

# WP 05-WH1704

Revision 7

## Facility Cask Transfer Car (41-H-003) Operation

Technical Procedure

EFFECTIVE DATE: 04/17/09

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APPROVED FOR USE

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## INTRODUCTION <sup>1</sup>

This procedure provides the instructions for inspecting and conducting the preoperational checks, prior to the start of a remote-handled (RH) waste handling evolution, on the Facility Cask Transfer Car (FCTC) (41-H-003). It also provides the instructions for operating the FCTC.

Performance of this procedure generates the following record(s), as applicable:

- Equipment Logbook

## REFERENCES

### BASELINE DOCUMENTS

- 40 CFR §264.15, "General Inspection Requirements"
- WP 08-PT.03, WIPP Quality Assurance Program Plan for Type "B" Packaging
- WP 13-1, Washington TRU Solutions LLC Quality Assurance Program Description

### REFERENCED DOCUMENTS

- WP 04-IM1000, Issues Management Processing of WIPP Forms
- EA04IM1000-1-0, WIPP Form

## PRECAUTIONS AND LIMITATIONS

- Preoperational checks are to be completed prior to the start of an RH waste handling evolution.
- Only personnel qualified as a Waste Handling Technician/Engineer (WHT/WHE), or trainees operating under the direct supervision of a qualified WHT/WHE, are authorized to perform the waste handling (WH) activities specified in this procedure.
- If this procedure cannot be performed as written, or in sequence, WHE shall be contacted.
- The strain relief device for the cable reel must be firmly attached to the car, **AND** care taken that no strain is being placed on the plug.

- If FCTC is connected to either of the Cask Loading Room (CLR) cable reels, the following conditions must be met to drive the car in reverse:
  - Facility Cask Rotating Device (FCRD) must be powered up.
  - Telescoping Port Shield must be fully retracted.
  - Control Panel 411-CP-264-04 must be **ON**.
  - FCRD must be fully down, lock pins retracted, and latches unlatched.
  - Grapple Hoist and shield bell must be in full up position (position A).
  - FCRD travel limit proximity switch must not be activated.
- The Grapple Hoist position and Telescoping Port Shield position interlocks can be overridden by turning the interlock override switch on 411-CP-264-04 to override.
- Until FCTC is clear of the pivot rails, the full-speed setting on FCTC must be used when traveling on or off the waste conveyance.
- The circuit breaker on the travel motor starter box should only be turned **OFF** prior to connecting, or disconnecting, the FCTC control pendant.
- Safety glasses and a long-sleeve 100% cotton shirt must be worn when opening and closing breakers.
- Equipment Logbook must be reviewed by WHE on a weekly basis, generally the last day of the workweek.
- When loading the FCTC and Facility Cask on the conveyance, and the Facility Cask has a canister inside that exceeds 3,220 lb, the hoisting supervisor must be notified for work bonnet removal. This is necessary for downloading or uploading the FCTC and Facility Cask.

## PREREQUISITE ACTIONS

- 1.0 Review Equipment Logbook for outstanding deficiencies and Action Requests (ARs).
- 2.0 Record equipment number and Not Applicable (N/A) run hours in Equipment Logbook.

- 3.0 If a required inspection becomes delinquent, perform the following:
- 3.1 Immediately notify Site Environmental Compliance (SEC) of the delinquent inspection.
  - 3.2 Schedule and complete the required inspection.
  - 3.3 Document the following in a letter to SEC within five working days:
    - Schedule of inspection
    - Reason(s) why the inspection was not performed
    - Any measures taken to offset negative impacts resulting from not performing the inspection
    - Actions to prevent further delinquencies
  - 3.4 Waste Handling Operation, **GO TO** WP 04-IM1000 and issue a WIPP Form (EA04IM1000-1-0) for delinquent inspection.

