This document includes hands-on tasks to evaluate the trainees understanding of the Human Machine Interface. As the instructor, you should work with one trainee at a time to do this evaluation. Evaluate the trainees separately for each situation and score them based on the procedural steps listed for that drill. Every answer must be “Yes” to pass the trainee on this evaluation. If any questions were answered “No”, then retraining is required.

*NOTE: Alert operations that you will be using a Robotic Tote Palletizer for training so that they are not alarmed by any activities. (Time with the robotic work cell should have been pre-arranged so as to not negatively impact operations).*

*Please note: The only action requiring entry into the cell during this evaluation is putting the machine in Maintenance mode, where the technician will use the cycle stop and interlock key to activate the light curtain to set the conditions for maintenance mode by removing the empty pallets in location, 2 and 3. The cell can remain in a cycle stopped, home position, during this training, with no LOTO or APP LOTO required.*

**Objective #1: Create a safe work zone**

Trainer Instructions: Ask the trainee to stop the robotic work cell, verify that equipment is in a safe state, demonstrate how to correctly enter and exit the work cell using the interlock key, and how to enter beyond the inner light curtain using the Emergency stop button, per Entering and Exiting Work cell training materials.

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| **Evaluation of procedural steps** | **Yes** | **No** |
| Did the trainee cycle stop the robot correctly pressing the cycle stop button? |  |  |
| Did the trainee verify the arm is in home or perch positon? |  |  |
| Did the trainee press the trap key activation button, verify interlock key activation, remove the key, place it on their wrist, and then enter into the cell? |  |  |
| Did the trainee activate the emergency stop before entering beyond the inner light curtain? |  |  |

**Objective #2: Demonstrate understanding of Human Machine Interface functions and applications**

Trainer Instructions: Ask the trainee to execute key maintenance functions on the HMI. To receive a “yes” the trainee must access the application and provide details on how the particular function works in executing maintenance tasks.

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| **Evaluation of procedural steps** | **Yes** | **No** |
| Home Screen: have the trainee demonstrate the ability to navigate the homes screen. Explain all home screen icons : 1) Active recipe 2) Alarms 3) tote count 4) Date and time Icon 5) Red Arrow 6) Magnifying glass Icon |  |  |
| Maintenance login: Ask the trainee to login to the maintenance function. Ensure the trainee enters the password and user name. Ask the trainee the biggest differences between RME and operations functions (Possible answers: Ability to manually control the robot, change operational mode, access PM screens) |  |  |
| Alarm Icon: Demonstrate the functionality of the alarm icon. |  |  |
| Functional Icons: Have the trainee access the pallet quantity screen by pressing the pallet icon: Ask the trainee how they could use this screen view to diagnose maintenance issue (verification of tote and layer counts after multiple crashes is answer). |  |  |
| Alarm menu: Can the trainee demonstrate navigation and understanding of the alarm menu screen. Identify alarm status and alarm messages. |  |  |
| Maintenance Menu: Demonstrate how to login to the maintenance menu. Demonstrate how to access the preventative maintenance screen and navigate PM task list accessing daily, weekly, and monthly tasks. |  |  |
| Sensor Menu: Can the trainee demonstrate how to navigate the sensor menu screen. |  |  |
| Operational Mode: Can the trainee demonstrate navigation and understanding of operational controls. |  |  |
| Manual Controls: Can the trainee demonstrate how to access the robot manual controls application. |  |  |

**Objective #3: Demonstrate ability to execute Human Machine Interface tasks.**

Trainer Instructions: Ask the trainee to execute key maintenance actions on the HMI. Ensure the proper procedure of activating the emergency stop when entering beyond the inner light curtain. To receive a “yes” the trainee must access complete each action item assigned.

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| **Evaluation of execution of HMI tasks** | **Yes** | **No** |
| Maintenance Mode: Can the trainee demonstrate how to access the maintenance mode conditions page on robot manual controls. Have the trainee demonstrate setting the conditions to enable maintenance mode and put the ARM in maintenance position 1, 2, and 3. ( have trainee reset the conditions for the next participant) |  |  |
| Robot manual controls: Can the trainee demonstrate how to use the robot manual controls. (Reset, hold, open clamp 1, open clamp 2, and abort functions) |  |  |
| Robot Detected Product Drop: Can the trainee demonstrate the ability to recover from a robot detected product drop. |  |  |
| Help Menu: Can the trainee demonstrate the ability to access the help menu |  |  |

**Instructor/Trainee sign off**

As the trainer for the RWC4 and maintenance evaluation, I certify that the technician named below has successfully understood and demonstrated the procedures for Entering and Exiting the work cell, Entering and Exiting the work cell with E-Stop and general maintenance on the Robotic Tote Palletizer Cell (RWC4).

DATE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

TRAINER LOGIN: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

TECHNICIAN LOGIN: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_