Working Copy

WP 04-HO4003

Revision 4

Waste Handling Hoist Alarm Response

Alarm Response

EFFECTIVE DATE: 05/21/07

Bob Kirby

APPROVED FOR USE

TABLE OF CONTENTS

PERFORMANCE. 3
1.0 ALARM/INITIATING DEVICE[1]. 3
2.0 AUTOMATIC ACTIONS. 7
3.0 IMMEDIATE ACTIONS. 7
4.0 SUBSEQUENT ACTIONS. 7
5.0 POSSIBLE CAUSES. 8
6.0 CORRECTIVE ACTIONS. 8
7.0 RECORDS. 9
8.0 REFERENCES. 9

PERFORMANCE

1.0 ALARM/INITIATING DEVICE[1]

Alarm Window Location Matrix

A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
B1	B2	B3	B4	B5	B6	B7	B8	B9	B10
C1	C2	C3	C4	C5	C6	C7	C8	C9	C10 (*)
D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
E1	E2 (*)	E3 (*)	E4 (*)	E5 (*)	E6 (*)	E7 (*)	E8	E9	E10
F1	F2	F3	F4	F5	F6	F7	F8	F9	F10 (*)

Note: (*) Signifies window not in use.

WARNING

Do not reset the alarms listed in Steps 1.1 through 1.3 under **ANY** conditions without Management approval. Resetting alarms may result in injury to personnel and/or damage to equipment.

1.1 Emergency Stop Alarms

- Window A-1, REGULATOR MALFUNCTION
  Initiating Device - RMX
- Window A-2, MOTOR OVERSPEED
  Initiating Device - MOSPD
- Window A-3, TACH/LOSS LILLY OVERSPEED
  Initiating Device - LOS
- Window A-4, NORMAL EMERGENCY BRAKING NOT AVAILABLE
  Initiating Device - NEBA

- Window A-5, EMERGENCY STOP P.B.
  Initiating Device - ESTOP

- Window A-6, OVER-TRAVEL, RAISING
  Initiating Device - ROT

- Window A-7, OVER-TRAVEL LOWERING
  Initiating Device - LOT

- Window A-8, OVERCURRENT
  Initiating Device - IOC

- Window A-9, OVERVOLTAGE
  Initiating Device - OV

- Window A-10, FIELD LOSS
  Initiating Device - FL

- Window B-1, POWER CONVERTER EMERGENCY FAULT
  Initiating Device - PCFLT

- Window B-2, AC BRIDGE POWER UNDER VOLTAGE
  Initiating Device - ACBPUV

- Window B-3, AC BRIDGE POWER FEEDER OPEN
  Initiating Device - ACBKR

- Window B-4, SERIES SIX FAULT
  Initiating Device - PPC

- Window B-5, JAMMED CONVEYANCE
  Initiating Device - JC

- Window B-6, SHAFT GATE OPEN DURING TRIP
  Initiating Device - BRC, SGC

- Window B-7, MATERIAL CAR PERMISSIVE
  Initiating Device - CSA

- Window B-8, BRAKE MAINTENANCE
  Initiating Device - LBM, RBM

- Window B-9, CONTROL TEST
  Initiating Device - CTEST

- Window B-10, FIELD EXCITER AC INPUT LOSS
  Initiating Device - LBM, RBM

- Window C-1, FAILURE TO DECELERATE PROPERLY
  Initiating Device - FDEC

- Window C-2, BRAKE SYSTEM PRESSURE LOW
  Initiating Device - BSP

- Window C-3, TAIL ROPE FOUL
  Initiating Device - MSCR

- Window C-4, LOW OIL LEVEL
  Initiating Device - TRF

- Window C-5, HOIST MOTOR STALL
  Initiating Device - STALL

- Window C-6, HOIST TRAVELING IN WRONG DIRECTION
  Initiating Device - REVDIR

- Window C-7, HOIST MOTOR FIELD OVERCURRENT
  Initiating Device - FOC

- Window C-8, RADIO EMERGENCY STOP
  Initiating Device - RESA

1.2 Controlled Stop Alarms

- Window D-1, DISTANCE PROGRAMMER PERMISSIVE
  Initiating Device - PRGPRM

- Window D-2, DISTANCE PROGRAMMER MALFUNCTION
  Initiating Device - PRGMAL

- Window D-3, BRAKE NOT RELEASED
  Initiating Device - BNR

- Window D-4, HOIST MOTOR AIR FLOW LOSS
  Initiating Device - HMALF

- Window D-5, LILLY GEAR LOSS
  Initiating Device - GLSX, LGL

- Window D-6, CHAIR OUT OF POSITION
  Initiating Device - CHPOS

- Window D-7, PIVOT RAIL OUT OF POSITION
  Initiating Device - PRPOS

- Window D-8, BRAKE PRESSURE BELOW 1200 P.S.I. WHILE ON STANDBY PUMP
  Initiating Device - SPPL

