

**Procedure for Lifting Operations****AZSPU-HSSE-DOC-00056-2****This number supersedes UNIF-HSE-PRO-109-C1**

|                          |                             |                                |                                              |
|--------------------------|-----------------------------|--------------------------------|----------------------------------------------|
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## 1 INTRODUCTION

### 1.1 Document Purpose

This document is based on the UK Lifting Operations and Lifting Equipment Regulations 1998 and SI 1998/2307 (LOLER). It presents the BP standards applicable to the safe use of lifting equipment in Azerbaijan Strategic Performance Unit.

LOLER implements the lifting provisions of the Amending Directive to the Use of Work Equipment Directive (AUWED, 95/63/EC) and build upon the requirements of the Provision and Use of Work Equipment Regulations 1998 (PUWER).

It is important to note that all work equipment, including that deemed to be 'lifting' under LOLER, shall require to be *maintained in an efficient state, in effective working order and in good repair*, LOLER Regulation 5.

This document satisfies the requirements of lifting operations in the BP Golden Rules of Safety. The BP North Sea Lifting Rules and other references are cited in Appendix C.

### 1.2 Document Scope

The contents of this procedure are applicable to all BP owned and managed sites / installations in Azerbaijan and Georgia. Contractors working on BP owned or managed sites / installations are also responsible for alignment with this procedure.

This document does not replace the procedures prepared and adopted by specialist contractors. Neither does it supersede any national and local regulatory requirements.

This procedure complies with the 'HSE expectations' contained in 'getting HSE right', the Golden Rules of Safety, and the Control of Work (CoW) standard that the hazards associated with BP activities are identified and that the risks are assessed and managed.

All guidelines contained in this document shall be regarded as the minimum requirements for BP owned or managed sites / installations in Azerbaijan and Georgia.

The scope covers defined activities of BP and Contractors at all BP AzSPU sites and installations.

The contents of this document apply to work carried out by or on behalf of the AzSPU.

The scope of this document incorporates mechanisms to ensure:

- All items of work equipment covered by AzSPU identified as lifting equipment are operated and maintained in a safe and fit for purpose condition
- Lifting operations are carried out in a safe manner
- Risks to plant equipment and personnel involved in lifting operations are identified, appropriately assessed and mitigated to ensure that these are at all times as low as reasonably practicable
- Equipment, procedures, and standards of competency etc. are identified and managed in a safe manner
- Roles and responsibilities for all lifting operations and activities are clearly defined

### 1.3 Legislation and Standards

The aim of this Safe System of Work is to achieve no accidents, no harm to people, and no damage to the environment. To achieve this aim, this SSOW complies with Azerbaijani legislation, terms of the Production Sharing Agreement (PSA) and mandatory BP Standards.

The best international oil industry practice and relevant goal setting legislation have been adopted to reduce the level of risk to as low as reasonably practicable and therefore well below that mandated by applicable statutory laws and regulations.

In the absence of local regulations, BP Group Standards will apply. In addition, appropriate UK and US regulations and industry best practice have been considered in setting suitable goals and targets.

### 1.4 Stopping Unsafe Work

To stop the continuation of potentially unsafe work at the earliest possible stage, the Control of Work policy and this Lifting Operations procedure make it very clear that all personnel are obliged and have the authority to **STOP** the work that they consider to be unsafe.

### 1.5 Medical

All operators of lifting machines i.e. cranes, forklifts, MEWPs etc must be medically fit to the requirements of AZSPU-HSSE-DOC-00007-2 and section 4 of the Scope and Frequency document.

### 1.6 Deviations

This procedure is written in sufficient detail that it can be applied consistently at all sites / installations. There may still be the requirement for some local rules covering site / installation specific logistical / administrative arrangements and local variations in responsibilities to reflect differences in organizational arrangements. These local rules should not deviate from the core processes within this document. Any form of deviation from this procedure, including but not limited to local rules, shall be requested and authorized in accordance with SSOW, Deviations from Regulations and Procedures procedure (Doc. No. AZSPU-HSSE-DOC-00011-2).

### 1.7 Document Review

This document will be reviewed on an annual basis when users from the sites / installations will have an opportunity to propose changes to the existing processes and procedures. The document Technical Authority will be responsible for coordinating this review.

