

Immediate Procedure Change (IPC) Form

Procedure Number: _____ Procedure Rev. Number: _____ IPC Rev. Number: _____

Procedure Title: _____

Change description:

List affected portions (steps, pages, sections, attachments, etc.) of the procedure: *(Attach additional pages as necessary)*

Supervisor print/sign:

Date:

FM/NFM/SME print/sign: N/A

Date: N/A

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Date:

Review and Concurrence

(Attach additional pages as necessary)

Function	Printed Name/Signature	Date
NMC&A	N/A	N/A
NCS	N/A	N/A
OS&H		
Cognizant Eng.	N/A	N/A
USQD Reviewer		

FAM print/sign:

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Effective Date:

Working Expedited Copy Preparation and IPC Submittal

The following will be performed to complete the IPC:

- X-300, EOC, and affected personnel/facility receive working expedited copies of the procedure and FBP-BS-PRO-00135-F01 to resume work.
- A working expedited copy of the procedure, FBP-BS-PRO-00135-F01, and all supporting paperwork will be forwarded to PerformanceDocuments@ports.pppo.gov.

FAM/Designee print/sign:

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ELECTRONIC
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DOCUMENT NO.: FBP-DD-PRO-00141	REV. NO. 0.1	EFFECTIVE DATE: <u>01/15/25</u>
TITLE: Mobile Equipment Spotter	<u>3</u> YR PERIODIC REVIEW DATE: <u>01/14/28</u>	
	APPROVED BY: Jack Hughes DATE: 01/14/25 (Signature on File)	

USE CATEGORY:	GENERAL INTENT	Page 1 of 17
SME: Tim Williams	Writer: Kim Noel-Evens	

Level 2 Technical Procedure

Revision	Record of Issue/Revision	Affected Pages
0	Initial release; addresses FBP-PR-FY24-0952.	All

Previous Record of Issue/Revision information is available from the history files.

TITLE:	Mobile Equipment Spotter	FBP-DD-PRO-00141
		REV. NO. 0.1 26 1-24-25
		Page 2 of 17

CONTENTS

1.0	PURPOSE	3
2.0	SCOPE AND APPLICABILITY	3
3.0	GENERAL INFORMATION	3
4.0	USE REFERENCES	4
5.0	PRECAUTIONS AND LIMITATIONS	5
5.1	Special Hazards and Controls	5
5.2	Other Limitations	5
6.0	PREREQUISITES	6
7.0	TEST EQUIPMENT, TOOLS, AND SUPPLIES	6
8.0	ACTIONS	7
8.1	Heavy Equipment Operations	7
8.2	Hazard Controls	10
9.0	POST-PERFORMANCE ACTIVITIES	10
10.0	RECORDS	10
10.1	Records Generated	10
10.2	Requirements	10
11.0	DEFINITIONS/ACRONYMS	10
11.1	Definitions	10
11.2	Acronyms	11
12.0	SOURCE REFERENCES	11
Appendix A	REGULATORY REQUIREMENTS FLOW DOWN	12
Appendix B	EXCAVATOR HAND SIGNALS	13
Appendix C	FORKLIFT HAND SIGNALS	14
Appendix D	TRUCK HAND SIGNALS	15
Appendix E	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) TABLE A	16
Appendix F	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) TABLE T	17

TITLE: Mobile Equipment Spotter	FBP-DD-PRO-00141
	REV. NO. 0.1 24-1-24-25
	Page 3 of 17

1.0 PURPOSE

- 1.1 This procedure has been developed to implement applicable requirements for mobile equipment spotters.
- 1.2 This document implements applicable regulatory requirements. They are listed in Appendix A, *Regulatory Requirements Flow Down*.

2.0 SCOPE AND APPLICABILITY

- 2.1 This Level 2 procedure provides instructions for performing spotter duties for mobile equipment at the Portsmouth Gaseous Diffusion Plant (PORTS) site.
- 2.2 This procedure applies to Fluor-BWXT Portsmouth LLC (FBP) employees and contract labor resources (CLR) personnel working for FBP at the PORTS site.
- 2.3 Subcontractors are subject to review and acceptance of their procedures by the Hoisting and Rigging (H&R) manager or designee in lieu of full FBP procedure compliance.