## PERFORMANCE

- 1.0 PREOPERATIONAL CHECKS
- 1.1 Prior to energizing FCTC, perform the following:

### WARNING

There is a potential for the control pendant and power cables to be run over, or cut, by the car while it is being moved. This could cause injury to the operator, as well as damage the cable or car components. Care should ALWAYS be used to keep the cables in sight while moving the car. An additional spotter may be used if necessary.

- Inspect the power cables and the FCTC pendant control cable for damage or excessive wear.
- Verify on either end of the car, that the FCTC control pendant is plugged into the receptacle labeled PENDANT CORD.
- Verify car path is clear of obstructions.
- Check general condition of the FCTC: NO damage, loose parts, grease, or trash.
- Verify gear case oil level is in the normal range on the dipstick.

- 1.2 **IF** the FCTC is located in the CLR or RH Bay,  
**THEN** perform the following:
- Verify the cable reel power supply disconnect switches 41P-SW04/41 and 41P-SW04/42 are **OFF**.
  - Verify turntable is in line with the tracks the car is **ON**.
  - If needed, open the FCRD gates and/or remove cover.
  - Connect the power cable from the cable reel in line with the tracks the car is to travel on into the near side receptacle on the car labeled CAR POWER 480V/3PH/60HZ.
  - Verify control panel 411-CP-264-04 is **ON**.
  - Verify FCRD is **ON**.
- 1.3 **IF** the FCTC is located at the Waste Shaft Station,  
**THEN** perform the following:
- Verify the cable reel power supply disconnect switch 53P-SW04/105 is **OFF**.
  - If needed, connect the power cable to the near side receptacle on the car labeled CAR POWER 480V/3PH/60HZ.
- 1.4 Energize the cable connected to the car by placing the disconnect switch in the **ON** position.
- 1.5 Place the circuit breaker on the travel motor starter box in the **ON** position.
- 1.6 Check red POWER ON light on the travel motor starter box door is **ON**.
- 1.7 Momentarily press each push-to-test button, and verify the POWER ON, FORWARD, and REVERSE lights illuminate.

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**NOTE**

In relation to the car, the front or forward end is the end away from the drive mechanism. The rear or reverse end is the opposite end. Normally, the car should be slowed and stopped by turning the speed adjust control to the minimum setting. This reduces heat stress on the motor control circuits. However, the car may be stopped instantly, at any time, by releasing the deadman switch on the pendant.

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- 1.8 Place the FORWARD-REVERSE switch in the **FORWARD** position.

- 1.9 Turn the speed adjust control to the slowest setting.
- 1.10 Grip and hold the deadman switch.

**CAUTION**

To avoid damaging the car, slow speeds should be used near obstructions or near the end of travel.

- 1.11 Slowly raise the speed adjust control setting until the desired speed is obtained.
- 1.12 When the car has run approximately two feet, turn the speed adjust control setting back to the slowest setting.
- 1.13 Release the deadman switch.
- 1.14 Place the FORWARD-REVERSE switch in the **REVERSE** position.
- 1.15 Grip and hold the deadman switch.

**CAUTION**

To avoid damaging the car, slow speeds should be used near obstructions, or near the end of travel.

- 1.16 Slowly raise the speed adjust control setting until the desired speed is obtained.
- 1.17 When the car has run approximately two feet, lower the speed adjust control setting back to the slowest setting.
- 1.18 Release the deadman switch.
- 1.19 Place the FORWARD-REVERSE switch in the **OFF** position.
- 1.20 Place the cable reel disconnect switch in the **OFF** position.
- 1.21 If needed, disconnect power cable from the FCTC power receptacle.
- 1.22 If needed, close FCRD gates or place cover on top of Telescoping Port Shield.
- 1.23 Initiate ARs to address any deficiencies that **CANNOT** be corrected by Waste Handling Operations.

1.24 WH perform the following:

- Notify WHE, of any deficiencies discovered during preoperational checks, and the status of each (e.g., deficiencies corrected and ARs generated).
- Notify WHE and report status of pre-operational check.