- Window D-9, FAULT TRANSFER FROM PRIMARY TO STANDBY PUMP
  Initiating Device - BPTF

- Window D-10, RADIO CONTROL MALFUNCTION
  Initiating Device - RCF

- Window E-1, PROGRAMMER BYPASS DEFEAT
  Initiating Device - PBYP

1.3 Protective Stop Alarms

- Window E-9, HOIST MOTOR ARMATURE GROUND
  Initiating Device - GNDA

- Window E-10, HOIST MOTOR FIELD GROUND
  Initiating Device - GNDF

- Window F-1, HOIST MOTOR OVERTEMPERATURE
  Initiating Device - MOT

- Window F-2, HOIST BEARING OVER TEMPERATURE
  Initiating Device - BTALRM

- Window F-3, CONV. ANNUNCIATOR (CHECK CONVERTER L.E.D. HARDWARE) RESET REQUIRED
  Initiating Device - PCANN

- Window F-4, LEFT BRAKE WEAR
  Initiating Device - LBW

- Window F-5, RIGHT BRAKE WEAR
  Initiating Device - RBW

- Window F-6, EXCESSIVE TREAD WEAR
  Initiating Device - TW

- Window F-7, OIL COOLING FAN MOTOR OVERLOAD
  Initiating Device - OCF10L, OCF20L

- Window F-8, SYNCHRONIZER MOTOR OVERLOAD
  Initiating Device - OLSYNX

- Window F-9, EXCESSIVE ROPE CREEP
  Initiating Device - ERC

NOTE

Indication Only Alarms provide annunciation, but do **NOT** automatically stop the hoist.

1.4 Indication Only Alarms

- Window E-8, DC CONTROL POWER GROUND
  Initiating Device - GNDCP

- Window C-9, RADIO COMMUNICATIONS NOT AVAILABLE
  Initiating Device - RCCA

2.0 AUTOMATIC ACTIONS

2.1 Emergency Stop

- Brakes set immediately stopping hoist.

2.2 Controlled Stop

- Hoist is stopped by the normal deceleration rate. After it has slowed, the brakes will set and the DC loop will open.

2.3 Protective Stop

- Brakes set immediately stopping hoist.

3.0 IMMEDIATE ACTIONS

3.1 **IF** personnel are aboard conveyance,
THEN verify their physical condition, using cage phone.

4.0 SUBSEQUENT ACTIONS

WARNING

Do not reset the alarms listed in Steps 1.1 through 1.3 under **ANY** conditions without Management approval. Resetting alarms may result in injury to personnel and/or damage to equipment.

4.1 Initiation of the alarms listed in Steps 1.1 through 1.3, requires the Hoistman to notify the on-shift manager under the following conditions:

- An inadvertent trip of the hoist system. (If the trip is identifiable as part of an authorized maintenance check or an operations check, notification is **NOT** necessary.)

- Any anomaly affecting safety or reliability of the hoist system
- Any emergency or unusual condition that requires interdepartmental interfaces
- Prior to any maintenance on hoist systems or authorization for persons to enter restricted areas.

4.2 Silence Alarms.

4.3 Notify manager.

4.4 The following steps may be performed **AFTER** approval has been granted (if approval is required):

4.4.1 Place Hoist Mode Selector in MANUAL.

4.4.2 Place Manual Brake Controller to SET.

4.4.3 Press Safety Reset Button.

4.4.4 Place Manual Brake Controller to RELEASE.

4.4.5 Press Annunciator Reset button.

4.5 **IF** performance of Steps 4.4.1 through 4.4.5 does **NOT** result in system restoration,
THEN notify Hoisting managers and Cognizant Engineers.

4.6 Return to normal operation in accordance with WP 04-HO1003, Waste Handling Hoist Operation.

5.0 POSSIBLE CAUSES

- Loss of power
- Faulty relay
- Setpoint out of adjustment
- Component failure
- Manual activation of E-Stop

6.0 CORRECTIVE ACTIONS

- Submit an Action Request (AR) in accordance with the Work Control Administration WP 10-WC3011.

7.0 RECORDS

None

8.0 REFERENCES

BASELINE DOCUMENTS

- Electrical Control Equipment by General Electric, consisting of:

  (A) Elementary Dwg. 237B6688

  (B) Assembly Dwg. 237B6689

- General Electric SILCOMATIC Power Conversion Elementary Dwg. 237B6019

- 31-H-002-W, Waste Hoist Drive Conversion Functional Block Diagram

REFERENCED DOCUMENTS

- WP 10-WC3011, Maintenance Process

- WP 04-HO1003, Waste Handling Hoist Operation