3.0 GENERAL INFORMATION

- 3.1 Occupational Safety and Health Administration (OSHA) requires that a spotter is present on most job sites when working with heavy equipment, mobile elevated work platforms (MEWPs), and forklifts. Spotters are responsible for ensuring the safety of everyone working near the equipment.
- 3.2 All personnel performing duties as a mobile equipment spotter shall complete training module EC8458, *FBP Spotter Training*, and demonstrate their ability to perform/understand spotter duties through completion of the training course and associated exam.
- 3.3 Situations where spotters are required include, but are not limited to:
 - When the operator has a limited or obstructed view
 - When the operator has an obstructed view of the path in the direction of travel
 - Backing up of mobile equipment
 - Operating mobile equipment in high-traffic areas
 - Operation of mobile equipment near overhead utilities
 - Excavating near underground utilities
 - Working near unstable or sloped surfaces
 - In congested areas

TITLE: Mobile Equipment Spotter	FBP-DD-PRO-00141
	REV. NO. 0.1 1-23-25
	Page 4 of 17

- Where OSHA requires a dedicated spotter
- When the work control document or the job hazard analysis (JHA) requires a spotter

3.4 Spotters must **never** be closer than 5 feet to the mobile equipment **unless** the equipment is turned off or in park and the operator provides the spotter with approval to advance toward the equipment.

3.5 The operator must be able to see the full body of the spotter **unless** additional mitigations are agreed upon and approved by supervision or Occupational Safety and Health (OS&H).

3.6 The duties of the spotter must be discussed at the pre-job briefing(s) to re-emphasize the rule that spotters **never** position themselves in a hazardous position between equipment and other objects.

3.7 When working under or near electrical lines, a minimum of a 10 feet clearance between the equipment and the electrical line must be maintained.

3.8 When traveling under or near overhead electrical lines, maintain a minimum of a 6 feet clearance up to 50 kilovolts (kV).

3.9 The spotter and the equipment operator shall work as a team, review the hand signals to be used, and verify each interprets the signals the same.

3.10 The four key safe practices for drivers and operators are:

- Back up safely.
- Know your surroundings.
- Designate a spotter.
- Walk around equipment before backing.

4.0 USE REFERENCES

- A.** FBP-BS-PRO-00062, *Records Management Process*
- B.** FBP-JHA-13-1450, *Site Safety Orientation Job Hazard Analysis (SSO JHA)*
- C.** FBP-JHA-13-1647, *General Work Job Hazard Analysis (GW JHA)*
- D.** FBP-OS-PRO-00029, *Construction and Work Zone Barricades and Signs*

TITLE:	Mobile Equipment Spotter	FBP-DD-PRO-00141
		REV. NO. 0.1 0.1 1-28-25
		Page 5 of 17

5.0 PRECAUTIONS AND LIMITATIONS

5.1 Special Hazards and Controls

None. All hazards and controls associated with the activities in the procedure are addressed through FBP-JHA-13-1647, *General Work Job Hazard Analysis (GW JHA)*, and/or FBP-JHA-13-1450, *Site Safety Orientation Job Hazard Analysis (SSO JHA)*.