1.25 Record the following information in Equipment Logbook:

- Deficiencies noted
- Corrective actions taken (i.e., outstanding/newly generated ARs, etc.)
- Document that preoperational checks are completed for the RH-TRU 72-B or 10-160B evolution.

1.26 Enter time, date, and signature in Equipment Logbook to document performance of preoperational checks for the RH-TRU 72-B or 10-160B evolution.

## 2.0 CASK LOADING ROOM OPERATION

2.1 Ensure the following:

- Ensure the car path is clear of obstructions.
- Ensure control panel 411-CP-264-04 is **ON**.
- Ensure FCRD is **ON**.
- Ensure turntable is in line with the tracks the car is **ON**.

2.2 If needed, open the FCRD gates or remove cover.

2.3 Ensure the power cable from the cable reel is connected to the near side receptacle on the car labeled CAR POWER 480V/3PH/60HZ and the power cable is in line with the tracks the car is traveling on.

2.4 Place the cable reel disconnect switch in the **ON** position.

2.5 Verify RED POWER ON light on the travel motor starter box is **ON**.

2.6 Turn the speed adjust control to the slowest setting.

**NOTE**

The car should be slowed and stopped by turning the speed adjust control to the slowest setting. This reduces the heat stress on the motor control circuits.

The car may be stopped instantly at any time by releasing the deadman switch on the pendant.

The car direction may be reversed while it is in motion by selecting the opposite direction on the FORWARD-REVERSE switch, causing the car to decelerate to a stop and accelerate to the speed adjust setting.

- 2.7 Place the FORWARD-REVERSE switch in the **FORWARD OR REVERSE** position as necessary.
- 2.8 Grip and hold the deadman switch.

**CAUTION**

To avoid damaging the car, slow speeds should be used near obstructions or near the end of travel.

- 2.9 Raise the speed adjust control setting until the desired speed is obtained.
- 2.10 When the car is at the desired position, or is automatically stopped, release the deadman switch.
- 2.11 When no further movement of the car is planned, **OR** if the car is on the hoist ready to go underground, perform the following:
  - 2.11.1 Turn the cable reel disconnect switch **OFF**.
  - 2.11.2 If needed, disconnect cable reel from FCTC.
  - 2.11.3 **IF** FCRD gates are open,  
**THEN** close FCRD gates or place cover on top of Telescoping Port Shield.
- 3.0 MOVING THE TRANSFER CAR TO THE RH BAY FOR MAINTENANCE
  - 3.1 Inspect the turntable cavity for dirt and debris, and clean if necessary.
  - 3.2 Ensure control panel 411-CP-264-04 is **ON**.
  - 3.3 Ensure FCRD is **ON**.

- 3.4 Center the transfer car on the turntable.
- 3.5 Place the transfer car cable reel disconnect switch (41P-SW04/42) on the east wall in the **OFF** position.
- 3.6 Disconnect the car from the east cable reel (41-P-004B).
- 3.7 Close FCRD gates and/or place cover on top of Telescoping Port Shield.
- 3.8 Ensure approximately 120 (110 to 130) psig pressure on the turntable air supply gauge (411-PI-041-040) located in the southeast corner of the CLR.
- 3.9 OPEN the turntable air supply ball valve (PA-411-V-168) located in the pit in the floor just east of the turntable.
- 3.10 If necessary, balance the air flow to the four air bearings, using the flow control valves located in the recesses in the turntable, until the platform is free to turn.
- 3.11 Rotate the turntable until its tracks are lined up with the north-south tracks.
- 3.12 Close the turntable air supply ball valve (PA-411-V-168).
- 3.13 Ensure cable reel disconnect (41P-SW04/41) on north wall is **OFF**.
- 3.14 Connect the cable reel (41-P-004A) located on the north wall of the CLR to the transfer car.
- 3.15 Place the cable reel disconnect switch (41P-SW04/41) in the **ON** position.
- 3.16 Verify RED POWER ON light on the travel motor starter box is **ON**.
- 3.17 Ensure Door 155 is closed.
- 3.18 Open Door 145.
- 3.19 Run the transfer car to the desired position.
- 3.20 Place the cable reel disconnect switch (41P-SW04/41) in the **OFF** position.
- 3.21 If needed, disconnect the car from the north cable reel (41-P-004A).

