

WP 04-ED1341

Revision 7

Surface Backup Power Distribution

Technical Procedure

EFFECTIVE DATE: 06/28/10

Dale Parrish
APPROVED FOR USE

CONTINUOUS USE PROCEDURE

TABLE OF CONTENTS

CHANGE HISTORY SUMMARY 3

INTRODUCTION 4

REFERENCES 4

PRECAUTIONS AND LIMITATIONS 5

PERFORMANCE 6

1.0 SURFACE BACKUP POWER LINEUP 6

2.0 RECOVERY FROM SURFACE BACKUP POWER LINEUP 8

3.0 OPTION A, PS BUS A BACKUP POWER 9

4.0 RECOVERY FROM OPTION A 12

5.0 OPTION B, PS BUS B BACKUP POWER 13

6.0 RECOVERY FROM OPTION B 16

7.0 OPTION C, PS BUS A AND BUS B BACKUP POWER 18

8.0 RECOVERY FROM OPTION C 20

9.0 OPTION D, USE OF PLANT SUB TIE BREAKER, CB-9 22

Attachment 1 - Main Load Reduction List 23

Attachment 2 - Additional Load Reduction List 24

CHANGE HISTORY SUMMARY

REVISION NUMBER	DATE ISSUED	DESCRIPTION OF CHANGES
7	06/28/2010	Added Precaution and Limitation on breaker interlock system

INTRODUCTION

This procedure provides instructions for performing surface electrical distribution lineups during loss of utility power at the Waste Isolation Pilot Plant (WIPP). As required per WP 04-CO, this procedure shall be followed step-by-step for the activities and operations addressed herein. This procedure shall be performed under the direct supervision of the Facility Shift Manager (FSM)/Facility Shift Engineer.

There are no records generated by the performance of this procedure.

REFERENCES

BASELINE DOCUMENTS

- Drawing 25-J-020-W1, WIPP Site Primary Power Distribution - One-Line Reference Sheet
- Drawing 25-J-020-W2, WIPP Site Primary Power Distribution - One-Line Diagram
- Drawing 25-J-020-W3, WIPP Site Primary Power Distribution - One-Line Diagram, Normal Interrupters Lineup
- Drawing 25-J-020-W4, WIPP Site Primary Power Distribution - One-Line Diagram, Surface Low Voltage Interrupter Lineup
- Drawing 25-J-020-W5, WIPP Site Primary Power Distribution - One-Line Diagram, Underground Low Voltage Interrupter Lineup
- Drawing 25-J-020-W6, WIPP Site Primary Power Distribution - One-Line Selected Load System Interrupter Lineup Surface and Underground
- WP 04-FP1201, Site Fire Water Supply System Operations

REFERENCED DOCUMENTS

- WP 04-CA1001, Operation of Air Compressors 41G-021A and 41G-021B
- WP 04-CA1202, Operation of Air Compressors 45-G-030A&B
- WP 04-CO, Conduct of Operations
- WP 04-ED1021, Surface Electrical Distribution
- WP 04-ED1301, Diesel Generator Operation
- WP 04-ED1621, Underground Electrical Distribution

- WP 04-ED1631, Underground Backup Power Distribution
- WP 04-ED2341, Remote Operation of Underground Circuit Breakers
- WP 04-HV1021, Waste Handling Building Zone 2 HVAC
- WP 04-HV1176, Support Building Zone 6 HVAC
- WP 04-VU1001, Surface Underground Ventilation and Filtration System Operation
- WP 04-VU1608, Underground Ventilation and Filtration System Operation