5.2 Other Limitations

5.2.1 Personnel being injured resulting from mobile equipment operations:

- A. **Never** place your body in a hazardous position between equipment and any fixed objects.
- B. **Always** use a spotter when the operator has limited view of operations.
- C. Only operate equipment for the purpose in which it is designated.
- D. Operators shall be trained, qualified, and proficient on the types of equipment they are required to operate.
- E. Operators shall be trained and proficient in the use of hand and voice signals for the equipment types they are required to operate.
- F. Spotters shall be knowledgeable on the equipment capabilities and limitations when performing spotter duties for that equipment.
- G. Spotter(s) and operator(s) shall review and practice the hand signals for the type of equipment being used prior to start of work.
- H. Spotter(s) and operator(s) shall walk the work area to look for any hazardous conditions prior to start of work.
- I. Assure the ground is stable enough to support the equipment before operations begin; seek engineering assistance if necessary.
- J. Look for overhead hazards, such as cable trays, high-voltage wires, lighting, communication lines, building extrusions, piping, etc.
- K. Barricades/fencing shall be erected to warn personnel to stay out of the area/zone required for the equipment operations in accordance with FBP-OS-PRO-00029, *Construction and Work Zone Barricades and Signs*.
- L. Barricade or control the area with spotter(s) to keep all unnecessary equipment, vehicles, and personnel out.

TITLE: Mobile Equipment Spotter	FBP-DD-PRO-00141
	REV. NO. 0.1 26 28-25
	Page 6 of 17

- M.** Operator shall take signals from the designated spotter ONLY, excluding a STOP signal.
- N.** When using shears or similar attachments, keep everyone a safe distance from the operations; follow the manufacturer's requirements for safe distance.
- O.** Spotter(s) must **never** be closer than 5 feet to the equipment.
- P.** Spotter(s) must signal the operator to cease movement, ground any attachments, and/or shut off equipment if they need to approach closer than 5 feet of the equipment.
- Q.** Spotter must assure a minimum of 10 feet clearance exists between overhead power lines under 50 kV while working, and 6 feet of clearance exists when traveling under or near power lines under 50 kV. (See Appendix E, *Occupational Safety and Health Administration [OSHA] Table A*, and Appendix F, *Occupational Safety and Health Administration [OSHA] Table T*.)

5.2.2 Property damage resulting from mobile equipment operations:

- A.** Provide spotter(s) to assist operator when vision is limited.
- B.** Provide spotter(s)/flagger(s) when equipment operations are in heavily congested areas.
- C.** Install flags/cones/signage or a spotter to alert operator to overhead hazards.
- D.** Evaluate ground conditions when heavy equipment is needed.

6.0 PREREQUISITES

- 6.1** Follow JHAs, as required.
- 6.2** Complete training module EC8458.

7.0 TEST EQUIPMENT, TOOLS, AND SUPPLIES

Wear personal protective equipment (PPE) as required by FBP-JHA-13-1647, FBP-JHA-13-1450, and/or job-specific JHAs and project/area requirements.

TITLE: Mobile Equipment Spotter	FBP-DD-PRO-00141
	REV. NO. 0.1 26 1-24-25
	Page 7 of 17

8.0 ACTIONS

8.1 Heavy Equipment Operations

Supervisor

- 8.1.1 Verify assigned personnel are current in required training.
- 8.1.2 Walk job-site with spotter and operator to identify any hazards.
- 8.1.3 Provide spotter with any specialty PPE required by JHA(s), supervision, and/or OS&H.
- 8.1.4 Assign a spotter to work with a particular operator and determine type of signals to be used (i.e., hand or voice signals).
- 8.1.5 Review hand signals with spotter and operator and ensure both interpret them the same.
- 8.1.6 Ensure spotter has no other assigned duties while spotting.
- 8.1.7 Ensure operator is informed of who the spotter is.
- 8.1.8 Ensure the operator is trained and proficient in the operation of the equipment they are assigned to operate.
- 8.1.9 During the pre-job briefing, review the roles and responsibilities of the spotter:
 - A. Keep the area clear of all unnecessary personnel, vehicles, and equipment.
 - B. Guide the operator when the operator's view is obstructed.
 - C. Alert operator when overhead hazards are present.
 - D. Have no other duties while performing the role of a spotter.
 - E. Recognize the responsibilities for the safety of the public, environment, and co-workers.
 - F. Be fit for duty, focus on the job, and have a firm but courteous manner.
 - G. **Never** be closer than 5 feet to the equipment **unless** the equipment is turned off or in park, any attachments are grounded, and the operator provides approval to advance towards the equipment.
 - H. Remain in full sight of the operator at all times and **never** walk behind the equipment without approval from the operator to do so.
 - I. Follow the controls defined in the JHA(s).