#### 4.0 UNDERGROUND OPERATION AT THE WASTE STATION

- 4.1 Ensure the cable reel power supply disconnect switch (53P-SW04/105) is **OFF**.

- 4.2 Ensure the power cable from 53P-SW04/105 is connected to the near side receptacle on the car labeled CAR POWER 480V/3PH/60HZ.
- 4.3 Place the cable reel disconnect switch (53P-SW04/105) in the **ON** position.
- 4.4 Verify RED POWER ON light on the travel motor starter box is **ON**.

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**NOTE**

The full speed setting shall be used when traveling on or off the waste conveyance until the FCTC is clear of the pivot rails.

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- 4.5 Place the FORWARD-REVERSE switch in the **FORWARD OR REVERSE** position as appropriate.
- 4.6 Run the car to a position approximately halfway between the waste shaft and the E140 drift.
- 4.7 Place the cable reel disconnect switch (53P-SW04/105) in the **OFF** position.
- 4.8 Disconnect the cable reel from the car.
- 4.9 Connect the cable reel to the opposite end of the car.
- 4.10 Place the cable reel disconnect switch (53P-SW04/105) in the **ON** position.
- 4.11 Verify RED POWER ON light on the travel motor starter box is **ON**.
- 4.12 Place the FORWARD-REVERSE switch in the **FORWARD OR REVERSE** position as appropriate.

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**NOTE**

The full speed setting shall be used when traveling on or off the waste conveyance until the FCTC is clear of the pivot rails.

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- 4.13 Run the car to the desired position to load the Facility Cask on the Waste Conveyance, **OR** for removal of the Facility Cask for transport to the Horizontal Emplacement and Retrieval Equipment.
- 4.14 **IF** the car is on the Waste Conveyance in the Underground, **THEN** perform the following:
  - 4.14.1 Place the cable reel disconnect switch (53P-SW04/105) in the **OFF** position.
  - 4.14.2 Disconnect the car from the cable reel.

4.14.3 Ensure the car is pinned on the Waste Conveyance.

4.15 **IF** the car is in the E140 drift after removal of the Facility Cask,  
**THEN** perform the following:

4.15.1 Run the car out of the E140 drift.

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**NOTE**

The FCTC can be positioned on the east or west side of the E140 drift.

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4.15.2 Place the cable reel disconnect switch (53P-SW04/105) in the  
**OFF** position.

4.15.3 Disconnect the car from the cable reel.

5.0 REMOVING FACILITY CASK TRANSFER CAR FROM WASTE CONVEYANCE-  
SURFACE

5.1 Ensure waste conveyance is staged at collar.

5.2 Open Door 155.

5.3 Ensure pivot rails are lowered.

5.4 Ensure disconnect switch (41P-SW04/42) is **OFF**.

5.5 Open the FCRD gates and/or remove cover.

5.6 Connect power cable from cable reel (41-P-004B) to FCTC.

5.7 Place disconnect switch (41P-SW04/42) to **ON**.

5.8 Ensure conveyance lock pin is removed from the FCTC.

5.9 Ensure turntable is lined up with the east - west tracks.

5.10 Drive FCTC from conveyance to CLR turntable/or into the FCRD.

5.11 Close Door 155.

5.12 Place disconnect switch (41P-SW04/42) to **OFF**.

5.13 If needed, disconnect power cable from FCTC.

5.14 **IF** FCTC is not in the FCRD,  
**THEN** close FCRD gates.