PRECAUTIONS AND LIMITATIONS

- Central Monitoring Room Operator (CMRO) will contact XCEL Energy when Utility SUB circuit breakers (CBs) 3340 and 3355 operation (open or close) is required. Utility SUB CBs 3340 and 3355 will be opened by CMRO in emergency situations only.
- Load interrupter switches (LISs) will **NOT** be operated from CLOSED to OPEN with connected load.
- Protective relays limit CB operation as follows:
 - A CB that has a flag displayed **SHALL NOT** be closed.
 - Equipment being served by the tripped CB **SHALL NOT** be energized.
 - More than one attempt to reset an 86 (lockout) Relay **SHALL NOT** be made.
- Relay flags may be reset only after Maintenance and Engineering concur, except when 81 (Under Frequency), or 95 (Ground Check) Relay flag is present, due to a known power outage.
- Steps that cannot be performed due to out-of-service equipment may be omitted at discretion of FSM. These omissions shall not stop the performance of subsequent steps.
- When the underground is not manned, steps requiring communication with Underground Facility Engineer (UFE)/Underground Facility Technician (UFT) may be omitted and underground power may be reestablished in accordance with WP 04-ED2341.
- If the breaker interlock system (BIS) is inoperable, it must be DISABLED in Sub #3 before operating the diesel generators. This will enable CBG-1 and CBG-2 to open and close remotely.

- 480V Tie-Feeder CBs located in Area SUBs 1, 3, and Support Building are not interlocked with their respective SUB main CB. Steps in the applicable sections of this procedure ensure that SUBs 1, 3, and Support Building normal power sources are not connected via the Tie-Feeders.

PERFORMANCE

1.0 SURFACE BACKUP POWER LINEUP

NOTE

Steps 1.1 through 1.18 may be performed in any order or concurrently, as desired. Substeps must be performed in the order presented. **Surface Backup Power Lineup will supply power to the Surface Facilities only.**

- 1.1 Verify all Plant SUB (PS) CBs are open.
- 1.2 Reduce loads in accordance with Attachment 1, Main Load Reduction List, concurrently with Steps 1.3 through 1.19.
- 1.3 Notify UFE/UFT to:
 - Configure Underground Ventilation and Filtration System (UVFS) for minimum or filtration in accordance with WP 04-VU1608.
- 1.4 **GO TO** WP 04-ED1301, start **ONE** Diesel Generator (DG), and **RETURN TO** Step 1.5.
- 1.5 Verify Plant Air Compressors 41-G-021A and 41-G-021B in OFF at local control panels.
- 1.6 Place Chilled Water Pumps 41-GM-1021A and 41-GM-1021B in OFF at local control panel.
- 1.7 Perform the following in SUB 2:
 - 1.7.1 Open LIS 25P-SW15/2A.
 - 1.7.2 Close LIS 25P-SW15/2B.
- 1.8 Open SUB 4 CB-1 (Main Breaker).
- 1.9 Perform the following in SUB 6:
 - 1.9.1 Open LIS 25P-SW15/6A.
 - 1.9.2 Close LIS 25P-SW15/6B.

- 1.10 Open SUB 6 CB-2 (SWR 7, 24P-SWRO4/7).
- 1.11 Verify SB SUB LIS 45P-SW15/1B is closed.
- 1.12 Verify SB SUB CB-5 is open.
- 1.13 Verify SUB 1 LIS 25P-SW15/1B2 is closed.
- 1.14 Close SUB 1 LIS 25P-SW15/1B1 (tie to top side of SUB 3 LIS 25P-SW5/3B).
- 1.15 Verify SUB 1 CB-8 is open.
- 1.16 Verify SUB 3 LIS 25P-SW15/3A is closed.
- 1.17 Verify SUB 3 LIS 25P-SW15/3B is closed.
- 1.18 Verify all SUB 3 CBs are open.
- 1.19 Verify main load reduction is complete in accordance with Attachment 1.
- 1.20 Close **ONE** of the following SUB 3 CBs, corresponding to operating DG:
 - CB-7 (DG 1)
 - CB-11 (DG 2)
- 1.21 Close SUB 3 CB-9.
- 1.22 Close SUB 3 CB-5, energizing EFB MCC 41P-MCC04/7.
- 1.23 Close SUB 3 CB-10, energizing the following:
 - SUB 1
 - SUB 2
 - SUB 6
 - SB SUB
 - Waste Hoist SUB
- 1.24 **GO TO** WP 04-CA1001, start **ONE** Plant Air Compressor, and **RETURN TO** Step 1.25.
- 1.25 **GO TO** WP 04-VU1001, start Underground Ventilation and Filtration System (UVFS) in minimum or filtration, as required, and **RETURN TO** Step 1.26.
- 1.26 **GO TO** WP 04-HV1021, start Waste Handling Building (WHB) Zone 2 Heating, Ventilation, and Air Conditioning (HVAC), as required, and **RETURN TO** Step 1.27.

