

WP 05-WH1719

Revision 6

25-Ton Cask Unloading Room Crane

Technical Procedure

EFFECTIVE DATE: 10/01/09

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APPROVED FOR USE

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INTRODUCTION³

This procedure provides guidance for inspecting and operating the 25-Ton RH Cask Unloading Room Bridge Crane (41-T-186) at the Waste Isolation Pilot Plant (WIPP).

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

- Equipment Logbook

REFERENCES

BASELINE DOCUMENTS

- Title 40 *Code of Federal Regulations* (CFR) §264.15, "General Inspection Requirements"
- DOE Standard 1090-2007, *Hoisting and Rigging*
- *American Equipment 25-Ton Bridge Crane Design Specification and Operations/Maintenance Manual*

REFERENCED DOCUMENTS

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

PRECAUTIONS AND LIMITATIONS

- Only personnel qualified as Waste Handling Technician/Engineer (WHT/WHE), or trainees under the direct supervision of a qualified WHT/WHE are authorized to perform the waste handling activities specified in the procedure.
- Preoperational checks are to be completed prior to the first crane operation each shift.
- Crane must be moved slowly when operating close to limit switches to avoid overrunning them.
- If at any time during operation of the crane the red global fault light on the bridge mounted light bar illuminates, the Hoist/Fault Reset button must be pushed to acknowledge the fault.
- Crane may be shut down by pushing the Emergency Stop button or the Main Circuit Shunt Trip button.

- During load movements that impair the crane operator's view, a Spotter shall be utilized.
- Crane load cell indication should not exceed 50,000 lb.
- Safety glasses and a long-sleeve 100% cotton shirt must be worn when opening and closing breakers.

PREREQUISITE ACTIONS

- 1.0 If a required inspection becomes delinquent, perform the following:
 - 1.1 Immediately notify Site Environmental Compliance (SEC) of the delinquent inspection.
 - 1.2 Schedule and complete the required inspection.
 - 1.3 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.
 - 1.4 WH, **GO TO** WP 04-IM1000, and determine if a WIPP Form (EA04IM1000-1-0) is required.
- 2.0 Review Equipment Logbook for outstanding deficiencies and Action Requests (ARs).
- 3.0 WHE, review Equipment Logbook on a weekly basis, generally the last day of the workweek.

PERFORMANCE

- 1.0 PREOPERATIONAL CHECKS ¹
 - 1.1 Prior to energizing crane, perform the following:

NOTE

Deficiencies that are corrected when discovered may be considered a satisfactory check.

- 1.1.1 Ensure hoist is not connected to a load.

1.1.2 Inspect the following for any damage or wear: ²

- Sheaves
- Wire Rope
- Lifting Yoke

1.1.3 Ensure wire ropes are wound properly on drum.

1.1.4 Ensure Bridge Path is clear of obstructions.

1.1.5 Ensure Trolley Path is clear of obstructions.

1.1.6 Verify **NO** leakage of oil/grease from crane mechanisms.

1.2 Ensure Circuit Breaker 41-T-186 CUR CRANE POWER on 41P-MCC04/2 is **ON**.

1.3 Ensure the ON/OFF circuit breaker on the Variable Speed Drive panel, located on the catwalk in the Cask Unloading Room, is in the **ON** position.

1.4 At Control Panel 411-CP04/157 perform the following:

1.4.1 Ensure that EMERGENCY STOP button is in **OUT** position.

1.4.2 Turn Key Switch to **MAN** position.

1.5 Verify POWER ON light is **ON**.

1.6 Check that audible alarm sounds.

1.7 Check that yellow strobe light is **ON**.

1.8 Press START pushbutton.

1.9 Check that orange light on lightbar is flashing.

1.10 Press LAMP TEST button and verify crane control panel and bridge mounted bar lights are **ON**.

1.11 Release LAMP TEST button.

1.12 **IF** load cell is not zeroed,
THEN perform the following:

1.12.1 Push F4 key on the load cell until SCALE A is displayed.

1.12.2 Push ZERO key.

- 1.12.3 Verify load cell is indicating 0 (zero).
- 1.12.4 Push F4 key on the load cell until SCALE B is displayed.
- 1.12.5 Push ZERO key.
- 1.12.6 Verify load cell is indicating 0 (zero).
- 1.12.7 Push F4 key on the load cell until SCALE A + B is displayed.
- 1.12.8 Verify load cell is indicating 0 (zero).
- 1.13 Ensure MICRO SPEED switch is **OFF**.
- 1.14 Lower hoist using HOIST control. ²
- 1.15 Raise hoist using HOIST control. ²
 - 1.15.1 Verify Upper Limit Switch stops hoist travel. ²
 - 1.15.2 Verify white HOIST IN POSITION light is **ON**.

NOTE

Steps 1.16 through 1.19 may be performed in any order.

- 1.16 Move Trolley south using TROLLEY control. ²
- 1.17 Move Trolley north using TROLLEY control. ²
- 1.18 Move Bridge east using BRIDGE control. ²
- 1.19 Move Bridge west using BRIDGE control. ²
- 1.20 Check for burned out bridge mounted lights.
- 1.21 Turn Key Switch to **OFF** position.
- 1.22 Initiate ARs to address any deficiencies that **CANNOT** be corrected by Waste Handling Operations.
- 1.23 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 preoperational check.

1.24 Record the following information in Equipment Logbook:

- Deficiencies noted
- Corrective actions taken (outstanding/newly generated ARs, etc.)

1.25 Enter time, date, and signature in Equipment Logbook to document performance of preoperational checks.

2.0 CRANE OPERATION

2.1 Ensure that EMERGENCY STOP button is in the **OUT** position.

2.2 Place Key Switch in **MAN** position.

2.3 Press START pushbutton.

2.4 Verify POWER ON light is **ON**.

2.5 Operate appropriate controls to perform the desired function and/or operation.

3.0 CRANE SHUTDOWN

3.1 Ensure hoist is not connected to a load.

3.2 Ensure hoist is at the upper limit.

3.3 Verify white HOIST IN POSITION light is **ON**.

3.4 Place AUTO-OFF-MAN Key Switch to **OFF**.

3.5 Remove key.

3.6 Return key to lockbox.