TITLE:	Mobile Equipment Spotter	FBP-DD-PRO-00141
		REV. NO. 0.1 1-28-25
		Page 8 of 17

Operator

- 8.1.10 Know who is assigned as the spotter for the equipment being operated and discuss the type of signals that will be used.
- 8.1.11 Know and understand the hand signals for the particular type of equipment being operated, and review the hand signals with the spotter to ensure signals are interpreted the same.
- 8.1.12 Follow the signals given by the spotter.
 - IF an unclear signal is given, **THEN DO NOT** perform any movement until spotter clarifies the action being directed to perform.
- 8.1.13 Perform daily inspection and record the inspection on the appropriate daily inspection form before moving equipment.
- 8.1.14 Operate the equipment in a safe manner, always maintaining awareness of surroundings and the location of the spotter.
- 8.1.15 Always utilize a spotter to travel in reverse when there is no or limited view of the travel path.
- 8.1.16 Maintain constant view of the spotter.
 - IF view of the spotter is lost, **THEN** stop all equipment movement and shut equipment off until view of spotter is regained.
- 8.1.17 Be aware of blind spots for the equipment.
- 8.1.18 Communicate the capabilities and limitations of the equipment being used and ensure spotter is aware of any blind spots.
- 8.1.19 IF operational visibility is limited, **THEN DO NOT** operate/drive equipment without a spotter.
- 8.1.20 Keep mirrors and windows clean for better visibility.
- 8.1.21 **WHEN** parking, **THEN** leave hydraulic parts/attachments on the ground, leveled and locked out, with emergency brake set, if applicable, and remove keys from equipment.
- 8.1.22 Turn keys in to supervisor at the end of each shift; **never** leave keys in equipment when not in use.
- 8.1.23 Maintain a 10 feet clearance, at minimum, while working under overhead lines 50 kV or less. (See Appendix F.)

TITLE:	Mobile Equipment Spotter	FBP-DD-PRO-00141
		REV. NO. 0.1 28 1-28-25
		Page 9 of 17

- 8.1.24 Maintain a 4 feet clearance, at minimum, while traveling under or near overhead lines 0.75 kV or less. (See Appendix F.)

Spotter

- 8.1.25 Understand the roles and responsibilities as a spotter as communicated by the supervisor during the pre-job briefing.
- 8.1.26 Avoid distractions while working.
- 8.1.27 Meet fit for duty requirements.
- 8.1.28 Wear the proper PPE when spotting.
- 8.1.29 ~~Wear~~ ^{Consider wearing} high-visibility clothing in a different color than other crew members. ~~28~~ 1-28-25
- 8.1.30 Complete the required *FBP Spotter Training*.
- 8.1.31 Only use hand signals that have been agreed upon by the supervisor, operator, and spotter.
- 8.1.32 **WHEN** assigned to spot for an operator, **THEN** review and practice hand signals to ensure interpretation is the same.
- 8.1.33 Maintain a safe position; **never** place self in a hazardous position, such as between equipment and any fixed object.
- 8.1.34 Only walk behind an operating piece of equipment **IF/WHEN** the operator gives authorization that it is safe to do so; **never** walk behind an operating piece of equipment without authorization that it is safe to do so.
- 8.1.35 Maintain a safe distance from the equipment which spotting is being performed; **never** get closer than 5 feet to the equipment without the operator grounding the attachment, shutting off the machine, and giving approval that it is safe to advance toward the machine.
- 8.1.36 Walk the work area prior to starting work to identify any hazards that may be present; know the surroundings.
- 8.1.37 Maintain eye contact with the operator at all times.
- 8.1.38 Keep unauthorized personnel, equipment, and vehicles out of the work area.
- 8.1.39 Maintain awareness of any overhead hazards and alert the operator **IF/WHEN** they are getting close to them.
- 8.1.40 Ensure equipment maintains a 10 feet clearance, at minimum, from overhead power lines or a 6 feet clearance, at minimum, when traveling under an overhead power line.