- 1.27 **GO TO** WP 04-HV1176, start SB Zone 6 HVAC, and **RETURN TO** Step 1.28.
- 1.28 **IF** Air Intake Shaft (AIS) Hoist is required, **AND** DG is operating at > 900 kW, **THEN** perform additional load reduction in accordance with Attachment 2, Additional Load Reduction List.
- 1.29 **WHEN** DG is operating at < 900 kW, **THEN** notify Hoisting Supervisor that AIS hoisting may begin, if required.
- 1.30 **WHEN** hoisting operations are complete, **THEN** restore additional loads as required:
- Perimeter lighting
 - Experimental loads
 - Additional equipment at discretion of FSM
- 1.31 Verify Fire Suppression System operability.
- 2.0 RECOVERY FROM SURFACE BACKUP POWER LINEUP
- 2.1 Notify UFE/UFT of the following:
- All UVFS will be shut down.
 - Prepare for restoration of power in accordance with WP 04-ED1621.
 - Prepare for restoration of UVFS in accordance with WP 04-VU1608.
- 2.2 **GO TO** WP 04-VU1001, shut down UVFS, and **RETURN TO** Step 2.3.
- 2.3 **GO TO** WP 04-HV1021, shut down WHB Zone 2 HVAC, and **RETURN TO** Step 2.4.
- 2.4 **GO TO** WP 04-HV1176, shut down SB Zone 6 HVAC, and **RETURN TO** Step 2.5.
- 2.5 **GO TO** WP 04-CA1001, shut down operating Plant Air Compressor, and **RETURN TO** Step 2.6.
- 2.6 Open SUB 3 CB-10, de-energizing the following:
- SUB 1
 - SUB 2

- SUB 6
 - SB SUB
 - Waste Hoist SUB
- 2.7 Open SUB 3 CB-5, de-energizing EFB MCC 41P-MCC04/7.
- 2.8 Open SUB 3 CB-9.
- 2.9 Open **ONE** of the following SUB 3 CBs, corresponding to operating DG:
- CB-7 (DG 1)
 - CB-11 (DG 2)
- 2.10 **GO TO** WP 04-ED1301, and shut down operating DG, and **RETURN TO** Step 2.11.
- 2.11 **GO TO** WP 04-ED1021, restore normal utility power.
- 3.0 OPTION A, PS BUS A BACKUP POWER

NOTE

Steps 3.1 through 3.26 may be performed in any order or concurrently, as desired. Substeps must be performed in the order presented.

- 3.1 Verify all PS CBs are open.
- 3.2 Reduce loads in accordance with Attachment 1, concurrently with Steps 3.3 through 3.27.
- 3.3 Notify UFE/UFT to perform the following:
- Configure for backup power Option A in accordance with WP 04-ED1631.
 - Configure UVFS for minimum or filtration in accordance with WP 04-VU1608.
- 3.4 **GO TO** WP 04-ED1301, start **ONE** DG, and **RETURN TO** Step 3.5.
- 3.5 Verify Plant Air Compressors 41-G-021A and 41-G-021B in OFF at local control panels.
- 3.6 Place Chilled Water Pumps 41-GM-1021A and 41-GM-1021B in OFF at local control panel.
- 3.7 Verify 25P-SW15/9A is closed

- 3.8 Verify 25P-SW15/98 is closed.
- 3.9 Open 25P-SW15/97.
- 3.10 Verify 25P-SW15/8 is closed.
- 3.11 Open the following SUB 8 CBs:
 - 3.11.1 CB-3 (Engineering Bldg, 45P-DP04/50)
 - 3.11.2 CB-5 (Training Bldg, 45P-DP04/57)
 - 3.11.3 CB-2 (Switch Rack 12)
- 3.12 Verify SUB 2 LIS 25P-SW15/2A is closed.
- 3.13 Open SUB 4 CB-1 (Main Breaker).
- 3.14 Verify SUB 6 LIS 25P-SW15/6A is closed.
- 3.15 Open SUB 6 CB-2 (SWR 7, 24P-SWRO4/7).
- 3.16 Open SB SUB LIS 45P-SW15/1B.
- 3.17 Close SB SUB LIS 45P-SW15/1A.
- 3.18 Verify SB SUB CB-5 is open.
- 3.19 Open SUB 1 LIS 25P-SW15/1B2.
- 3.20 Verify SUB 1 LIS 25P-SW15/1B1 is open (tie to top side of SUB 3 LIS 25P-SW15/3B).
- 3.21 Open SUB 1 CB-1 (Main Breaker).
- 3.22 Rack SUB 1 CB-8 to CONNECT.
- 3.23 Close SUB 1 CB-8.
- 3.24 Verify SUB 3 LIS 25P-SW15/3A is closed.
- 3.25 Open SUB 3 LIS 25P-SW15/3B.
- 3.26 Verify all SUB 3 CBs are open.
- 3.27 Verify main load reduction is complete in accordance with Attachment 1.
- 3.28 Rack SUB 3 CB-18 to CONNECT.

- 3.29 Close SUB 3 CB-18.
- 3.30 Close **ONE** of the following SUB 3 CBs, corresponding to operating DG:
- CB-7 (DG 1)
 - CB-11 (DG 2)
- 3.31 Close SUB 3 CB-9.
- 3.32 Close SUB 3 CB-5, energizing EFB MCC 41P-MCC04/7.
- 3.33 Verify with UFE/UFT that EX Shaft Feeder may be energized.
- 3.34 Close SUB 3 CB-8, energizing the following:
- SB SUB
 - Waste Hoist SUB
 - PS CB-4
- 3.35 Close PS CB-4, energizing PS BUS A breakers.
- 3.36 Close PS CB-3, energizing the following:
- SUB 2
 - SUB 6
- 3.37 Verify with UFE/UFT that Salt Handling (SH) Shaft Feeder may be energized.
- 3.38 Close PS CB-2, energizing SH Shaft Feeder.
- 3.39 Close PS CB-10, energizing SUB 8.
- 3.40 **GO TO** WP 04-CA1001 or WP04-CA1202, start ONE Plant Air Compressor, and **RETURN TO** Step 3.41.
- 3.41 **GO TO** WP 04-VU1001, start UVFS in minimum or filtration, as required, and **RETURN TO** Step 3.42.
- 3.42 **GO TO** WP 04-HV1021, start WHB Zone 2 HVAC, as required, and **RETURN TO** Step 3.43.
- 3.43 **GO TO** WP 04-HV1176, start SB Zone 6 HVAC, and **RETURN TO** Step 3.44.
- 3.44 **IF** AIS Hoist is required **AND** DG is operating at > 900 kW, **THEN** perform additional load reduction in accordance with Attachment 2.

- 3.45 **WHEN** DG is operating at < 900 kW,
THEN notify Hoisting Supervisor that AIS hoisting may begin, if required.
- 3.46 **WHEN** hoisting operations are complete,
THEN restore additional loads as required:
- Perimeter lighting
 - Experimental loads
 - Additional equipment at discretion of FSM
- 3.47 Verify Fire Suppression System operability.
- 4.0 RECOVERY FROM OPTION A
- 4.1 Notify UFE/UFT of the following:
- All underground power will be shut down.
 - All UVFS will be shut down.
 - Prepare for restoration of power in accordance with WP 04-ED1621.
 - Prepare for restoration of UVFS in accordance with WP 04-VU1608.
- 4.2 **GO TO** WP 04-VU1001, shut down UVFS, and
RETURN TO Step 4.3.
- 4.3 **GO TO** WP 04-HV1021, shut down WHB Zone 2 HVAC, and
RETURN TO Step 4.4.
- 4.4 **GO TO** WP 04-HV1176, shut down SB Zone 6 HVAC, and
RETURN TO Step 4.5.
- 4.5 **GO TO** WP 04-CA1001 or WP04-CA1202, shut down operating Plant Air Compressor, and
RETURN TO Step 4.6.
- 4.6 Open PS CB-10, de-energizing SUB 8.
- 4.7 Open PS CB-2, de-energizing SH Shaft Feeder.
- 4.8 Open PS CB-3, de-energizing the following:
- SUB 2
 - SUB 6
- 4.9 Open PS CB-4, de-energizing PS BUS A.

- 4.10 Open SUB 3 CB-8, de-energizing the following:
- SB SUB
 - Waste Hoist SUB
 - PS CB-4
- 4.11 Open SUB 3 CB-5, de-energizing EFB MCC.
- 4.12 Open SUB 3 CB-9.
- 4.13 Open **ONE** of the following SUB 3 CBs, corresponding to operating DG:
- CB-7 (DG 1)
 - CB-11 (DG 2)
- 4.14 **GO TO** WP 04-ED1301, shut down operating DG, and **RETURN TO** Step 4.15.
- 4.15 Open SUB 1 CB-8.
- 4.16 Rack SUB 1 CB-8 to DISCONNECT.
- 4.17 Open SUB 3 CB-18.
- 4.18 Rack SUB 3 CB-18 to DISCONNECT.
- 4.19 **GO TO** WP 04-ED1021, and restore normal utility power.

5.0 OPTION B, PS BUS B BACKUP POWER

NOTE

Steps 5.1 through 5.27 may be performed in any order or concurrently, as desired. Substeps must be performed in the order presented.

- 5.1 Verify all PS CBs are open.
- 5.2 Reduce loads in accordance with Attachment 1 and concurrently with Steps 5.3 through 5.28.
- 5.3 Notify UFE/UFT to perform the following:
- Configure for backup power Option B in accordance with WP 04-ED1631.
 - Configure UVFS for minimum or filtration in accordance with WP 04-VU1608.

- 5.4 **GO TO** WP 04-ED1301, start **ONE** DG, and **RETURN TO** Step 5.5.
- 5.5 Verify Plant Air Compressors 41-G-021A and 41-G-021B in OFF at local control panels.
- 5.6 Place Chilled Water Pumps 41-GM-1021A and 41-GM-1021B in OFF at local control panel.
- 5.7 Verify SUB 5 LIS 25P-SW15/5 is closed.
- 5.8 Open SUB 5 CB-2 (SH Hoist House, 38P-MCC04/2).
- 5.9 Open 25P-SW15/9A.
- 5.10 Close 25P-SW15/9B.
- 5.11 Verify 25P-SW15/98 is closed.
- 5.12 Open 25P-SW15/97.
- 5.13 Verify 25P-SW15/8 is closed.
- 5.14 Open the following SUB 8 CBs:
 - 5.14.1 CB-3 (Engineering Bldg, 45P-DP04/50)
 - 5.14.2 CB-5 (Training Bldg, 45P-DP04/57)
 - 5.14.3 CB-2 (Switch Rack 12)
- 5.15 Perform the following in SUB 2:
 - 5.15.1 Open LIS 25P-SW15/2A.
 - 5.15.2 Close LIS 25P-SW15/2B.
- 5.16 Open SUB 4 CB-1 (Main Breaker).
- 5.17 Perform the following in SUB 6:
 - 5.17.1 Open LIS 25P-SW15/6A.
 - 5.17.2 Close LIS 25P-SW15/6B.
- 5.18 Open SUB 6 CB-2 (SWR 7, 24P-SWRO4/7).

- 5.19 Verify SB SUB LIS 45P-SW15/1B is closed.
- 5.20 Verify SB SUB CB-5 is open.
- 5.21 Verify WH Shaft Feeder LIS 31P-SW15/1 is closed.
- 5.22 Verify SUB 1 LIS 25P-SW15/1B1 is open.
- 5.23 Verify SUB 1 LIS 25P-SW15/1B2 is closed.
- 5.24 Verify SUB 1 CB-8 is open.
- 5.25 Open SUB 3 LIS 25P-SW15/3A.
- 5.26 Verify SUB 3 LIS 25P-SW15/3B is closed.
- 5.27 Verify all SUB 3 CBs are open.
- 5.28 Verify main load reduction is complete in accordance with Attachment 1.
- 5.29 Close **ONE** of the following SUB 3 CBs, corresponding to operating DG:
 - CB-7 (DG 1)
 - CB-11 (DG 2)
- 5.30 Close SUB 3 CB-9.
- 5.31 Close SUB 3 CB-5, energizing EFB MCC 41P-MCC04/7.
- 5.32 Close SUB 3 CB-10, energizing the following:
 - SB SUB
 - Waste Hoist SUB
- 5.33 Close PS CB-7, energizing PS BUS B breakers.
- 5.34 Close PS CB-6, energizing the following:
 - SUB 1
 - SUB 2
 - SUB 6
- 5.35 Close PS CB-8, energizing the following:
 - SUB 5
 - SUB 8
- 5.36 Verify with UFE/UFT that WH Shaft Feeder may be energized.

