEW (AS REQUIRED)

Reviewed By: _____ / _____ Date: _____
Print Signature

Reviewed By: _____ / _____ Date: _____
Print Signature

PROCEDURE APPROVAL

Approved By _____ / _____ Date: _____
Print Signature

| DUANE ARNOLD ENERGY CENTER EMERGENCY NOTIFICATION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|---|--|--|----------------|---|---|--|--|---|---|---|--|--|---|---|---|--|--|---|---|---|---|---|---|---|---|---|---|
| 1. Using the "All-Call" phone press "All-Call" to contact the offsite agencies (Inform personnel to standby) | | | | | | | | | | 2. First offsite agency contacted: Time: <u>1857</u> | | | | | | | | | | | | | | | | | | | | |
| 3. Initial Roll Call (after all on line): <input checked="" type="checkbox"/> Benton <input checked="" type="checkbox"/> Linn <input checked="" type="checkbox"/> State of Iowa | | | | | | | | | | 4. STATUS: <input type="checkbox"/> ACTUAL <input checked="" type="checkbox"/> DRILL | | | | | | | | | | | | | | | | | | | | |
| 5. IF an EAL is being declared, THEN provide the following message to the offsite agencies, otherwise: <input type="checkbox"/> N/A (and go to step 8) <div style="text-align: center;"> "This is the Duane Arnold Energy Center. We have declared a(n) _____", standby for additional information." **State one of the following: <input type="checkbox"/> Unusual Event <input type="checkbox"/> Alert <input type="checkbox"/> Site Area Emergency <input checked="" type="checkbox"/> General Emergency </div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6. Confirm that the previous message was received by all offsite agencies: <input checked="" type="checkbox"/> Benton <input checked="" type="checkbox"/> Linn <input checked="" type="checkbox"/> State of Iowa Time: <u>1902</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. EAL # Declared: <u>EG 1.0</u> EAL Date: <u>TODAY</u> EAL Time: <u>1850</u> | | Category | | | | Classification | | | | Sequence | | | | | | | | | | | | | | | | | | | | |
| | | R | F | H | S | E | C | U | A | S | G | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 8. Plant Status: <input type="checkbox"/> At Power <input checked="" type="checkbox"/> Shutdown | | | | | 9. <input type="checkbox"/> PAR Change Only <input type="checkbox"/> EAL Termination <input type="checkbox"/> Recovery <input checked="" type="checkbox"/> N/A | | | | | 10. Facility in Command and Control: <input checked="" type="checkbox"/> CR <input type="checkbox"/> TSC <input type="checkbox"/> EOF | | | | | | | | | | | | | | | | | | | | |
| 11. Wind Speed (50m preferred) <u>18</u> mph | | 12. Wind Direction (50m preferred) from <u>170</u> degrees | | 13. Category "F" EAL declaration only, otherwise: <input type="checkbox"/> N/A | | | | | Fuel cladding Barrier <input checked="" type="checkbox"/> Loss <input type="checkbox"/> Pot. Loss | | | | | RCS Barrier <input checked="" type="checkbox"/> Loss <input type="checkbox"/> Pot. Loss | | | | | Primary Containment Barrier <input checked="" type="checkbox"/> Loss <input type="checkbox"/> Pot. Loss | | | | | | | | | | | |
