

	<b>WORKING NEAR OR OVER LIVE SYSTEMS</b> OLS-HSE-PRC-5049	<b>Retention Code:</b> CG01 – CA
		<b>Revised:</b> 7/10/2017
<b>Owner:</b> BU and Functional Departments as applicable	<b>Approved By:</b> Manager, Field	<b>Review Frequency:</b> At least every 5 years



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## 1.1 Purpose

This procedure outlines the minimum safety requirements for the following:

- Equipment operator/spotter competency.
- Equipment inspection verification
- Mobile equipment working near overhead electrical lines or electrical cables.
- Mobile equipment working over or near process equipment or cable trays.

This procedure applies to all mobile equipment outlined in the definitions section.

**NOTE:** In addition, the use of cranes shall follow **(ALL-AOA-GE-OPM-OPR-0010 Surmont Operations Critical and Non-Critical Lifts)**.

## 2.1 Hazards to Mitigate

- Line strikes.
- Electrocutation.
- Hazardous material releases.
- Property damage.
- Line of fire.
- Blind spots

## 3.0 Procedure-Specific Roles and Responsibilities

### 3.1. Permit/ PJHA Issuers

- Ensure permit to work process is issued and followed.
- Assess the impact that the work will have on adjacent or simultaneous operations.

### 3.2. Work Supervisors

- Identify work activities and conduct hazard assessment.
- Ensure all applicable Life Saving Rule requirements are identified.
- Obtain required permit(s) to work based on hazard assessment.
- Ensure competent workers perform mobile equipment inspections/operations.

### 3.3. Contractors

- Follow this procedure.

## 4.0 Procedures

### 4.1. General

Any work (Excluding driving on designated roadway's) within 25m (82 ft.) of process equipment requires a work permit or applicable hazard assessment prior to execution. (Short term vehicle entry shall follow ISSoW section 7.3 for instruction)

### **Classified Area Operations**

Shall follow the requirements in HSE-MS procedure (**ALL-HSE-PRC-175 HotWork**)

### **Flag Person/Spotter**

- Only competent flag person's/spotters may direct mobile equipment.
- Shall wear high-visibility clothing and remain in sight or in clear communication with mobile equipment operators at all times.

### **Mobile Equipment Operator**

- Only competent persons may operate mobile equipment.
- Ensure all units are equipped with diesel motor shutoffs and 5lb ABC fire extinguishers secured in a bracket.
- Shall provide adequate defense against dropped tools and objects during operation.
- Shall ensure fall protection and rescue plan requirements are met prior to working from any equipment designed for lifting personnel, or exiting at height any elevated work platforms (**ALL-HSE-PRC-188 Fall Protection**).

## **4.2. Minimum Clearances Overhead Powerlines**

Shall follow HSE-MS procedure **Electrical Work (CPC-ALL-HSE-PRC-167) appendix B Table B1** for minimum clearance information

**NOTE:** Minimum clearance distances to electrical cables specified in this procedure do not apply to electrical cable in conduits or cable trays. When lifting or working above cable trays follow (**ALL-AOA-GE-OPM-OPR-0010 Surmont Operations Critical and Non-Critical Lifts**).

## **4.3. Work Over Process Equipment**

If cranes or mobile equipment work must be performed over process equipment the (**ALL-AOA-GE-OPM-OPR-0010 Surmont Operations Critical and Non-Critical Lifts**) must be used.

## **4.4. Equipment Inspections**

- Third party structural certifications by a qualified inspector available with equipment.
- Equipment operators shall conduct pre-use inspections and monthly/quarterly inspections per manufacturer's instructions (OH&S requirement).

## **5.1 References**

- Critical and Non-critical Lift Procedure OLS-OPS-PRC-7365.
- Electrical Work (CPC-ALL-HSE-PRC-167)
- Hot Work (ALL-HSE-PRC-175)
- Fall Protection (ALL-HSE-PRC-188)

## **6.0 Document Retention**

Records shall be retained in accordance with the ConocoPhillips' Document Retention HE11-CA.

## Appendix A – Definitions

### Contractor

A person or company that signs an agreement to provide services to CPC but is not in an employee relationship.

### Electrical cables

Conductors that have a factory-applied, voltage-rated insulation. Electrical cables can be found in cable trays or in other raceways, can be suspended with a messenger, or free-suspended from poles, pipe bridges, or steel bents.

### Overhead Powerlines

Transmission, distribution, and utility lines consisting of either bare conductors, or conductors with only weatherproof covering.

### Mobile equipment

Any kind of wheel or track-mounted equipment, such as cranes, aerial work platforms, backhoes, forklifts, skid steers and scissor lifts. (Excludes Passenger Vehicle, Argos and Side by Sides covered under hot work procedure (ALL-HSE-PRC-175).

### Process equipment

Equipment, tanks, or piping containing flammables, or hazardous materials.

### Qualified Person

A person who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, successfully demonstrated the ability to solve/resolve problems related to the subject matter, the work, or the project.

## Appendix B – Revision Record

Date	Reason	Name	Approver
7/10/2017	Reduce redundancy to other procedures by reference	David Friess	Pat Lamont

## Appendix C - Minimum Clearances (Overhead Power Lines)

Table B1 – Electric Shock Approach Distances – Exposed Moveable Conductors and Exposed Fixed Circuit Part

Exposed Moveable Conductor (Overhead Power Line) Voltage	Limited Approach Boundary	Restricted Approach Boundary	Prohibited Approach Boundary
Less than 300V	3.05 m	Avoid Contact	Avoid Contact
301V – 600V	3.05 m	305 mm	30 mm
1.0 – 15.0 kV	3.05 m	660 mm	178 mm
15.1 – 36.0 kV	3.05 m	787 mm	254 mm
35.1 – 121.0 kV	4.5 m	1.02 m	838 mm
138 – 145 kV	4.5 m	1.17 m	1.02 m
161 – 169 kV	5.0 m	1.29m	1.14m
230-362 kV	7.0 m	2.79 m	2.64 m
500kV	7.0 m	3.61 m	3.45 m