- 5.37 Close PS CB-5, energizing WH Shaft Feeder.
- 5.38 **GO TO** WP 04-CA1001 or WP 04-CA1202, start **ONE** Plant Air Compressor, and **RETURN TO** Step 5.39.
- 5.39 **GO TO** WP 04-VU1001, start UVFS in minimum or filtration, as required, and **RETURN TO** Step 5.40.
- 5.40 **GO TO** WP 04-HV1021, start WHB Zone 2 HVAC, as required, and **RETURN TO** Step 5.41.
- 5.41 **GO TO** WP 04-HV1176, start SB Zone 6 HVAC, and **RETURN TO** Step 5.42.
- 5.42 **IF** AIS Hoist is required **AND** DG is operating at > 900 kW, **THEN** perform additional load reduction in accordance with Attachment 2.
- 5.43 **WHEN** DG is operating at < 900 kW, **THEN** notify Hoisting Supervisor that AIS hoisting may begin, if required.
- 5.44 **WHEN** hoisting operations are complete, **THEN** restore additional loads as required:
- Perimeter lighting
 - Experimental loads
 - Additional equipment at discretion of FSM
- 5.45 Verify Fire Suppression System operability.
- 6.0 RECOVERY FROM OPTION B
- 6.1 Notify UFE/UFT of the following:
- All underground power will be shut down.
 - All UVFS will be shut down.
 - Prepare for restoration of power in accordance with WP 04-ED1621.
 - Prepare for restoration of UVFS in accordance with WP 04-VU1608.
- 6.2 **GO TO** WP 04-VU1001, shut down UVFS, and **RETURN TO** Step 6.3.

- 6.3 **GO TO** WP 04-HV1021, shut down WHB Zone 2 HVAC, and **RETURN TO** Step 6.4.
- 6.4 **GO TO** WP 04-HV1176, shut down SB Zone 6 HVAC, and **RETURN TO** Step 6.5.
- 6.5 **GO TO** WP 04-CA1001 or WP 04-CA1202, shut down operating Plant Air Compressor, and **RETURN TO** Step 6.6.
- 6.6 Open PS CB-8, de-energizing the following:
- SUB 5
 - SUB 8
- 6.7 Open PS CB-5, de-energizing WH Shaft Feeder.
- 6.8 Open PS CB-6, de-energizing the following:
- SUB 1
 - SUB 2
 - SUB 6
- 6.9 Open PS CB-7, de-energizing BUS B.
- 6.10 Open SUB 3 CB-10, de-energizing the following:
- SB SUB
 - Waste Hoist SUB
- 6.11 Open SUB 3 CB-5, de-energizing EFB MCC.
- 6.12 Open SUB 3 CB-9.
- 6.13 Open **ONE** of the following SUB 3 CBs, corresponding to operating DG:
- CB-7 (DG 1)
 - CB-11 (DG 2)
- 6.14 **GO TO** WP 04-ED1301, shut down operating DG, and **RETURN TO** Step 6.15.
- 6.15 **GO TO** WP 04-ED1021, and restore normal utility power.

7.0 OPTION C, PS BUS A AND BUS B BACKUP POWER

NOTE

Steps 7.1 through 7.18 may be performed in any order or concurrently, as desired. Substeps must be performed in the order presented.

- 7.1 Verify all PS CBs are open.
- 7.2 Reduce loads in accordance with Attachment 1 and concurrently with Steps 7.3 through 7.19.
- 7.3 Notify UFE/UFT to perform the following:
 - Configure for backup power Option C in accordance with WP 04-ED1631.
 - Configure UVFS for minimum or filtration in accordance with WP 04-VU1608.
- 7.4 **GO TO** WP 04-ED1301, start **ONE** DG, and **RETURN TO** Step 7.5.
- 7.5 Verify Plant Air Compressors 41-G-021A and 41-G-021B in OFF at local control panels.
- 7.6 Place Chilled Water Pumps 41-GM-1021A and 41-GM-1021B in OFF at local control panel.
- 7.7 Verify SUB 5 LIS 25P-SW15/5 is closed.
- 7.8 Open Sub 5 CB-2 (SH Hoist House, 38P-MCC04/2).
- 7.9 Verify 25P-SW15/9A is closed.
- 7.10 Verify 25P-SW15/98 is closed.
- 7.11 Open 25P-SW15/97.
- 7.12 Verify 25P-SW15/8 is closed.
- 7.13 Open the following SUB 8 CBs:
 - 7.13.1 CB-3 (Engineering Bldg, 45P-DP04/50)
 - 7.13.2 CB-5 (Training Bldg, 45P-DP04/57)
 - 7.13.3 CB-2 (Switch Rack 12)
- 7.14 Open SUB 4 CB-1 (Main Breaker).

- 7.15 Verify WH Shaft Feeder LIS 31P-SW15/1 is closed.
- 7.16 Verify SUB 3 LIS 25P-SW15/3A is closed.
- 7.17 Verify SUB 3 LIS 25P-SW15/3B is closed.
- 7.18 Verify all SUB 3 CBs are open.
- 7.19 Verify main load reduction is complete in accordance with Attachment 1.
- 7.20 Close **ONE** of the following CBs in SUB 3, corresponding to operating DG:
- CB-7 (DG 1)
 - CB-11 (DG 2)
- 7.21 Close SUB 3 CB-9.
- 7.22 Close SUB 3 CB-5, energizing EFB MCC 41P-MCC04/7.
- 7.23 Close SUB 3 CB-8, energizing: PS CB-4.
- 7.24 Close SUB 3 CB-10, energizing the following:
- PS CB-7
 - SB SUB
 - Waste Hoist SUB
- 7.25 Verify CB-9 in PS is open.
- 7.26 Close PS CB-4, energizing PS BUS A breakers.
- 7.27 Close PS CB-3, energizing the following:
- SUB 2
 - SUB 6
- 7.28 Verify with UFE/UFT that SH Shaft Feeder may be energized.
- 7.29 Close PS CB-2, energizing SH Shaft Feeder.
- 7.30 Close PS CB-10, energizing SUB 8.
- 7.31 Close PS CB-7, energizing PS BUS B breakers.
- 7.32 Close PS CB-6, energizing SUB 1.
- 7.33 Verify with UFE/UFT that WH Shaft Feeder may be energized.

- 7.34 Close PS CB-5, energizing WH Shaft Feeder.
- 7.35 Close PS CB-8, energizing SUB 5.
- 7.36 **GO TO** WP 04-CA1001 or WP 04-CA1202, start **ONE** Plant Air Compressor, as required, and **RETURN TO** Step 7.37.
- 7.37 **GO TO** WP 04-VU1001, start UVFS in minimum or filtration, as required, and **RETURN TO** Step 7.38.
- 7.38 **GO TO** WP 04-HV1021, start WHB Zone 2 HVAC, as required, and **RETURN TO** Step 7.39.
- 7.39 **GO TO** WP 04-HV1176, start SB Zone 6 HVAC, and **RETURN TO** Step 7.40.
- 7.40 **IF** AIS Hoist is required **AND** DG is operating at > 900 kW, **THEN** perform additional load reduction in accordance with Attachment 2.
- 7.41 **WHEN** DG is operating at < 900 kW, **THEN** notify Hoisting Supervisor that AIS hoisting may begin if required.
- 7.42 **WHEN** hoisting operations are complete, **THEN** restore additional loads as required:
- Perimeter lighting
 - Experimental loads
 - Additional equipment at discretion of FSM
- 7.43 Verify Fire Suppression System operability.
- 8.0 RECOVERY FROM OPTION C
- 8.1 Notify UFE/UFT of the following:
- All underground power will be shut down.
 - All UVFS will be shut down.
 - Prepare for restoration of power in accordance with WP 04-ED1621.
 - Prepare for restoration of UVFS in accordance with WP 04-VU1608.

