

Z E R O

A C C I D E N T



مؤسسة صالح عائض بالحارث  
SALEH AYED BALHARITH EST.  
General Contracting & Rig Movers  
للمقاولات العامة و لنقل معدات الحفر

# HEALTH AND SAFETY HANDBOOK

## Personal Protective Equipment

Personal protective equipment (**PPE**) refers to protective clothing, helmets, goggles, or other garments or equipment designed to protect the wearer's body from injury or infection. The hazards addressed by protective equipment include physical, electrical, heat, chemicals, biohazards, and airborne particulate matter.



# HEALTH AND SAFETY POLICY

SAB is committed to strive to be the best provider of Heavy Lifting & Transportation, or if possible exceeding, the current (and if applicable any in the future foreseen) standards, demands and expectations of customers and government regarding Safety, Security, Health & Quality aspects.

Undertaking our activities goes along with high responsibility, competency and professionalism, so in order to realize our commitment and maintain our leadership position in this business we have established a structure that includes all the organization's activities and describes the processes including the aspects of Safety, Health and Quality.

## **Our policy is established on the following items:**

We operate our workplaces to comply with Safety, Security, Health & Quality applicable local and global regulations, and with the policies of our group using best practice as a guideline.

We'll ensure that the risk associated with our activities and services to employees and other interested parties, surroundings and the information and goods entrusted to us are known and controlled in a responsible manner.



# HEALTH AND SAFETY POLICY

We'll maintain the best possible Health and Safety performance, and in order to achieve this Standard, prevent occupational injuries, illnesses and pollution.

We'll establish, implement and maintain a framework to measure our QHS objectives and targets and to ensure the continual improvement of our QHS program and Documented Management System.

We will review our policy periodically to ensure its adequacy and suitability and we'll communicate this policy to all employees and interested parties.

We believe that our employees are our greatest asset and its part of our policy to ensure that everyone is aware of his vital role for the continual development of their welfare within our company by participating in our periodic scheduled training programs.



# IDENTIFYING SAFETY AND HEALTH PROBLEMS IN THE WORKPLACE

Identifying health and safety problems can be as easy as answering basic questions. To determine if there are health and safety problems that need to be addressed in your workplace, use these questions:

- Do you or your co-workers have injuries or health complaints? If so, what types?
- Who has been hurt or is having symptoms?
- When do you or your co-workers feel these symptoms?
- Where in the workplace are safety or health problems occurring?
- What are the conditions that are causing problems?

Source: Safe Jobs Now: An AFSCME Guide to Health and Safety in the Workplace.



**SAFETY**

**FIRST**

**Z E R O   A C C I D E N T**

# WAYS TO MAINTAIN A SAFETY RIG SITE



Create a safety plan before work begins.



Conduct safety orientation and regular training sessions for workers.



Have a safety incentive program and make it well known to workers.



Investigate all accidents and safety oversights.

<http://www.warren-cat.com/company/night-time-construction>

# CARRYING OUT THE LIFT

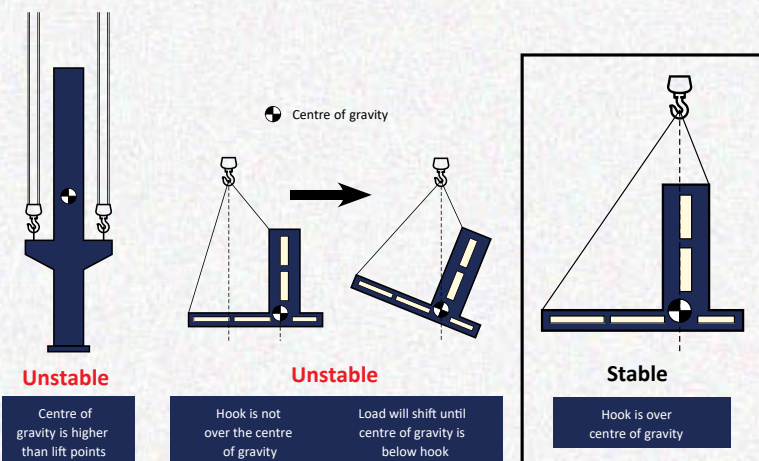
Lifting operations should be carried out following the lift plan under the supervision of a competent person, who controls the team (crane operator, slinger, signaller etc.) and who can stop the lift at any time should they consider the lift to be unsafe.

## When carrying out any lift make sure:

- All those involved in the lift know their role and understand who is in control of the operation;
- Load routes are established to avoid loads being lifted over people;
- The load is properly slung by a competent person. Ensure the chains and slings are of the correct strength and are in good condition. Chains and slings may be damaged by the load, so packing could be necessary. The centre of gravity of the load may not be in the middle of the load (this is very common with pieces of plant), causing it to shift or slip out of its slings when it is raised.

It is important that loads are slung so that they are in balance with their centre of gravity beneath the hook (*see below Figure*);

- A competent banksman or signaller is provided if the driver's view is restricted;
- There is adequate clearance so that people are not struck or trapped by the load, counterweight or body of the crane. If traps are unavoidable, fence them off;
- Where necessary, tag lines are used to guide loads, e.g. in windy conditions or on large loads;
- If the site team cannot complete the lift as planned, the appointed person must be consulted before the plan is changed.



The centre of gravity must be beneath the hook

# MOBILE CRANE

## CRITICAL LIFT

*All Lifts: conducted near power lines; loads with weight more than 40 tons; loads exceeding 85% of rated crane capacity; tandem and night lifts; require prior Manager approval.*

Safe lifting depends on three key elements, which require that the operation must be:

- Properly planned by a competent person (also known as the 'appointed person');
- Appropriately supervised (by a competent 'crane supervisor'); and
- Carried out in a safe manner. load over vessels, piping, and/or equipment containing hydrocarbons, steam or other pressurized liquids.

**Critical crane lifts include the following examples and restrictions/requirements.**

- Any part of a crane whose boom or boom attachment is working within **10 meters (33 feet)** of any hydrocarbon and/or pressurized piping areas. This includes cranes having to suspend a load over vessels, piping, and/or equipment containing hydrocarbons, steam or other pressurized liquids.
- Any part of a crane whose boom or boom attachment is working within **10 meters (33 feet)** of any populated/traffic areas. This includes cranes having to suspend a load over pedestrians, vehicle traffic, occupied construction equipment, and/or occupied buildings

- Any crane lift that requires an attachment(s) to the main boom.
- Any load 40 tons or greater.
- Using a man-basket.
- Any load that exceeds 85% of the crane's rated load capacity or manufacturer's specifications for that specific lift.
- Any crane lift with explosion/fire high heat hazards.

*Special critical crane lifts, hazardous by their nature and requiring special training, rigging, and/or boom attachments, include, but are not limited to, the following examples and restrictions/requirements:*



## Tailing, tandem (multiple), or turning lifts.

**A.** De-rate all cranes involved in the lift by twenty-five percent (25%) of the load chart.

**B.** Utilize cranes of same size, manufacturer, and model, if possible, (except tailing lift) for tandem (multiple), and turning lifts.

**C.** Have a separate approved Critical Lift Plan on site prior to the lift, each time one of these types of lifts is performed.

**D.** Have a Rigger-I in charge of actual lift coordination.

*Standard and critical crane lifts shall not be performed in wind speeds exceeding 32km/h (20mph-17.4 knots - 9 meters/second), unless otherwise specified by the crane manufacturer.*

## Crane suspended personnel platforms (manbaskets)

**A.** Only allow work from, or transport by, a crane suspended personnel platform (manbasket) when conventional means of performing the work reaching the worksite (such as personnel hoist, ladder, stairway, aerial lift, elevating work platform, or scaffold) would be more hazardous, or is not practical, because of structural design or worksite conditions.

**B.** Have an approved Critical Lift Plan on site prior to the lift.

**C.** Have a Crane Suspended Personnel Platform (Manbasket) Permit (SA 9648) properly completed, signed, and onsite prior to the lift.

# MOBILE CRANE CRITICAL LIFT

# OVERHEAD ELECTRIC POWERLINE

*The assigned Saudi Aramco Foreman for Saudi Aramco drilling/work over rigs and for Contractor drilling/work over rigs shall notify the Wellsites Division, Drilling & Workover Services Department ( D&WOSD) of the date of the rig move. Wellsites Division shall be responsible for:*

7:1 Selecting the most appropriate route for moving the drilling rig components with high clearance requirements to minimize power-line crossings.

7:2 Directly notifying the Power Dispatcher (if overhead power lines have to be crossed) at least 7 work days before the equipment move of the date, time, location of crossing, power-line(s) affected, and estimated duration of the scheduled outage required so that

facilities affected by the outage can be notified the effect on Producing Operations evaluated.

7:3 Transportation Department (TD) shall prepare and obtain PDD's concurrence on the Rig Pre-Move Checklist Form, Attachment 1 for Saudi Aramco rig moves. Wellsites Division, D&WOSD shall prepare and obtain PDD's concurrence on the Rig Pre-Move Checklist Form, attachment 1B (contractor rigs) for moves by contractors.



Powerline Voltage Level		Nominal Voltage	Absolute Limit of Approach	
Min (KV)	Max (KV)	KV	m	ft
0	50	0, 11, 0, 24, 0, 48, 2,4,4,16 11,13,8,33,34,5	1.8	6
>50	200	69,115,132	3.1	10
>200	350	230	3.1	10
>350	500	380	4.9	16

If a controlled outage is required, the proponent department of the move or work shall contact the PDD Electric System Operator (ESO) and initiate a Work Permit request. The ESO shall determine if an outage of the overhead power-line can or should be scheduled before the move or work is permitted to proceed. (Facility involved shall be notified by PDD for the scheduled power outage.) Scheduled outages required on any Saudi Electric Company (SEC) owned and operated power-lines shall be coordinated by the PDD Power Dispatcher. Overhead power-line(s) shall be considered energized until the PDD indicates that it is not energized.

7:4 If clearance cannot be met and the power-lines cannot be de-energized, Wellsites Division, D&WOSD for Contractors rigs and TD for Saudi Aramco rigs shall initiate a request for a Hot Work Permit ( Refer to GI 2.100) signed by PDD’s local area Service Dispatcher or ESO. The Hot Work Permit shall indicate clearly that the overhead power-line is energized and that the Drilling Foreman for Saudi Aramco drilling rigs or assigned Liaison Man for Contractor drilling rigs is familiar with this GI. The Hot Work Permit shall also indicate precautions to be taken to prevent power-line contact. Where practical, the power-line crew shall be advised to cover the line conductors with protective equipment made for the purpose.

Notifying the PDD Power Dispatcher or ESO of any changes in timing as soon as they are known.

# 6 STEPS TO ESTABLISH AN EFFECTIVE STOP WORK AUTHORITY PROGRAM

## 1. Stop

When an employee or contractor perceives condition(s) or behavior(s) that pose imminent danger to person(s), equipment or environment he or she must immediately initiate a stop work intervention with the person(s) potentially at risk.

If the supervisor is readily available and the affected person(s), equipment or environment is not in imminent danger, coordinate the stop work action through the supervisor. The stop work action should be clearly identify as a stop work action and initiated in a non-combative manner.



## 2. Notify

Notify affected personnel and supervision of the stop work action. If necessary, stop work activities that are associated with the work area in question. Make the area(s) as safe as possible by removing personnel and stabilizing the situation.

# 6 STEPS TO ESTABLISH AN EFFECTIVE STOP WORK AUTHORITY PROGRAM

## 3. Investigate

Affected personnel will discuss the situation and come to an agreement on the stop work action.

If all parties come to an agreement the condition or behavior is safe to proceed without modifications, (e.g. the initiator was unaware of certain information or circumstances), the affected persons should show appreciation to the SWA initiator for their concern and then resume work. The SWA is complete at this point and no further steps are needed.

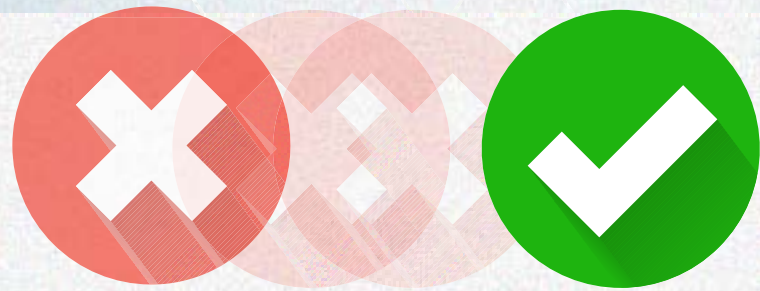
If it is determined and agreed the SWA is valid, A Stop Work Issuance Form will be completed. The condition(s) or behavior(s) that pose threats or imminent danger to person(s), equipment or the environment must be resolved before restarting work. Work will be suspended until a proper resolution is achieved.



# 6 STEPS TO ESTABLISH AN EFFECTIVE STOP WORK AUTHORITY PROGRAM

## 4. Correct

Modifications to the affected area(s) will be made according to the corrections outlined in the Stop Work Issuance Form. The affected area(s) will then be inspected by qualified experts to verify completeness of the modifications and to verify all safety issues have been properly resolved. The completion of modifications will then be noted on the Stop Work Issuance Form.



## 5. Resume

The affected area(s) will be reopened for work by personnel with restart authority. All affected employees and contractors will be notified of what corrective actions were implemented and that work will recommence.

# 6 STEPS TO ESTABLISH AN EFFECTIVE STOP WORK AUTHORITY PROGRAM

## 6. Follow-Up

Operations Managers will provide the root cause analysis to the stop work action and identify any potential opportunities for improvement. The Safety Manager will publish the incident details regarding the stop work action to all Operations Managers and employees outlining the issue, corrective action and lessons learned. Management will promptly review all stop work reports in order to identify any additional investigation or required follow-up.



Follow up

<http://blog.wisebusinessware.com/safetyinsiderblog/how-to-establish-an-effective-stop-work-authority-program>

# 12 LIFE SAVING RULES



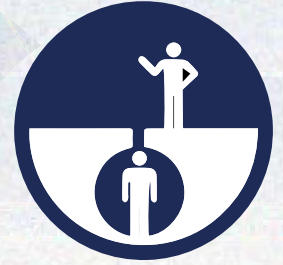
Work with a valid Work Permit when required.



Keep away from the "Line of Fire".



Verify isolation before work begins and use the specified life protecting equipment



Obtain authorization before entering a confined space



Obtain authorization before overriding or disabling critical equipment



Protect yourself against a fall when working at height.



Do not walk under a suspended load



Do not smoke outside designated smoking areas.



No alcohol or drugs while working or driving



While driving, do not use your phone and do not exceed speed limits



Wear your seatbelt.



Follow prescribed Journey Management Plan

<https://www.shellsource.com/ShellSource/BusinessFunctions/Safety/LifeSavingRules.htm>



## 4 MOST COMMON SAFETY ACCIDENTS IN THE WORKPLACE

# 1 SLIPS, TRIPS & FALLS

### How to Reduce Risk

- Require employees to wear slip resistant shoes
- Avoid creating obstacles in aisles & walkways.
- Ensure proper lighting.



# 2 STRAINS & SPRAINS

### How to Reduce Risk

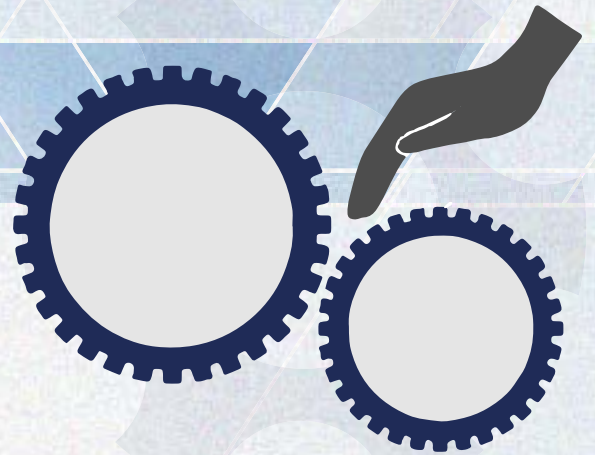
- Practice ergonomic controls like eliminating or reducing awkward postures.
- Perform administrative controls like stretching, job rotation & frequent breaks

## 4 MOST COMMON SAFETY ACCIDENTS IN THE WORKPLACE

### 3 STRUCK OF PINCHED

#### How to Reduce Risk

- Establish routes for employees & fork lifts.
- Perform lockout-tagout to ensure machines are shut off properly
- Identify pinch points



### 4 BURNS & ABRASIONS

#### How to Reduce Risk

- Provide proper chemical handling training
- Require PPE ( Personal Protective Equipment)
- Enforce proper machine guarding.



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