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TITLE:	Mobile Equipment Spotter	FBP-DD-PRO-00141
		REV. NO. 0.1 1-28-25
		Page 10 of 17

8.1.41 Follow all controls listed in JHA(s).

CAUTION

DO NOT use equipment that is damaged or unsafe.

8.2 Hazard Controls

OS&H Personnel

- 8.2.1 Provide controls in the JHA for the work being performed.
- 8.2.2 Provide oversight as required/requested by management/supervision.
- 8.2.3 Audit work activity periodically for adherence so safety controls listed in JHAs.
- 8.2.4 Perform a walkdown/hazard assessment of the work area.

Supervisor

- 8.2.5 Perform walkdown of work area with assigned personnel prior to work start.
- 8.2.6 Verify proper PPE is available and worn by spotters during spotting activities.
- 8.2.7 During pre-job briefing, discuss the duties of a spotter and reinforce the rule of spotters and other personnel to **never** position themselves in a hazardous position between equipment and other objects.

9.0 POST-PERFORMANCE ACTIVITIES

IF barricades/fencing/signage used, THEN remove barricades/fencing/signage in accordance with FBP-OS-PRO-00029.

10.0 RECORDS

10.1 Records Generated

Applicable daily inspection form(s)

10.2 Requirements

Records generated or received as a result of performing this procedure shall be managed according to FBP-BS-PRO-00062, *Records Management Process*.

11.0 DEFINITIONS/ACRONYMS

11.1 Definitions

None

TITLE: Mobile Equipment Spotter	FBP-DD-PRO-00141
	REV. NO. 0.1 0.1 1-28-25
	Page 11 of 17

11.2 Acronyms

- A. CFR** – Code of Federal Regulations
- B. FBP** – Fluor-BWXT Portsmouth LLC
- C. JHA** – job hazard analysis
- D. kV** – kilovolt
- E. OS&H** – Occupational Safety and Health
- F. OSHA** – Occupational Safety and Health Administration
- G. PPE** – personal protective equipment
- H. PORTS** – Portsmouth Gaseous Diffusion Plant

12.0 SOURCE REFERENCES

- A.** 29 Code of Federal Regulations (CFR) 1910, *Occupational Safety and Health Standards*
- B.** 29 CFR 1926, *Safety and Health Regulations for Construction*
- C.** EC8458, *FBP Spotter Training*
- D.** FBP-24-SCN-00258 R1, *SO-24-ESH&Q-001, Use of Spotters*
- E.** FBP-DD-PDD-00001, *Motorized Heavy Equipment*
- F.** FBP-DD-PRO-00139, *Control of Heavy Motorized Equipment and Mobile Cranes*
- G.** SO-24-ESH&Q-001, *Use of Spotters*

TITLE:	Mobile Equipment Spotter	FBP-DD-PRO-00141
		REV. NO. 0.1 01-24-25
		Page 12 of 17

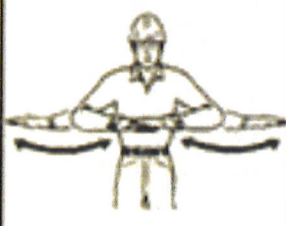
Appendix A
REGULATORY REQUIREMENTS FLOW DOWN

1. 29 CFR 1910, *Occupational Safety and Health Standards*
2. 29 CFR 1926, *Safety and Health Regulations for Construction*

TITLE:	Mobile Equipment Spotter	FBP-DD-PRO-00141
		REV. NO. 0.1 2/8 1-28-25
		Page 13 of 17

Appendix B
EXCAVATOR HAND SIGNALS

EXCAVATOR HANDSIGNALS

			
Load Up	Load Down	Swing Left	Swing Right
			
Turn Left	Turn Right	Travel	This Far To Go
			
Everything Slow	Stop Engine	Stop	Emergency Stop

TITLE:

