

Human Performance (HU) tools DLA – Script for Practical Exercise

Step 2. Successfully demonstrate the correct use of the standard through simulated execution

Part 1 – Individual exercises for each HU tool

Three way communication

Lead: As leaders, you are expected to consistently demonstrate three way communication, to confirm you have understood instructions, or when conveying operational information.

Mgr 1, here is procedure to trip some breakers.

Give work direction to person in field, (performed by Mgr 2), via phone or radio

- clear repeat back
- phonetic alphabet used
- hear 'that is correct'

Q: When are 3 way communications to be used?

Phonetic alphabet

Using flashcards, Mgr1 goes thru all cards, Mgr 2 provides phonetic word.

Reverse roles

Record number of missed letters on record form. Pass is 24/26 correct

Pre job Brief

Lead: What are five basic questions to be asked in every pre job brief?

The two managers may work together to get 5 questions, and may refer to their HU tools card – must have brought it with them.

Q:When is a pre job brief required?

Q: Besides the 5 basic questions, list 3 other items that a detailed pjb addresses.

Procedure use and adherence & placekeeping

Given a procedure to trip a breaker, demonstrate correct procedure use and placekeeping methods.

Human Performance (HU) tools DLA – Script for Practical Exercise

- cross out procedure steps that are “not applicable” and have the supervisor approve and initial these.
- During the pre-job briefing, identify and mark in an “eye-catching” manner any critical steps prior to starting work.
- Perform the step as written.
- Highlight or mark (e.g., slash) a step as it is completed.
- Sign or initial a sign-off blank for each step or each action, where blanks are provided.
- Re-read and verify completion of the previous few steps performed if distracted or interrupted.
- Once a procedure page has been completed, confirm all required steps are complete and initial completion of the page in the margin of the procedure.
- If a page is not completed, draw a line under the last step completed and write “Completed to this step”, sign and date.

Q: What does procedure adherence mean?

Q: When is place keeping required?

Self checking - STAR

Lead: use self checking, and turn on the light switch for room CR 6010E

Mgr 1:

- repeat back instruction
- go to light switch
- verify that the light switch is for the correct room
- touch light switch
- pause, to confirm no contra indications
- turn on light switch
- confirm back to lead that light switch for CR 6010E has been turned on

Q: What should you observe, when some one is using STAR?

Verification Methods – Peer checking, concurrent and independent verification

Lead: Using **peer checking**, turn on light switch for room CR 6010E

Mgr 1:

Human Performance (HU) tools DLA – Script for Practical Exercise

- repeat back instruction
- confirm that Mgr 2 will provide peer check
- go to light switch
- verify that the light switch is for the correct room

Mgr 2:

- Go to light switch
- verify that the light switch is for the correct room

Mgr 1, to Mgr 2:

- Please confirm that the task is to switch on the light for CR 6010, which is this light switch

Mgr 2, to Mgr 1:

- I confirm that the task is to switch on the light for CR 6010, which is this light switch

- Mgr 1 switch on light
- Mgr 2 observe Mgr 1 before and during task,

- Mgr 2: you have correctly turned on light in CR6010, which was the task.

Q: When should peer checking be used?

Lead: Using **concurrent verification and flagging**, turn on light switch for room CR 6010E

Mgr 1:

- Get the procedure – concurrent verification is formal, and requires sign off
- repeat back instruction
- confirm that Mgr 2 will provide concurrent verification
- go to light switch
- verify that the light switch is for the correct room
- pause, checks procedure, says the task is to turn on the light switch for CR6010E

Mgr 2:

- Get the procedure – concurrent verification is formal, and requires sign off
- Go to light switch
- verify that the light switch is for the correct room
- pause, checks procedure, says the task is to turn on the light switch for CR6010E
- since Mgr 2 saw Mgr 1 do this, he should flag the light switch (not truly independent)

Human Performance (HU) tools DLA – Script for Practical Exercise

Mgr 1, to Mgr 2:

- Please confirm that the task is to switch on the light for CR 6010, which is this light switch

Mgr 2, to Mgr 1:

- I confirm that the task is to switch on the light for CR 6010, which is this light switch
- Mgr 2 touches the light switch

Mgr 1

- We are in agreement, that the task is to switch on light for CR 6010, which is this light switch
- Switch on light
- Sign procedure

Mgr 2:

- observe Mgr 1 before and during task,
- you have correctly turned on light in CR6010, which was the task.
- Remove flag from light switch
- Sign procedure

- Mgr 1: Provide signed copy of procedure to Lead.

Q: What are the key differences between peer checking, and concurrent verification?

Lead: Using **independent verification**, turn on light switch for room CR 6010E

Mgr 1:

- Get the procedure – independent verification is formal, and requires sign off
- repeat back instruction
- confirm that Mgr 2 will provide independent verification
- go to light switch
- verify that the light switch is for the correct room
- pause, checks procedure, says the task is to turn on the light switch for CR6010E
- Switch on light
- Verify that light in CR 6010 is on
- report to Mgr 2 that task is complete, and ready for independent verification
- Sign procedure

Mgr 2:

Human Performance (HU) tools DLA – Script for Practical Exercise

- Get the procedure – independent verification is formal, and requires sign off
- Go to light switch
- verify that the light switch is for the correct room
- pause, checks procedure, says the task is to turn on the light switch for CR6010E
- verifies to Mgr 1 that light switch in CR 6010 is on.
- Sign procedure

Mgr 1:

- confirms to lead that light switch in CR6010 has been turned on, and this has been independently verified by Mgr 2.
- Provide signed copy of procedure to Lead.

Human Performance (HU) tools DLA – Script for Practical Exercise

Part 2 – Integrated exercise, using Electrical Panel HU Simulator (Panel pictures)

Lead: I am going to be taking you through one of the Human Performance Simulators – called “Electrical Panel HU Simulator”.
These are pictures of Unit 6, 600 volt, Class 3 and Class 4, Bravo and Delta Buses, 53330 B and D and 53340 B and D.

You will demonstrate how to do the tasks I gave you correctly, using:
task preview,
three way communication and use of the phonetic alphabet,
self checking,
verification methods - peer checking, concurrent verification and independent verification.
Flagging,
Procedure use and placekeeping

Go to panel in field, flag the breaker you operate, then confirm completion of task to me. Any questions?

Provide sticky note pad, for flagging of breakers and for writing down breaker numbers.

Confirm team is ready to start.

Lead: Walk me through the steps in your **task preview**

Mgr 1

- Summarize critical steps – get wrong breaker, trip critical equipment, or trip unit
- Anticipate errors
- Forsee worst case consequences for critical steps
- Evaluate controls or contingencies for critical steps
- Review previous experience & lessons learned

Lead: I would like you to trip the breaker for the backup supply to the 600V Class 2 supply. The breaker number is 6-53330-CB10D (delta)

Possible Response:

- Mgr 1: You would like me to trip 6-53330-CB10D?

Lead: That is correct

Human Performance (HU) tools DLA – Script for Practical Exercise

If Mgr 1 trips this breaker and flags it, Lead coaches – tripped wrong breaker

Error: Did not confirm complete set of instructions.

Correct Response:

Mgr 1:

- There appears to be a discrepancy here.
- Breaker 6-53330-CB10D is labelled as being the Fan Motor...,
- not the backup supply to 600V Class 2 supply.
- Please confirm your direction.

Lead: Good catch, Mgr 1.

The correct breaker number is 6-53330-CB10B (bravo)

Mgr 1:

- You would like me to trip 6-53330-CB10B (bravo)

Lead: That is correct. Please use a **peer check** to confirm correct breaker

Mgr 1:

- Using **self-check STAR**, this is breaker 6-53330-CB10B (bravo) and it is labelled as the backup supply to 600V Class 2 supply

Mgr 2:

- Confirm, using **STAR** that this is breaker 6-53330-CB10B (bravo), and it is labelled as the backup supply to 600V Class 2 supply

Mgr 1:

- I will press this button to trip this breaker 6-53330-CB10B (bravo)

Mgr 2:

- That is correct

Mgr 1:

- Presses trip button

Mgr 2:

- You've tripped breaker 6-53330-CB10B (bravo) which was the requested breaker to trip

Mgr 1 To lead::

Human Performance (HU) tools DLA – Script for Practical Exercise

- I have tripped breaker 6-53330-CB10B (bravo) and had that action peer-checked as correct

Lead: Very good. The next step is identified as being a critical step, and so I want you to use **concurrent verification** to ensure you are doing this correctly.

Mgr 1:

- understand that **concurrent verification** is to be used for next task.

Lead: I would like you to trip the breaker for feedwater drains pump 2.
The breaker number is 6-5334-CB12B (bravo)

Mgr 1:

- You would like me to trip feedwater drains pump 2.
- Please advise USI and component number.

Lead: Good catch. Component is 6-4313-PM2. Breaker to be tripped is 6- 5334-CB12B (bravo)

Mgr 1:

- With procedure in hand,
- Locate breaker, use self check to confirm correct component.
- Confirm that breaker is to be tripped

Mgr 2:

- With procedure in hand (separate copy),
- locate breaker, use self check to confirm correct component.
- Confirm that component is to be tripped.
- Flag component to be tripped

Mgr 2

- Touch breaker to be tripped

Mgr 1

- Agree, that is breaker to be tripped.
- Advise Lead that breaker 6-5334-CB12B (bravo) is about to be tripped.
- Trip breaker by pushing trip pushbutton

Mgr 2

- Observes Mgr 1 before and during execution, to confirm that correct action is being taken on correct component.

Human Performance (HU) tools DLA – Script for Practical Exercise

- Verify that correct action was performed, remove flag

Mgr 1

- initial procedure step to verify completion

Mgr 2

- initial procedure step to verify completion

Mgr 1 To Lead:

- Breaker 6-5334-CB12B (bravo) has been tripped, and verified

Lead: Very good.

Please remain at panel. I will be there shortly to confirm that you have tripped the correct breakers

Lead: Confirms correct breaker tripped by verifying labelling on breakers. This is **independent verification**, since it is after the action has occurred. This method of verification cannot be used if there might be immediate adverse consequences to the proposed action.

Skill testing question (not graded): What other method might be used, to do independent verification?

EMI in control room indicates breaker 6-5334-CB12B (bravo) has been tripped. This is also **independent verification** – after the fact.

Lead: This completes practical exercise to demonstrate your knowledge of HU tools

Mgr 1 has: passed or failed the practical evaluation.

Next, have a seat and do Step 3 - complete the written exam on BP PROG 00.07.

Human Performance (HU) tools DLA – Script for Practical Exercise