| 14. Abnormal Release due to the event? <input checked="" type="checkbox"/> Has not occurred (go to block 18) <input type="checkbox"/> Has occurred but is terminated (go to block 15) <input type="checkbox"/> Is occurring (go to block 15) | | | | | 15. Airborne Release to the Environment <input type="checkbox"/> Below Federal Limits (no Kaman HI-HI) <input type="checkbox"/> At or Above Federal Limits (Kaman HI-HI) | | | | | 16. Type of Release <input type="checkbox"/> Airborne Filtered <input type="checkbox"/> Airborne Unfiltered <input type="checkbox"/> Radioactive Liquid | | | | | 17. Projected Duration of Release <input type="checkbox"/> Unknown (4 hour default) <input type="checkbox"/> 1 hour or less <input type="checkbox"/> Release Duration estimate: _____ hour(s) | | | | | | | | | | | | | | | |
| 18. Time / Date of PAR Change determination or N/A: Time: _____ Date: _____ <input checked="" type="checkbox"/> N/A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19. Utility Protective Action Recommendations | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>Unusual Event</u> <input type="checkbox"/> A. No actions recommended | | | | | | | | | | <u>Alert</u> <input type="checkbox"/> B. No actions recommended | | | | | <u>Site Area Emergency</u> <input type="checkbox"/> C. No actions recommended | | | | | | | | | | | | | | | |
| <u>General Emergency</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> D. Dose projections ≥ 1 REM TEDE or ≥ 5 REM CDE at 0-2 miles from the site boundary | | | | | <input type="checkbox"/> E. Dose projections ≥ 1 REM TEDE or ≥ 5 REM CDE at 2-5 miles from the site boundary OR Rapidly Progressing Severe Accident defined as a Primary Containment Barrier Loss per the EAL Fission Product Barrier table and EITHER of the following conditions: <ul style="list-style-type: none"> Exceeding EAL threshold for Primary Containment Barrier Potential Loss for Radiation/Core Damage ≥ 1 REM TEDE or ≥ 5 REM CDE at the site boundary | | | | | | | | | | <input type="checkbox"/> F. Dose Projections ≥ 1 REM TEDE or ≥ 5 REM CDE at 5-10 miles from the site boundary. | | | | | <input type="checkbox"/> G. Hostile Action In Progress OR Other known impediments | | | | | | | | | | |
| Evacuate, (or shelter if release duration is 1 hour or less), within a 2 mile radius and to 5 miles in the downwind subareas. All others monitor and prepare. | | | | | Evacuate, (or shelter if release duration is 1 hour or less), within a 2 mile radius and to 5 miles in the downwind subareas and shelter downwind subareas from 5 miles to EPZ edge. All others monitor and prepare. | | | | | | | | | | Evacuate, (or shelter if release duration is 1 hour or less), within a 2 mile radius and to EPZ edge in the downwind subareas, and shelter as appropriate beyond EPZ edge. All others monitor and prepare. | | | | | Shelter in Place within a 2 mile radius and to 5 miles in the downwind subareas. All others monitor and prepare. | | | | | | | | | | |
| 20. Additional Information: <u>SEVERE ICE STORM IN PROGRESS, HAMPERING ERO RESPONSE. RPV LEVEL BELOW "25" INCHES. THE 'C' MSL IS NOT ISOLATED</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Approved: <u>SHIFT OSM</u> <small>print name</small> | | | | | | | | | | <u>1. Shift OSM</u> <small>signature</small> | | | | | Date: <u>TODAY</u> | | | | | Time: <u>1855</u> | | | | | | | | | | |
| Transmitted by: Name: <u>SHIFT COMMUNICATOR</u> Time: <u>1904</u> | | | | | | | | | | Final Roll call (agency initials): Benton <u>BC</u> Linn <u>LC</u> Iowa <u>SI</u> | | | | | | | | | | | | | | | | | | | | |

NOTE-05 INSTRUCTIONS

NOTE: Any information in the bold-bordered boxes of the form is required to be accurate per NEI 99-02 guidance and is used to determine performance per NRC DEP-PI.

NOTE: The number of the item listed below corresponds to the form box number.

1. Use of All-Call is the preferred method to contact the offsite agencies. IF the All-Call is not available OR you are having difficulty contacting a specific agency (using the agency-specific button on the All-Call), THEN use of a commercial line is the next available option. Refer to the below listed contact numbers.

Note: This information can also be found in the Emergency Telephone Book (ETB) under Manual State, County, & Federal Notification Process.

NOTE: The 15 minute NRC requirement documented in Box 5 of this form still applies even if alternate phone numbers are used. Request additional assistance as necessary to ensure the 15 minute requirement is met.

| | | | |
|---------------|----------------|----------------|----------------------------------|
| Linn County | 892-6505 | 892-6500 | 398-4012 (Dispatch) |
| Benton County | (319) 472-4519 | (319) 640-5080 | (319) 472-2337 ext. 1 (Dispatch) |
| State of Iowa | (515) 979-2200 | (515) 725-3231 | (515) 323-4360 (Dispatch) |

2. The first agency contacted is required to be complete 15 minutes after the event is declared. Reference EPIP 1.2, Notifications. Document the time in box 2. This initial notification satisfies the time requirement for the NRC DEP-PI.
3. Ensure a roll call is performed AFTER all personnel are on line. This ensures that all agencies are available to receive the emergency message. There are historical examples in which one or more agencies have dropped off and this was not recognized until the final roll call. If this occurs, then an immediate callback will be needed OR a separate contact to that agency via commercial line. The agency-specific button on the All-Call phone can be used for direct contact of an offsite agency.
4. Check the appropriate box for either ACTUAL or DRILL. If performing for training, check DRILL.
5. If this is NOT for an EAL declaration, ensure that the N/A box is checked and go to step 8, no other information is then required to be completed in this box. IF an EAL is declared, THEN check the associated event classification. Provide the structured message to the offsite agencies.
6. Confirm with the offsite agencies that the message was received and check associated agency box. A simple yes answer from the offsite agencies is sufficient to confirm. Three part communication is not required.

- Example message to communicate: *All agencies confirm that this message was received. Linn county do you confirm? Benton County do you confirm? State of Iowa do you confirm?*

When this is complete document the time that the message was confirmed received.

NOTE: NRC Regulations require that ALL offsite agencies are aware of the Event Classification within 15 minutes following event declaration (RSPS).

It is not necessary to put the emergency level declared in the canned message blank. The checkboxes are sufficient. IF a person does use the blank to write down the emergency level it will not count against the NEI 99-02 accuracy requirements for the box.

7. Document the EAL number and corresponding date and time of declaration. Circle the letters corresponding for the Category, Classification, and Sequence. It is not necessary to circle the box with a period symbol as this is merely a place-keeper to remind the communicator that EALs are in the number format X.X. However, if the period symbol is circled it will not count against the accuracy requirement of the box.

NOTE-05 INSTRUCTIONS

8. Check the appropriate box for whether the Reactor is at power or shutdown. This determination is meant to occur upon declaration of the event emergency level and not to be an item that is continuously assessed so as to preclude the timely notification to the OROs.
 - Shutdown should be determined when the Reactor is subcritical with Reactor power below the heating range. This can be determined by Average Power Range Monitors downscale (< 5%). If reactor power falls below 5% and then rises to 5% or above, the reactor should not be considered to be shut down below the heating range.
9. Check the appropriate box for the reason this emergency message is being transmitted if other than an EAL declaration. Check the N/A box if none of the listed reasons apply.
10. Check the associated facility that currently has Command and Control.
11. Use the PPC screen SPRAD or SPMET1 to determine wind speed and document in box 11. Use the 50m value if available; otherwise use the 10m value. If none of these are available, contact the National Weather Service at 1-800-803-9357.
12. Use the PPC screen SPRAD or SPMET1 to determine wind direction and document in box 12. Use the 50m value if available; otherwise, use the 10m value. If none of these are available, contact the National Weather Service at 1-800-803-9357.
13. IF the EAL that was declared is associated with the Fission Product Barrier table (e.g. Category F), THEN check the applicable boxes that indicate whether a Loss or Potential Loss has occurred. Check all boxes that apply. IF the EAL declared is not from the EAL Fission Product Barrier Table THEN N/A box 13.
14. Information for an abnormal release can come from different sources. Two sources to consider are the actual KAMAN data and Field Team Reports (if KAMANS are not available).
NOTE: ARP 1C35A <C-3> provides guidance as to what is considered a release in progress. On the KAMAN monitor the yellow "HI" line on the Rad Level Trend Display corresponds to a release rate equal to 50 times normal which is the definition of a release in progress due to an event.

Perform the following:

- Check "Has not occurred" if you have not received a KAMAN "HI" alarm. Go to box 18.
 - Check "Has occurred but is terminated" if you had received a KAMAN "HI" alarm as a result of the event but now it is no longer alarming. Go to box 15.
 - Check "Is occurring" if you currently have a KAMAN "HI" alarm active AND the release is not isolated. Go to box 15.
15. If there is an airborne release to the environment, use the KAMAN monitors and determine if the KAMAN HI-HI (RED) alarm has been exceeded. Check the appropriate box.
 16. Check the box for ALL the releases that apply. Refer to the following:
 - a) Airborne Filtered: any release flow path through any functioning Standby Gas Treatment train or through the Offgas System Adsorbers to the Offgas Stack. This release is monitored by the Offgas Stack Kaman monitor. This type of release is only checked if there is an Offgas Stack KAMAN HI Alarm or equivalent supporting information such as dose assessment or Field Team reports.
 - b) Airborne Unfiltered: for ANY other airborne release path. This release path may be monitored by either a Reactor Building or Turbine Building KAMAN monitor OR it could be an unmonitored release. This type of release is only checked if there is a Reactor Building or Turbine Building KAMAN HI Alarm or equivalent supporting information such as dose assessment or Field Team reports.
 - c) Radioactive Liquid: Check box if known liquid release. Contact the Site Radiation Protection Coordinator for additional information and support if needed.

NOTE-05 INSTRUCTIONS

17. Check appropriate box for duration of release. Unless the release duration can be determined with certainty then "unknown" should be checked. If the duration is one hour or less, it could affect the PAR determination. If you know the release duration, write down in box 17.
18. If the Emergency Notification is for a PAR Change only, write down the date and time that the PAR change was declared. IF there was not a PAR change associated with this notification, THEN check N/A. It is not necessary to put N/A for Time and Date. If a person does put N/A in the time and date blank it will NOT count against the NEI 99-02 requirements for the box.
19. Refer to EPIP 3.3, Dose Assessment and Protective Action for guidance on PAR decision making. Check the associated letter corresponding to the PAR. Use EPIP 3.3, PAR-01 flowchart as additional guidance. For the purposes of PAR declaration, it has been determined with the Offsite Response Organizations (OROs) that DAEC would only recognize and determine on their own that an impediment existed for the "G" PAR if a Hostile Action was taking place. However, IF the OROs have previously provided information to DAEC that an impediment exists, THEN the "G" PAR would apply as well. Impediments other than Hostile Action would not be known to DAEC unless the information was provided from the offsite response agencies (OROs). Additionally, DAEC is not responsible for soliciting information and the OROs are not obligated to provide information in order to assess "other known impediments". Examples of other impediments may include (not an all-inclusive list):
 - Evacuation support
 - Adverse weather
 - Roadways closed
20. Examples of additional information could include:
 - A wind shift that results in additional downwind subareas that may be affected by this event
 - Corrections to the original notifications
 - If multiple initiating conditions are present, provide clarification in this box
 - Other information that may be needed by the State and/or Counties
 - NOTE: it is not necessary to repeat information from previous blocks

Final Completion Instructions:

- Authorizing individual prints name and provides signature, date and time.
- Person transmitting message will sign/put time in box, and provide this information to personnel on line.
- Final Roll call is performed for all offsite agencies on line. Document the initials of the offsite agencies.
- Once complete with all of the above information, ask the offsite agencies if they have any questions and instruct them to call back if they require additional information later.
- FAX page 1 of the completed form to the offsite agencies. The FAX machines have laminated instructions next to them for guidance. Generally, for distribution: Button 01 is for working hours and Button 02 is for off hour and weekend distribution. If the fax is not operable, confirmation will need to be made via telephone or radio. Working hours are considered 7am to 5 pm.