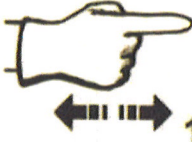
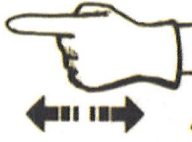
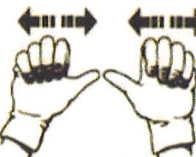
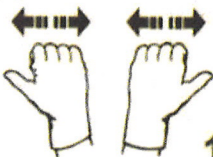
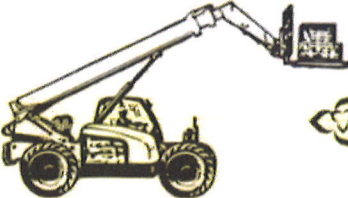
Mobile Equipment Spotter

FBP-DD-PRO-00141

REV. NO. 0.1 ~~1-28-25~~

Page 14 of 17

Appendix C FORKLIFT HAND SIGNALS

Tilt Fork Up  1	Tilt Fork Down  2	Boom Up  3	Boom Down  4
Boom Up Slowly  5	Boom Down Slowly  6	Close Clam  7	Open Clam  8
Tilt Forks Left  9	Tilt Forks Right  10	Shift Fork Left  11	Shift Fork Right  12
Turn Left  13	Turn Right  14	Shorten Hydraulic Boom  15	Extend Hydraulic Boom  16
Travel Away from Signaller  17	Travel Towards Signaller  18	Everything Slowly  19	Stop  20
Stop Everything  21	NO RESPONSE SHOULD BE MADE TO UNCLEAR SIGNALS 22	  V014	

TITLE:

Mobile Equipment Spotter

FBP-DD-PRO-00141

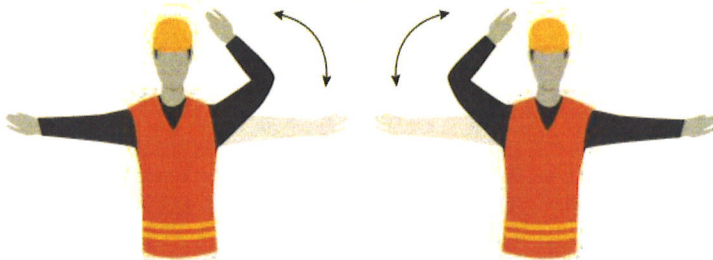
REV. NO. 0.1 *28 1-28-26*

Page 15 of 17

Appendix D TRUCK HAND SIGNALS

SPOTTER HAND SIGNALS

URNS



Point one arm to indicate the direction to turn. Bend monitoring arm repeatedly toward head to indicate continued turning.

EMERGENCY STOP



Start with hands clasped over head. Extend downward repeatedly until vehicles stops.

PROCEED SLOWLY



Face palms in direction of desired travel. Bend both arms repeatedly toward head and chest, and then extend.

STOP



Cross both arms above head.

DISTANCE TO STOPPING POINT



Face palms forward, with hands above head. Bring elbow forward and hands together.

TITLE:	Mobile Equipment Spotter	FBP-DD-PRO-00141
		REV. NO. 0.1 26 1-28-25
		Page 16 of 17

Appendix E
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) TABLE A

Table A	
Minimum Clearance Distances	
Voltage (nominal, kV, alternating current)	Minimum Clearance Distance (feet)
up to 50	10
over 50 to 200	15
over 200 to 350	20
over 350 to 500	25
over 500 to 750	35
over 750 to 1,000	45
over 1,000	(as established by the utility owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution)
Note: The value that follows "to" is up to and includes that value. For example, over 50 to 200 means up to and including 200kV.	

TITLE: Mobile Equipment Spotter	FBP-DD-PRO-00141
	REV. NO. 0.1 24 1-26-26
	Page 17 of 17

Appendix F
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) TABLE T

Table T Minimum Clearance Distance while Traveling with No Load	
Voltage (nominal, kV, alternating current)	While Traveling Minimum Clearance Distance (feet)
up to 0.75	4
over 0.75 to 50	6
over 50 to 345	10
over 345 to 750	16
over 750 to 1,000	20
over 1,000	(as established by the utility owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution)