GUIDELINES AND REQUIREMENTS FOR WORK AT HEIGHT AND IN CONFINED SPACES IN THE NIGERIAN OIL AND GAS INDUSTRY

ISSUED BY

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1. INTRODUCTION

1.1 Background

Work at Height (WAH) and work in confined spaces are amongst the high-risk activities which are commonly used in executing job functions in oil and gas facilities. Mismanagement of hazards while working at height and working in confined spaces has the potential to cause severe injuries or death to personnel. Falls from height poses risks to those directly carrying out the work, and other workers within the working area. Similarly, accidents from working in a confined space can lead to asphyxiation, fire, explosion, etc.

These Guidelines is issued for persons intending to work at height and in confined spaces in the Nigerian oil and gas industry to prevent occupational accidents arising from unsafe work at height and in confined spaces. It describes the minimum requirements that must be satisfied prior to commencement of work and during work activities.

1.2 Purpose

The purpose of this document is to provide guidance to ensure that work at height and working in confined spaces are performed with appropriate work equipment, requisite competencies and that adequate measures are in place to forestall accidents, in line with global best practices.

These Guidelines outline the minimum requirements for managing occupational hazards in scaffolds, rope access, ladders and confined spaces.

1.3 Scope

These Guidelines apply to all oil and gas facilities in the Nigerian oil and gas industry and are in line with internationally recognised standards and codes of practice for work at height and working in confined spaces. It covers the intent of the Mineral

Oils (Safety) Regulations (MOSR), 1997 and Petroleum (Drilling and Production) Regulations, 1969 and subsequent amendments for the purpose of work at height and working in confined spaces.

Note: All technical details on the requirements for using **mechanical elevators** in WAH are covered in the *DPR Guidelines and Procedures for Lifting Equipment and Lifting Operations* which can be found on the DPR website via www.dpr.gov.ng.

1.4 Definition of Terms

1. **Work at Height (WAH)**: Work at Height (WAH) refers to all work activities regardless of work task and duration, where the risk of falling a distance is liable to cause injury.
2. **Confined Space**: Confined space refers to an enclosed or partially enclosed space not designed for continuous human occupancy and which harbours one or more of the following risks:
    i. Limited opening for entry or egress of persons
    ii. Unsafe level of oxygen
    iii. Unsafe level of contaminants, gases, fumes and vapours and
    iv. Substances that can cause engulfment

    Examples of confined spaces are process vessels, storage tanks, boilers, mud pits, silos, open-topped chambers, ducts, flues, sewer systems, excavations, trenches and other tank-like compartments usually having a manhole for entry.

2 GENERAL REQUIREMENTS FOR WORK AT HEIGHT

2.1 General Overview

A company wishing to render work at height (WAH) services in the Nigerian oil and gas industry shall meet the following criteria prior to their engagement by a licensee/lessee:

i. Obtain an OGISP which enables them to render such services in the Nigerian oil and gas industry;
ii. Belong to a nationally and/or internationally recognised professional body such as National Access and Scaffolding Confederation (NASC), IRATA, etc. as applicable and;
iii. Have personnel with advanced certification, capable of leading a team in scaffolding or rope access operations as applicable. Such certification shall be in line with internationally recognised occupational training standards for scaffolding or rope access as applicable.

2.2 Personal Protective Equipment (PPE) for WAH

All personnel shall be provided with PPEs that meet international standards for WAH activities. All PPEs shall be inspected and confirmed to be in good condition before usage. The minimum PPE required for WAH are:

i. Safety helmet
ii. Safety footwear
iii. Eye protection
iv. High visibility vest and coverall
v. Gloves
vi. Fall arrest harnesses, which must be used in accordance with the task-specific risk assessment and
vii. Other specific PPE as determined from the task-specific risk assessment.

2.2.1 Requirements for Fall Arrest Harness and Lanyard

WAH fall arrest safety harnesses, ropes, lanyards, fittings and other fall arrest equipment shall be conform to internationally recognised standards. All fall protection equipment must be anchored securely when in use. The fall arrest harness and lanyards shall satisfy at the minimum the following:

i. The material, design and specifications must be able to withstand loads from free falls without failing;
ii. The fall arrest harness shall be comfortable for the worker with provisions for the attachment of a lanyard above the waist at the sternal or dorsal area;
iii. The length of the lanyard and location of the anchor must be such that there is provision for fall clearance that will prevent the worker from coming into contact with the lower level or hitting the ground;
iv. Positioning lanyards that ensure work positioning/working in restraint shall be used when required to eliminate the risk of falls from height; and
v. Pre-use checks and tests shall be carried out on Self Retracting Lanyard (SRL) when used.

2.2.2 Requirements for Anchors and Anchorage Points

In accordance with internationally recognized standards, the anchors, anchorage points and locations must be reliable, have adequate strength and stability to withstand the dynamic and static forces and located on structures with adequate integrity. It shall satisfy at the minimum the following:

i. Anchors and anchor devices shall be of good construction and manufactured in conformance to recognised international standards. Certificate of conformance declaring that such anchors meet the required standard must be in place;

ii. Installation of anchors shall be done by a competent person in accordance with the designer's and/or manufacturer's guidelines. Anchors must be tagged with the installer name, installation date, rated load and other relevant information;

iii. Anchors and anchorage points shall not be located on sharp, rough edges or hot surfaces, at corners or edges with potential to cut, abrade or chafe fall protection equipment;

vi. Anchors and anchorage points shall be fully examined and certified in accordance with the manufacturer's instructions or every six (6) months by a competent person; and

vii. A register of fall protection equipment including anchors and anchorage points shall be maintained. In addition, the inspection and maintenance of equipment shall be tracked.

Note: Further reference on anchors and anchorage points are covered in the *DPR Guidelines and Procedures for Lifting Equipment and Lifting Operations* which can be found on the DPR website via www.dpr.gov.ng.

2.3 Risk Assessment and Work Procedure For WAH

For all WAH activities, a risk assessment shall be carried out, documented and made available on demand. At a minimum, the following requirements shall be satisfied:

i. The variables such as nature of the work, loads, fall distance and weather conditions shall be considered;

ii. The risk assessment shall be carried out by competent persons;

iii. The risk assessment, Standard Operating Procedures (SOP) and emergency response plan, shall be developed in line with global best practices and recommendations from internationally recognised standards;

iv. Permit-To-Work (PTW) system shall be put in place and strictly adhered to; and

v. The risk assessment and SOPs shall be communicated to the WAH personnel prior to commencement of work and regularly while the work is ongoing. The evidence to show that WAH personnel have been briefed shall be made available on demand.

2.4 Barricading Workspace

The workspace which is the area where the WAH is taking place, shall be cordoned off or barricaded to prevent entry by unauthorized personnel. In addition, caution signs and other safety signs shall be placed around the workspace to alert personnel of the work activities taking place.

2.5 Dropped Objects Prevention

The management and prevention of dropped object hazards shall be in line with internationally recognised standards such as ANSI/ISEA 121-2018 standard or its equivalents. All tools used during WAH shall be secured to prevent injuries caused by tools falling on personnel working below the platform. At the minimum, the following shall apply:

i. Tools shall be tethered using lanyards to anchorage points on the safety harness of the worker or on the structure. This should be the primary method to prevent dropped objects;

ii. Secondary means such as perimeter netting, toe-boards etc shall be used to strengthen the dropped object prevention control; and

iii. Where the tools are housed in a container/bucket/pouch, such housings shall be attached as in 3.5(i).

Note: If the worker is the anchor point, the combined load of the tools shall not exceed 5lbs (2.3 kg).

2.6 **WAH Rescue**

A rescue plan must be in place before any WAH can be executed. It must be prepared in line with internationally recognised standards and shall be included in the WAH operator/contractor's SOP. The rescue plan is a major component of the emergency response plan. At a minimum, the rescue plan shall address the following:

i. Details of the rescue kit, including its components and location.
ii. Pre-use check on the integrity of the rescue equipment. Equipment which fail the pre-use check shall on no condition be used.
iii. Limitations of the rescue system, such as:
    a. Configuration of the system
    b. Maximum weight
    c. Weather restrictions such as high winds and
    d. Requirements for additional resources, such as extra personnel or equipment.
iv. Location of suitable anchor points.
v. Rescue paths.
vi. Communication arrangements within the site and with external support.
vii. A competent personnel present in the work area at all times, to alert and start basic rescue work in case of a fall.
viii. A rescue team trained by a competent person(s) on executing the rescue plan and on first aid. The team must understand the rescue plan, their roles and responsibilities.
ix. Periodic drills of rescue plans are carried out, especially for high risks activities; and
x. Periodic review of rescue plan to incorporate lessons learned from incidents and exercises.

3 WORKING AT HEIGHT USING SCAFFOLDS

Scaffolding shall be designed, erected and dismantled in strict accordance with internationally recognised standards such as standards from NASC, British standards etc. All scaffolding materials must be passed and lowered/raised in a controlled and orderly manner using hand-to-hand, gin wheels and ropes etc. Scaffolders shall be required to comply with internationally recognized standards for preventing falls. Where possible, fall protection measures such as advanced guardrail systems, scaffolders steps etc, shall be used during scaffold erection.

3.1 Minimum Training Requirements for Scaffolding

Every member of the scaffolding team shall be required to possess relevant certifications to the appropriate level (e.g. Advanced Scaffolder, Intermediate Scaffolder or Basic Scaffolder), in line with internationally recognised occupational training standards such as Construction Industry Scaffolders Record Scheme (CISRS). Scaffolders using or erecting proprietary scaffolding must be trained in accordance with the manufacturer's instructions.

3.2 Load Requirements of Scaffolds

All scaffolds shall be designed and set up to provide adequate strength, stability and rigidity while erect, in use and when dismantled. The factor of safety of the scaffold shall be at least four (4) times their maximum load.

3.3 Working Platform and Edge Protection Requirements for Scaffolds

Working platforms shall have sufficient width and be fully boarded to allow passage of personnel and/or materials. They shall be capable of resisting the loads imposed upon them, including high wind loads that could dislodge the scaffold boards. At a minimum, scaffold working platforms shall possess the following features:

i. A top and medium guard rail which shall be appropriately spaced to prevent a fall through of personnel;

ii. Toe board height shall be appropriate to prevent the fall of persons, material, or object from the working platform;

iii. No lateral gap shall be found on the working platform, except for the provision of access to ladder and stairway; and

iv. Boards and other materials considered likely to be displaced accidently shall be secured to prevent displacement or fall.

3.4 Scaffold Access/Egress

All scaffolds shall be equipped with ladders, stairways or other means of access/egress in compliance with internationally recognized standards. The means of access/egress shall be secured and positioned as not to endanger stability of the scaffold.

3.5 Scaffold Ties and Stability

All scaffolds including free standing scaffolds, must be securely protected from collapse or overturning in accordance with internationally recognised standards, manufacturer's instructions (for proprietary scaffolding) or the design engineer specifications. Where masonry anchors are used, they must be installed in accordance with manufacturers' instructions and tested as required by international standards.

3.6 Scaffold Material Selection

All materials used in scaffold construction such as scaffold tubes, timber boards, other boards such as laminated veneer or plastic, and scaffold fittings used to erect a scaffold shall be compliant with applicable internationally recognised standards and codes. The scaffold tubes shall be of high tensile strength and durability.

3.7 Housekeeping of Scaffold Materials and Equipment

All scaffold materials/equipment shall be stored appropriately at predefined/approved sheltered areas to protect against corrosion and prevent it

from becoming a trip hazard in facilities. All damaged or unserviceable scaffold materials/equipment shall be segregated from the serviceable equipment and removed from service.

3.8 Scaffold Statutory Inspection

A scaffold shall not be put in use unless thoroughly inspected by a competent person who possesses relevant scaffold inspection certification. Every scaffold shall be inspected:

i. Before it is first put into use;
ii. After a substantial alteration;
iii. After every seven days while in use; and
iv. After any event likely to jeopardise the safe condition of the scaffold (e.g. high winds, interference, damage etc.).

The inspector is required to place a scaffold tag after inspection. Also, the necessary documentations and records containing details of the inspection carried out shall be provided on demand.

4 WORKING AT HEIGHT USING ROPE ACCESS

Rope access requirements shall apply to any operation where personnel descend or ascend on a rope or transverse on a horizontal rope to gain access to structures that are difficult to reach. Rope access shall be done in strict accordance with internationally recognised standards such as those from SPRAT and IRATA.

4.1 Minimum Training Requirements for Rope Access

Rope access work shall be carried out by competent personnel who are certified in line with internationally recognized standards, such as those by SPRAT and IRATA. At the very least, the skills acquired from the trainings shall include the following:

i. Understanding rope access safety and fall hazards;

ii. Application of rope access equipment;

iii. Estimating fall factors and clearance distances;

iv. Execution of basic rescue;

v. First Aid; and

vi. Cardiopulmonary Resuscitation (CPR) and other trainings which are relevant to the safe execution of rope access work.

The rope access team shall be led by a competent person who possesses an advanced internationally recognized certification such as a level 3 in IRATA certification scheme. At a minimum, the competent person shall:

i. Understand rope access techniques appropriate to particular worksites and its limitations;

ii. Be responsible for hazard identification and risk assessments for rope access related tasks;

iii. Be able to organize rescue operations; and

iv. Possess supervisory skills.

Other members of the rope access team shall comprise technicians and other personnel that possess internationally recognized certification such as levels 1 and 2 in IRATA certification scheme and are capable of rigging working ropes, undertake rescue operations and perform other rope access tasks.

4.2 Inspection and Tracking of Rope Access Equipment

Proper documentation of the origin, usage and inspection of equipment is necessary to ensure the integrity of rope access systems. The following requirements shall, at a minimum, be followed:

i. A competent person shall be designated for the purpose of overseeing the care of rope access equipment and shall ensure proper storage, documentation, and replacement of equipment.

ii. All equipment must have a certificate of conformity declaring that such equipment meets the required standard.

iii. All manufacturer's instructions and equipment identification tags shall be kept safe.

iv. Each equipment shall be uniquely marked for identification purposes. Such markings shall not compromise equipment operation or integrity.

v. The Safe Working Load (SWL) shall be marked on the rope access equipment. All equipment shall be rated for a SWL of one person in normal operations and two persons in an emergency.

vi. Records of equipment such as name of manufacturer, safe working loads, certificate of conformity, location of equipment, next inspection dates etc, including notes regarding extreme or abnormal conditions when using any equipment shall be kept safe.

vii. Any equipment with signs of deterioration or excessive wear, or if it has exceeded manufacturer's recommended work life shall be immediately removed from service.

viii. Pre-use checks shall be carried out on all equipment before use. Ropes shall be checked before and after every use for cuts, abrasion, soft or particularly hard areas and signs of chemical contamination or heat damage.

ix. Equipment shall be inspected based on frequency of use and the inspection records shall be documented by a competent person in accordance with recognised standards.

4.3 Care, Storage and Transport of Rope Access Equipment

Rope access equipment shall be stored in a clean and dry area, away from possible chemical contamination or direct exposure to sunlight. Damp or wet equipment shall not be used until they are dried naturally in a well-ventilated area away from direct sunlight or heat. Furthermore, the equipment shall be transported in appropriate bags/containers.

4.4 Ropes

Ropes must be carefully chosen to meet the safety and operational requirements of the task. At the minimum, ropes used shall be in conformance with internationally recognized standards and shall:

i. Be constructed such that its interior core is protected by a woven exterior sheath designed to optimize strength, durability, and flexibility e.g. kernmantle rope;
ii. Possess high tensile strength; and
iii. Be free from twisting and have appropriate elasticity.

5 WORK AT HEIGHT USING LADDERS

The use of ladders shall be restricted to tasks with low risk, light work and short duration. The ladders used shall comply with internationally recognised standards, such as NORSOK, British and other similar standards.

5.1 Minimum Training Requirements for Use of Ladders

Workers that use ladders for their activities shall be trained on the correct and safe use of ladders by a competent person. In addition, personnel shall be taught how to visually inspect a ladder for defects.

5.2 Safe Use of Ladders

In using ladders at worksites, the following shall be adhered to at a minimum:

i. The manufacturer's manual on the maximum weight that the ladder can support shall be strictly followed;
ii. Ladders shall be sufficiently high to reach its intended location and the inclination to the ground should be at 75°;
iii. While ascending or descending the ladder, both hands shall be free i.e nothing must be carried;
iv. While climbing up or down or working on a ladder, the worker shall always face the ladder and the ladder shall not be moved;
v. A three-point contact shall be maintained on the ladder, such as two feet and one hand or two hands and one foot;
vi. For worksites with potential of electrical shock hazards, non-metallic ladders such as fiberglass or wood ladders shall be used;
vii. Ladders shall be secured to prevent them from sliding or tipping over when in use. This can be achieved by tying the ladder at the stiles, but never at the rungs/steps; and
viii. Ladders shall be mounted on clean, firm, non-slippery and level grounds.

5.3 Inspection of Ladders

Pre-use checks shall be carried out by a competent person to ensure amongst others that:

i. The ladder stiles or uprights are not bent or damaged;
ii. The foot pad/safety feet are not worn out, damaged or missing;
iii. The rungs/steps are not bent, worn out, missing or loose;
iv. The joints of the ladder are not broken or damaged; and
v. The locking mechanisms are not bent, worn out or damaged.

6 WORKING IN CONFINED SPACES

6.1 General Requirements and Risk Assessment

All confined space activity shall be carried out under a permit-to-work system. The identification of hazards, assessment of risks, and emplacement of control measures to prevent/mitigate identified risks must be carried out prior to working in confined spaces. Additionally, the following shall apply:

i. All energy sources connected to the confined space are properly identified and isolated.

ii. The confined spaces that contain or have the potential to contain serious atmospheric hazards shall be tested prior to entry and continuously monitored by a competent person.

iii. An attendant must be stationed outside a confined space. At a minimum, the attendant is required to monitor the entrants to the confined space, test the air quality and alert the rescue team during an emergency. Furthermore, the attendant shall remain outside the permit space during entry and rescue operations until relieved by another attendant.

iv. Adequate supervision shall be carried out at the confined space to ensure that:

   a. The confined space meets acceptable entry conditions
   b. Only authorized personnel enter a confined space
   c. Entry into a confined space is monitored and tracked and
   d. Work is terminated immediately in the event of adverse changes to the confined space atmosphere.

v. Any person entering a confined space must be physically and mentally fit to cope with physical and psychological stresses associated with working in the confined space.

6.2 Minimum Training Requirements for Confined Space Entry

Every personnel working in a confined space shall undergo appropriate training to acquire knowledge and skills necessary to safely perform their assigned duties. The trainings shall be conducted by competent persons and certifications shall be made available when demanded for. At a minimum, personnel shall understand the following:

i. Permit To Work (PTW) System
ii. Physical hazards and control measures
iii. Atmospheric hazards and control measures
iv. Personal Protective Equipment (PPE)
v. Actions to be taken during confined space emergencies
vi. Gas detection systems
vii. Fire Fighting equipment
viii. Mechanical retrieval/rescue systems such as tripod, davit etc
ix. Mechanical ventilation equipment and
x. Communication equipment.

6.3 Confined Space Personnel Protective Equipment

In addition to the PPE requirements in Section 2.2, all personnel shall be required to wear air purifying respirators if there is a risk of air contaminants (gases, fumes and vapours) while air-supplying respirators shall be used if the risk of low-level oxygen is present.

6.4 Testing and Evaluation of Confined Spaces

No person shall enter a confined space unless it is certified safe for entry by a competent person. In testing confined spaces, the following, at the minimum, shall apply:

i. Testing shall be carried out if the atmosphere which has been contaminated or to any extent unsafe to breathe or where any doubt exists as to the condition of the atmosphere. The results shall be recorded on the permit-to-work.
ii. Gas detectors shall be used to conduct regular monitoring to ensure that there is no change in the atmosphere while the work is being carried out.
iii. Any time a hazardous atmosphere is detected, every entrant shall leave the space immediately. Before re-entry, the space must be recertified by a competent person.

6.5 Gas Purging

Purging the gas or vapour from the confined space shall be carried out where there is presence or possible presence of flammable or toxic gases or vapours. For confined spaces with flammable contaminants, inert gases shall be used. After purging, the requirements in section 6.4 shall apply.

6.6 Mechanical Ventilation

Mechanical ventilators such as a blower/exhaust fan shall be used to continuously ventilate a confined space, if there is a limitation to natural ventilation. When mechanical ventilation is used, the following shall, at the minimum, apply:

i. An entrant shall not enter the space until the hazardous atmosphere is eliminated.
ii. The air supply for mechanical ventilation shall be from a clean source, free from any contaminants and shall not increase the hazards in the space.
iii. The requirements of section 6.4 shall apply in testing and evaluating the confined space atmosphere.
iv. The mechanical ventilator shall:

a. Be monitored to ensure its continuous operation during the period the confined space is occupied.
b. Have controls clearly identified and tagged.
c. Be guarded against unauthorised interference.

Note: Oxygen shall not be used to ventilate a confined space. Oxygen enrichment (excess) of an atmosphere can result in increased flammability level and the likelihood of explosion or fire is heightened.

6.7 Confined Space Emergency Response and Rescue

Emergency plans and procedures for confined space must be in place prior to commencement of work. At a minimum, emergency plans developed shall address the following:

i. the nature of the confined space;
ii. all the risks identified in the confined space; and
iii. the likely nature of an emergency rescue.

Rescue operations shall be conducted by trained personnel. Rescue drills shall be conducted periodically to acquaint the rescue team with the procedures needed to safely conduct a rescue operation.

For non-entry rescue operations, retrieval lines attached to the harness of the entrant shall be anchored on appropriate lifting devices such as tripods, davits etc.

7 SANCTIONS

These Guidelines provide the minimum requirements for work at height and working in confined spaces in the Nigerian oil and gas industry. Non-compliance with the requirements shall be deemed as violations to relevant sections of the Petroleum Act, 1969 as amended, Petroleum (Drilling and Production) Regulations, 1969 and subsequent amendments and Mineral Oils (Safety) Regulations, 1997. These violations may summarily lead to fines to operators/facility owners or personnel and/or temporary or permanent revocation of licenses and/or permits and temporary or permanent withdrawal or non-approval of necessary Oil and Gas Industry Service Permit.

The Guidelines will be reviewed from time to time to reflect changes in national and international best practices or as may be deemed fit by the Director/CEO, Department of Petroleum Resources.

8 GLOSSARY

ANSI/ISEA	American National Standards Institute/ International Safety Equipment Association
CISRS	Construction Industry Scaffolders Record Scheme
CPR	Cardiopulmonary Resuscitation
IRATA	Industrial Rope Access Trade Association
NASC	National Access & Scaffolding Confederation
NORSOK	Norsk Sokkels Konkurranseposisjon
OGISP	Oil and Gas Industry Service Permit
PPE	Personal Protective Equipment
SPRAT	Society of Professional Rope Access Technicians

9 REFERENCES

1. SG25:14 - Access and Egress from Scaffolds, via Ladders and Stair Towers etc. (National Access and Scaffolding Confederation (NASC)).
2. Safe Practices for Rope Access Work (Society of Professional Rope Access Technicians (SPRAT)).
3. IRATA International code of practice for industrial rope access.
4. Training, Assessment and Certification Scheme for personnel engaged in industrial rope access methods (IRATA).
5. IRATA International Guidelines.
6. Safe use of ladders and stepladders, A brief guide (UK Health, Safety and Executive).
7. Regulation 87/2009, Occupational Health and Safety Code, Alberta.
8. BS EN 12811-1:2003 - British standards for Scaffolds performance requirements.
9. ANSI/ISEA 121-2018: American National Standard for Dropped Object Prevention Solutions.

10. Occupational Safety and Health Administration (OSHA) 1910.146 - Permit-required confined spaces.
11. Safe work in confined spaces, Confined Spaces Regulations 1997 (UK Health and Safety Executive).
12. Confined spaces: A brief guide to working safely (UK Health and Safety Executive).

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