

# WP 05-WH1721

Revision 9

## 6.25-Ton Fixed Hoist and Facility Grapple

Technical Procedure

EFFECTIVE DATE: 06/24/09

Randy Britain  
APPROVED FOR USE

**TABLE OF CONTENTS**

INTRODUCTION ..... 3

REFERENCES ..... 3

PRECAUTIONS AND LIMITATIONS ..... 3

PREREQUISITE ACTIONS ..... 4

PERFORMANCE ..... 4

1.0 PREOPERATIONAL CHECKS ..... 4

2.0 6.25-TON FIXED HOIST AND FACILITY GRAPPLE OPERATION ..... 6

3.0 6.25-TON FIXED HOIST AND FACILITY GRAPPLE SHUTDOWN ..... 6

## INTRODUCTION <sup>1,2</sup>

This procedure provides the required instructions for inspecting and conducting the preoperational checks, prior to the start of a Remote-Handled (RH) Waste Handling evolution, on the 6.25-Ton Fixed Hoist (41-H-022) and the Facility Grapple located in the Cask Loading Room at the Waste Isolation Pilot Plant (WIPP). This procedure also provides operating instructions for the 6.25-Ton Fixed Hoist and Facility Grapple.

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*
- DOE/WIPP-07-3372, *Waste Isolation Pilot Plant Documented Safety Analysis*
- DOE/WIPP-07-3373, *Waste Isolation Pilot Plant Technical Safety Requirements*

### REFERENCED DOCUMENTS

- WP 04-IM1000, Issues Management Processing of WIPP Forms
- EA04-IM1000-1-0, WIPP Form

## PRECAUTIONS AND LIMITATIONS

- Preoperational checks are to be completed prior to the start of RH Waste Handling evolution.
- 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 this procedure.
- If procedure cannot be performed as written, or in sequence, WHE should be contacted.
- Safety glasses and a long-sleeve 100% cotton shirt must be worn when opening and closing breakers.

## 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:
  - Immediately notify Site Environmental Compliance (SEC) of the delinquent inspection.
  - Schedule and complete the required inspection.
  - 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
  - Waste Handling Operations, **GO TO** WP 04-IM1000, and issue a WIPP Form (EA04IM1000-1-0) for the delinquent inspection.
- 4.0 WHE, review Equipment Logbook on a weekly basis, generally the last day of the workweek.

## PERFORMANCE

### 1.0 **PREOPERATIONAL CHECKS** <sup>3,4</sup>

- 1.1 Perform the following prior to operating the Grapple Hoist:
  - Visually inspect the visible portion of the Grapple Hoist and the Facility Grapple for any damage/loose connections.
  - Ensure that there are **NO** obstructions between Facility Grapple and Telescoping Port Shield.
  - Verify **NO** leakage of oil or grease from hoist mechanisms.
- 1.2 Ensure circuit breaker 10 on 41P-MCC04/1 is **ON**.
- 1.3 Ensure disconnect switch 41P-SW04/6 is **ON**.

- 1.4 Ensure main E-STOP button (HS-236-06A) is **OUT** on Control Panel 411-CP-264-04.
- 1.5 Place GRAPPLE HOIST switch in MAN.
- 1.6 Verify hoist is at Position A with Hoist Position A indication light **ON**.
- 1.7 Push and hold the JOG LOWER button to initiate lowering of the Grapple Hoist.
- 1.8 Verify HOIST LOWERING light is **ON**.
- 1.9 **WHEN** the hoist position B indicator light is **ON**,  
**THEN** release JOG LOWER button.

---

**NOTE**

A second person is required to facilitate engagement of proximity switch.

---

- 1.10 Engage the grapple proximity switch with a piece of metal.
- 1.11 Verify PINTLE GRAPPLE CONTACT indication light is **ON**.
- 1.12 Place FACILITY GRAPPLE OPEN-CLOSE switch in CLOSE.
- 1.13 Verify visually that the grapple paws close.
- 1.14 Verify FACILITY GRAPPLE CLOSE green light is **ON**.
- 1.15 Place FACILITY GRAPPLE OPEN-CLOSE switch in OPEN.
- 1.16 Verify visually that the grapple paws open.
- 1.17 Verify FACILITY GRAPPLE OPEN red light is **ON**.
- 1.18 Remove piece of metal from grapple proximity switch.

---

**NOTE**

Second person must be clear of hoist travel path prior to jogging hoist.

---

- 1.19 Push and hold the JOG LIFT button to initiate lifting of the Grapple Hoist.
- 1.20 Verify HOIST LIFTING light is **ON**.
- 1.21 **WHEN** hoist stops at upper limit,  
**THEN** release JOG LIFT button.
- 1.22 Initiate ARs to address any deficiencies that **CANNOT** be corrected by Waste Handling Operations.

1.23 WH, perform the following:

1.23.1 Notify WHE of any deficiencies discovered during preoperational checks, and the status of each (e.g., deficiencies corrected and ARs generated).

1.23.2 Notify WHE and report status of preoperational check.

1.24 Record the following information in the Equipment Logbook:

- Deficiencies noted
- Corrective actions taken (outstanding/newly generated ARs, etc.)
- Preoperational checks are complete for the RH-TRU 72-B or CNS 10-160B evolution.

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

## 2.0 6.25-TON FIXED HOIST AND FACILITY GRAPPLE OPERATION

2.1 Perform the following at Control Panel 411-CP-264-04:

- Ensure GRAPPLE HOIST switch is in AUTO.
- Ensure E-STOP button (HS-236-06A) is OUT.
- Verify HOIST POS A light is **ON**.
- Ensure FACILITY GRAPPLE OPEN-CLOSE switch is in OPEN.
- Verify FACILITY GRAPPLE OPEN red light is **ON**.

2.2 Perform the desired function and/or operation with the 6.25-Ton Fixed Hoist and/or Facility Grapple using the appropriate controls.

## 3.0 6.25-TON FIXED HOIST AND FACILITY GRAPPLE SHUTDOWN

3.1 Verify the following at Control Panel 411-CP-264-04:

- 3.1.1 PINTLE GRAPPLE CONTACT indicating lamp is **NOT ON**.
- 3.1.2 FACILITY GRAPPLE OPEN-CLOSE switch is in OPEN.
- 3.1.3 FACILITY GRAPPLE OPEN red light is **ON**.
- 3.1.4 Green SHIELD VALVE 41-N-003 CLOSE light is **ON**.

- 3.2 **IF** RH Waste Handling canister transfer evolution is complete, **THEN** ensure the following:
- Facility Cask is in the horizontal position, **OR** is not present in the Cask Loading Room.
  - Grapple Hoist is at the upper limit.
  - TEL PORT SHIELD DOWN lamp is **ON**.
- 3.3 Ensure CANISTER TRANSFER SYSTEM MODE SWITCH is in NEUT.
- 3.4 If needed, close Facility Cask Rotating Device gates or place cover on top of Telescoping Port Shield.