- 8.2 **GO TO** WP 04-VU1001, shut down UVFS, and **RETURN TO** Step 8.3.
- 8.3 **GO TO** WP 04-HV1021, shut down WHB Zone 2 HVAC, and **RETURN TO** Step 8.4.
- 8.4 **GO TO** WP 04-HV1176, shut down SB Zone 6 HVAC, and **RETURN TO** Step 8.5.
- 8.5 **GO TO** WP 04-CA1001 or WP 04-CA1202, shut down operating Plant Air Compressor, and **RETURN TO** Step 8.6.
- 8.6 Open the following PS CBs:
- 8.6.1 CB-10 (SUB 8)
 - 8.6.2 CB-2 (SH Shaft Feeder)
 - 8.6.3 CB-3 (SUB 2 and 6)
 - 8.6.4 CB-4
 - 8.6.5 CB-5 (WH Shaft Feeder)
 - 8.6.6 CB-6 (SUB 1)
 - 8.6.7 CB-8 (SUB 5)
 - 8.6.8 CB-7
- 8.7 Open SUB 3 CB-8, de-energizing: PS CB-4.
- 8.8 Open SUB 3 CB-10, de-energizing the following:
- PS CB-7
 - SB SUB
 - Waste Hoist SUB
- 8.9 Open SUB 3 CB-5, de-energizing EFB MCC.
- 8.10 Open SUB 3 CB-9.
- 8.11 Open **ONE** of the following SUB 3 CBs, corresponding to operating DG:
- CB-7 (DG 1)
 - CB-11 (DG 2)

8.12 **GO TO** WP 04-ED1301, shut down operating DG, and **RETURN TO** Step 8.13.

8.13 **GO TO** WP 04-ED1021, and restore normal utility power.

9.0 OPTION D, USE OF PLANT SUB TIE BREAKER, CB-9

NOTE

Option D may be used with Option A or Option B.

9.1 **IF** PS BUS A and BUS B are in condition to be energized, **THEN** use PS tie breaker CB-9.

9.2 **IF ONE** or more of the following CBs or LISs are open:

- SUB 3 CB-10
- SUB 3 CB-9
- SUB 3 CB-8
- PS CB-7
- PS CB-4
- SUB 3 LIS 25P-SW15/3B
- SUB 3 LIS 25P-SW15/3A

THEN close PS CB-9.

9.3 Operate available PS CBs at direction of FSM.

Attachment 1 - Main Load Reduction List

These loads may be energized/de-energized in any order, as desired.

LOCATION	LOAD	SUPPLY
Support Building	Elevator 45-H-002	45P-DP04/2
Support Building	Zones 1 through 6 HVAC	Local Panels
Waste Handling Building	Zones 1, 2, and 4 HVAC	Local Panels
Waste Handling Building	Vacuum Pumps 41-G 050A, 050B, 050C	Local Panel
Waste Handling Building	Lighting Panels 41P-LP04/1, LP04/2, LP04/3, LP04/4, and LP04/5	41P-MCC04/6
Waste Handling Building	Forklift Battery Recharging Station 41P-DP04/21	41P-MCC04/5
TRUPACT Maintenance Facility	Distribution Panel 41P-DP04/4	41P-MCC04/5
Safety Building	Chiller 45-E-646	Local Panel
Engineering Building	Chiller 45-E-407	Local Panel

Attachment 2 - Additional Load Reduction List

These loads may be energized/de-energized in any order, as desired.

LOCATION	LOAD	SUPPLY
Support Building	Water Heater 45-E-402	45P-DP04/1
Support Building	Lighting Panels 45P-LP04/11, LP04/12, LP04/13, and LP04/14	45P-DP04/1
Support Building	Cart Chargers	45P-DP03/11 CB-26, 32, and 36
Waste Handling Building	Mechanical Equipment Room Unit Heaters 41-B-904, 905, 906, 907, and 908	41P-DP04/3
Waste Handling Building	CH Area Unit Heaters 41-B-935, 938, 939, and 941	41P-MCC04/5
Exhaust Filter Building	Meteorological Building	41P-MCC04/7
Exhaust Filter Building	Perimeter Lighting	41P-LP04/11 CB-8, and 9