## 1.8 SSOW Specific Cross References

This procedure shall be used where appropriate in conjunction with the suite of AzSPU Procedures referenced below.

| Document Number        | Title of Procedure                         |
|------------------------|--------------------------------------------|
| AZSPU-HSSE-DOC-00011-2 | Deviations from Regulations and Procedures |
| AZSPU-HSSE-DOC-00054-2 | Incident Investigation and Reporting       |
| AZSPU-HSSE-DOC-00060-2 | Permit To Work                             |
| AZSPU-HSSE-DOC-00012-2 | Authorization                              |
| AZSPU-HSSE-DOC-00063-2 | Task Risk Assessment                       |
| AZSPU-HSSE-DOC-00059-2 | Man Riding Operations                      |
| AZSPU-HSSE-DOC- 0002-2 | Control of Work Standards                  |

## 1.9 Lifting Operations Golden Rules of Safety

Lifting Operations is one of BP's Golden Rules of Safety and states:

Lifting operations over 'live' equipment may only be undertaken if all other options have been considered and ruled out. Lifts utilizing cranes, hoists, or other mechanical lifting devices will not commence unless:

- An assessment of the lift has been completed and the lift method and equipment has been determined by a responsible person
- Operators of powered lifting devices are trained and certified for that equipment
- Rigging of the load and supervision of the lift is carried out by a competent person
- Lifting devices and equipment have been verified fit for use within the last 12 months (as a minimum)
- Load does not exceed dynamic and / or static capacities of the lifting equipment
- All safety devices installed on lifting equipment are operational
- All lifting devices and equipment have been visually examined before each lift by a competent person
- Non-essential personnel are out of any area where they might be injured by a falling or shifting load

## 1.10 Language Facilitation

Due to the various languages spoken at different sites and installations, there is a necessity to assist all with an ease of understanding. Therefore, the development and use of information tools are available.

## 1.10 Procedure Summary

A Procedure Summary has been developed in a form of a leaflet, which can be carried by line supervisors while conducting their day-to-day work tasks. The leaflet summarizes the contents of this Lifting Operations procedure. The procedure summary can also be used as a guideline for line supervisors to deliver their daily toolbox talk. (See Appendix I)

## 2 DEFINITIONS & ABBREVIATIONS

|                                                                                                                               |                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| <b>ACO:</b> Approved Code of Practice for LOLER                                                                               | <b>ASNT:</b> American Society of Non-Destructive Testing                      |
| <b>AzSPU:</b> Azerbaijan Strategic Performance Unit                                                                           | <b>CITB:</b> Construction Industry Training Board                             |
| <b>CCU:</b> Cargo Carrying Unit                                                                                               | <b>EMTA:</b> Engineering and Machines Training Association.                   |
| <b>ECITB:</b> Engineering and Construction Industry Training Board.                                                           | <b>IMR:</b> Inspection maintenance routine                                    |
| <b>LOLER:</b> Lifting Operations and Lifting Equipment Regulations 1998, S.I. 2307                                            | <b>MHC:</b> Mechanical Handling Contractor                                    |
| <b>NDT:</b> Non-Destructive Testing                                                                                           | <b>NVQ:</b> National Vocational Qualification                                 |
| <b>OPITO:</b> Offshore Production Industry Training Organization.                                                             | <b>PCN:</b> Personnel certification in NDT                                    |
| <b>PMR:</b> Planned Maintenance Routine                                                                                       | <b>PPE:</b> Personal Protective Equipment                                     |
| <b>PU:</b> Performance Unit                                                                                                   | <b>PUWER:</b> Provision and Use of Work Equipment regulations 1998, S.I. 2306 |
| <b>RACI:</b> A document describing positions or people who are Responsible, Accountable, Consulted, and Informed for actions. | <b>RTITB:</b> Road Transport Industry Training.                               |
| <b>SI:</b> Statutory Instrument                                                                                               | <b>SSOW:</b> Safe System of Work                                              |
| <b>SVQ:</b> Scottish Vocational Qualification                                                                                 | <b>SWL:</b> Safe Working Load                                                 |

## 3 LIFTING EQUIPMENT

All lifting equipment shall be marked with a unique identifier, safe working load and portable lifting equipment shall be colour-coded.

Lifting equipment and mechanical handling aids can be divided into four main categories, which reflect different purposes, different re-certification methods and different areas of responsibility.

These categories can be summarized as follows:

### 3.1 Category 1: Portable Lifting Equipment (Lifting Appliances, Accessories)

Portable lifting appliances are generally defined as:

Any mechanical device capable of raising or lowering a load e.g. chain blocks, pull lifts, Tirfor machines, powered hoists, beam clamps, sheave blocks.

Portable lifting accessories are defined as:

Any below the hook device which is used to connect a load to a lifting appliance e.g. shackles, wire rope slings, chain slings, sling sets, swivels, turnbuckles, plate clamps etc. A suitably trained competent person shall examine and document portable lifting equipment at six month intervals.

Clarification on four leg sling sets: Four leg sling sets must be fitted to a quad link assembly and not four sling legs onto one link. The safety factor of the wire must be **5:1**.

This equipment will be stored and issued from a designated storage area. This is generally a cargo container modified for the purpose of storing lifting equipment, generally referred to as a rigging loft.

Portable lifting equipment appliances will be supplied via the rigging loft and subjected to the relevant site specific lifting controls and procedures.

### 3.2 Category 2: Fixed Lifting Equipment

Fixed lifting equipment are those items of lifting equipment permanently installed at the site such as overhead cranes, hoists trolley beams, pad eyes, davits, swing jibs, man riding winches, tugger winches, etc.

Maintenance schedules and records of inspection and testing shall be maintained through Maintenance Management System (MMS) via the Planned Maintenance Routine (PMR) schedules and Written Schemes of Examination (WSE) or appropriate auditable method.

### 3.3 Category 3: Mobile Equipment

Equipment mounted on wheels or tracks and is self propelled or specifically designed to be attached to or pulled by a vehicle are defined as mobile equipment.

This category of lifting equipment includes but is not limited to:

- Mobile cranes
- Mobile forklifts
- Mobile working platforms
- Mobile knuckle boom cranes / hiabs
- Cargo handling equipment (fitted with load indicator)

### 3.4 Category 4: Cargo Carrying Units

**Offshore Containers:** Portable units for use in the transportation of goods or equivalent, handled in open seas, to and from fixed and / or floating installations.

Units designed to the BS/EN 12079 standard are suitable for shipment to offshore installations.

Units that do not comply with the EN 12079 should be examined in accordance with the BP check list and if fit for purpose a technical deviation shall be applied for before shipment. Examples of offshore Cargo Carrying Units (CCUs) are containers, lifting baskets, waste skips, skids, and power packs etc.

**Onshore Containers:** Portable units for repeated use in the transportation of goods or equivalent, handled via crane or forklift on shore based yards or in harbour areas (not lifted to offshore installations).



Units used onshore or loaded onto boats in harbour areas do not need to conform to the BS/EN 12079 standard but must be suitably fit for purpose and subject to a two yearly load test and six monthly visual examinations as per industry standards.

CCUs permanently held onshore include rigging lofts, paint stores, temporary office units etc.

**Freight Containers** – Units generally supplied with materials via coastal ports and fitted with ISO corner casting lifting points.

Units fitted with ISO corner casting lifting points are not suitable for lifts to and from offshore installations with a four or five leg sling arrangement.

As per the standard BS 3951-2 unit types A, B, C are not designed to be lifted by sling sets, see BS 3951 – 2 section 6.3.1.

**Onshore** - Units weighing less than five metric tons (gross) maybe lifted with a four or five leg sling arrangement, if fit for purpose and the original manufactures data plate is intact.

Shore based units over five metric tons (gross) should be lifted with a suitable spreader beam to ensure only vertical loadings are applied on the main structure or a lower twist lock spreader beam arrangement my be used, if fit for purpose and the original manufactures data plate is intact.

**Offshore** - Under controlled and planned conditions, an approved lifting frame may be used with a technical deviation.

### **Onshore - Single Point Lifts**

CCUs or skids with single point lifts are not acceptable offshore in open seas form supply boat to platform. CCUs or skids that are properly certified with correct centre of gravity for an even lift may be lifted onshore or onto boats in harbour areas.

All CCUs must be regularly inspected, tested and a valid certificate to be in place prior to use.

## **3.5 Category 5: Transit Slings**

Lifting equipment accessories such as slings and shackles referred to as 'transit slings' are generally used on offshore facilities for general cargo handling and transportation duties.

Transit slings are used for cargo handling, boat transfer, and transportation duties and must not be used for general lifting operations.

Due to the particular duty and environmental conditions to which this category of equipment is subjected, i.e. shock loading and corrosive atmosphere, transit slings **shall be used once** and then quarantined for back load and destroyed and replaced when returned onshore. Transit slings shall not be reused for a return trip. Demonstrable management and adherence to the one time use policy is to be asset specific.

Transit slings shall only be used for lifting loads during delivery to an offshore facility or back loaded to shore. Unbundled drill pipe or tubulars shall be fitted with new slings / bulldogs / tie wraps for the return journey.

## **4 EXAMINATION PHILOSOPHY**

A statutory examination known as a Thorough Examination will be carried out as per specific requirements defined in this section.

An Authorized Lifting Equipment Inspector shall perform all Thorough Examinations (as defined in Appendix A) of lifting equipment within AzSPU.

### **4.1 Examination of Portable Lifting Equipment**

A Thorough Examination of all portable lifting equipment shall be conducted and documented every six months. An Authorized Lifting Equipment Inspector must approve inspection, testing, and maintenance procedures.

All portable lifting equipment must have original certificate (birth certificate). Where the original or an approved copy is not available or out of date, re-certification will be necessary. A competent person must inspect portable lifting equipment prior to issue and use.

The rigging loft keeper or responsible person shall implement the six monthly thorough examination and colour coding of equipment, control of equipment, control quarantine area and pre use examinations of all equipment signed out from his control.

### **4.2 Examination of Fixed Lifting Equipment**

All fixed lifting equipment (excluding offshore pedestal cranes) is subject to a six monthly thorough examination and colour coding performed by authorized lifting equipment inspector.

All fixed lifting equipment must be registered in Computerized Maintenance Management System (CMMS) or equivalent complete with inspection and maintenance intervals (including six month thorough examination).

It is responsibility of an Authorized Lifting Equipment Inspector to develop inspection / maintenance / certification program based on regulations, established best practices and history information (excluding offshore pedestal cranes).

A BP approved inspection and maintenance program for offshore pedestal cranes should be developed and performed by company responsible for crane management through CMMS or equivalent.

### **4.3 Examination of Transit Slings**

A competent person must examine all transit slings prior to use.

Transit Slings shall not be used offshore for any other purpose than a single transit or delivery to or from a facility.

Due to the particular duty and environmental conditions to which this category of equipment is subjected, i.e. shock loading and corrosive atmosphere, it shall be destroyed immediately following its return onshore.

#### 4.4 Examination of CCUs

All CCUs with pad-eyes must be regularly inspected, tested, and recertified.

**Offshore** - CCUs must be manufactured to EN 12079, 2006 standard as a minimum and inspected every six months and load tested every two years.

It is important to note that the lifting assembly fitted to CCUs are deemed to be accessories for lifting and shall therefore be subjected to a six monthly thorough examination.

Units that do not comply with the EN 12079 should be examined in accordance with the BP check list and if fit for purpose a technical deviation shall be obtained before shipment.

**Onshore** - CCUs permanently held on site, which are lifted on a regular basis or otherwise in service, will be subject to a two yearly load test and six monthly visual examinations as per industry standards.

CCUs permanently held onshore include rigging lofts, paint stores, temporary office units etc.

**Freight Containers** - Units fitted with ISO corner casting lifting points shall comply with BS 3951.

Records of examinations of these units shall be kept with the Site Controller and a register detailing the location and the next examination due dates maintained.

All CCUs must be appropriately checked prior to use.

#### 4.5 Examination of Mobile Lifting Equipment

All mobile lifting equipment must be supplied, maintained, inspected, certified as per manufacturer recommendations and relevant standards (BS 7121, ASME B30.5 or equivalent, see references in appendix C). Ensure that certification can be located for all ropes, hook blocks, wedge sockets, crane accessories and calibration or verification certificates for the load indicator.

Temporary or new cranes, forklifts, cherry pickers, hiabs and load cargo handling equipment to sites must be checked and fully inspected prior to use by a registered or approved competent person, additionally all certification should be reviewed to ensure items meet required standards (Standard check list Appendix E).

Daily checks should be made on mobile / crawler cranes, forklifts and cherry pickers by operator and recorded on a check sheet; these check sheets should be issued to the maintenance department to form part of the Maintenance Management System and Planned Maintenance Routine schedules and Written Schemes of Examination or appropriate auditable method. (Standard check list Appendix E)

## **5 REPORTS / RECORDS**

### **5.1 Strategy**

Each site must have a complete register of all lifting equipment.

Hard copies of all the lifting equipments original certification, all Thorough Examination certificates shall be kept on site with the Site Lifting Coordinator or Superintendent.

A register of lifting and rigging loft equipment including the information below should be maintained.

- Unique Identification Number
- Safe Working Load or Working Load Limit
- Description sufficient to identify the item
- Location
- Original test certificate details
- Date of last Thorough Examination and certificate number
- Name of inspector carrying out examination
- Name of company carrying out examination
- Date of additional thorough Examinations and certificate numbers
- Date of next Thorough Examination
- Any remedial work or areas not inspected (internal parts)
- Quarantined / defect report number if applicable

The lifting equipment register must accurately describe all lifting equipment on site.

Third party Thorough Examination reports shall be held on the asset, by the relevant supervisor, until such times as the equipment is returned to the supplier.

The register shall be regularly audited. It shall be the responsibility of the competent person, to check the relevant lifting equipment register to confirm the current status of the equipment prior to use.

### **5.2 Storage and Availability of Records**

The Site Manager / Site Controller / Offshore Installation Manager shall ensure that the records are properly maintained and are in order.

## **6 CONTROL PROCESSES**

### **6.1 Rigging Loft**

A rigging loft concept shall be used for pre use inspection, management, and control of portable lifting equipment appropriate to the work site.

The rigging loft will consist of a secure controlled storage area providing the following:

- Storage of new equipment
- Quarantine of defective equipment
- Inspection area / Document control

Any items are released from the rigging loft must undergo a pre use inspection by a suitably trained competent person.

A competently trained responsible person will become the Rigging Loft Controller and will hold the key for the rigging loft for each shift.

Lifting equipment issue will be recorded by the rigging loft controller in the equipment issue section of the 'Register and Control Document' spreadsheet, detailing the date issued, pre use inspection has been carried out, equipment plant number and description, location or job site, signature of person, name and company of personnel using the item, date returned and return inspection comments.

All items of equipment including slings, shackles, and eyebolts will be registered.

All returned items shall be subject to a receiving inspection by the rigging loft controller prior to release into the rigging loft stock.

Items awaiting inspection will be held in the designated inspection area of the rigging loft.

The rigging loft keeper is also responsible for the control and management of the quarantine area.

For BP operations sites this process is detailed in document OPSB-OPS-PRC-063.

Contractor sites must operate under an approved controlled operational procedure for rigging lofts.

## **6.2 Colour Coding**

All portable lifting equipment shall be colour coded to give visual indication of its certification status prior to use. Some fixed lifting equipment may be colour coded.

The colour code system denotes a thorough examination within the past six months and that a valid examination report exists. Conduct a visual examination prior to use, as colour coding does not guarantee that equipment is in serviceable condition.

**Incorrectly coloured portable lifting equipment shall not be used under any circumstances.**

The valid colour codes boards shall be visibly evident at all sites.

Colour coding, listed in section 6.3, is an established industry practice. Any other coding convention must be discontinued.

All sites shall adopt a strict colour code system for lifting and rigging equipment. An approved site specific procedure must be in place.

Each colour code shall be valid for a period of six months.

A suitably trained and competent person i.e. third party testing company should carry out colour coding.

### 6.3 Control of Portable Lifting Equipment

On BP controlled sites / installations the following colour code cycle will be used on portable lifting equipment of categories 1 and 2 to indicate that they have been examined and fit for use for a six-month period:

|               |                              |
|---------------|------------------------------|
| <b>Green</b>  | (October 2008 to April 2009) |
| <b>Blue</b>   | (April 2009 to October 2009) |
| <b>Yellow</b> | (October 2009 to April 2010) |

Then back to **Green**

**NOTE:** Clearly identified colour codes for the six month period shall be posted in Permit offices and security entrances to the site or facility.

**NOTE:** Colour Coding shall be clearly demonstrated against black background

Portable and fixed lifting equipment and accessories that have been rejected on post use examinations must be stored in the quarantined area of the rigging loft and will have the colour coding painted over with **white paint** and tagged '**Do Not Use**' until such time that the item is returned to the supplier for repair or replacement.

The Rigging loft concept shall be used for management and control of portable lifting equipment appropriate to the work site.

The rigging loft will consist of a secure controlled storage area providing the following:

- Storage of new equipment
- Quarantine of defective equipment
- Inspection area / document control

### 6.4 Control of Fixed Lifting Equipment

All Fixed Lifting Equipment shall have a unique visible identification number or reference number entered into CMMS or equivalent.

All fixed lifting equipment approved for personnel transfer (manriding) must be properly identified.

### 6.5 Control of Transit Slings

All transit slings will be colour coded as shown below. This will ensure that all lifting equipment is easily identified and kept separate from the transit slings. The control and recertification of unused transit slings shall be the responsibility of the Site Manager, Site Controller, or Offshore Installation Manager.

|               |                    |
|---------------|--------------------|
| <b>Brown</b>  | (April to October) |
| <b>Purple</b> | (October to April) |

## 6.6 Control of Cargo Carrying Units (CCUs)

The Site Manager, Site Controller, or Offshore Installation Manager is accountable for ensuring a competent person is assigned for verification that all CCUs sent from the site are in a safe condition and for obtaining of an accurate weight of all CCUs and ensuring that such weights are not above the SWL.

The weight of each CCU shall be recorded on the outbound manifest and a copy made available to receiving asset. All CCUs sent to BP operated sites should have a minimum of one month certification period remaining.

Stacking of containers, baskets, tanks and half heights is generally not allowed on BP sites.

Where this is not practicable, stacking requires prior permission of the relevant BP Performance Unit Leader (or Vice President in case of Drilling & Completions) and:

- Equipment is specifically designed for that purpose, and clearly marked as suitable for stacking
- Stacking is confined to pre-designated areas
- Risk assessment of stacking operations is performed and demonstrates the risk involved is lower than alternative practicable approaches
- Stacked containers must have an additional pennant so that the crane hook can be attached / detached while the load handler is standing at deck level
- Stacking and de-stacking is controlled by permit

## 6.7 Control of Mobile Lifting Equipment

No mobile equipment shall be used unless it has valid certification of Thorough Examination.

## 6.8 Control of Third Party Contractor Lifting Equipment

Contractor lifting equipment includes all items whether rented, or supplied free of charge, as part of the contractor tools of trade, including container sling assemblies.

Contractor lifting equipment may arrive on a site by a number of different routes. It is the Site Lifting Coordinator's responsibility to verify that equipment satisfies the requirements of this SSOW.

The contractor will be responsible for equipment certification and keeping a register for all lifting equipment which shall be made available for audit as and when required by BP.

## 6.9 Control of Uncertified Structural Components

Use of these components will automatically classify the lifting operation as Complicated, unless an approved site / installation specific procedure is in place.

If a rigging plan utilizes an uncertified structural component, it is vital that sufficient data is collated regarding the component in question. The assessment may require engineering calculations with regard to stresses and strains that apply to the component in question.

The MHC Technical Support Engineer shall become involved to provide engineering or technical expertise per the lifting plan decision tree.



## 6.10 Control of Webbing and Round Slings

Use of man made endless fibre round slings and flat webbing slings will automatically default to the Complicated lifting unless an approved site specific procedure is in place.

A Site Competent Person shall be appointed to inspect these types of slings for damage prior to use. If damage is evident or suspected, the slings shall be physically removed and destroyed. Certification for this type of sling is valid for six month only, after which it must be destroyed.

**Man made fiber slings shall not be recertified.**

## 7 COMPETENCY

### 7.1 Competencies and Training of Personnel

The Site Manager / Site Controller / Offshore Installation Manager shall ensure that all persons involved with lifting equipment, its use, operation, management, maintenance and training, have received formal recordable training and experience that provides levels of competency according to their tasks and responsibilities and at least to the level in the following chart.

All personnel involved in mechanical handling and lifting operations on Azerbaijan and Georgia AzSPU Installations and Sites, shall be trained to the relevant standard (North Sea or equivalent) and formally assessed as competent in the tasks to be undertaken.

Documentary evidence of training and competence assurance will be required before any person is authorized to perform lifting operations.

The Site Manager / Site Controller / Offshore Installation Manager shall ensure a register of competent personnel authorized to undertake lifting operations shall be maintained.

| Description of Role                    | Lifting Operation   | Level of Competency                                                                                                                                                                                                                                                     |
|----------------------------------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Banksman</b>                        | Routine and Simple  | Level 1 EAL / ECITB / CITB Green Card or equivalent                                                                                                                                                                                                                     |
| <b>Rigger / Slinger / Load Handler</b> | Routine and Simple  | Level 2/3 EAL / ECITB / CITB Blue card or equivalent                                                                                                                                                                                                                    |
| <b>Crane Operator</b>                  | All Categories      | Offshore: Sparrows Stage 3 (OPITO) or equivalent.<br>Onshore: crane operators shall have the correct operators licence for the type of crane they are operating and shall be properly assessed before crane operations can begin; heavy goods vehicle drivers' license. |
| <b>Forklift Operator</b>               | Forklift Operations | CITB / RTITB or equivalent                                                                                                                                                                                                                                              |



|                                    |                       |                                                                                                    |
|------------------------------------|-----------------------|----------------------------------------------------------------------------------------------------|
| <b>Site “Competent Person”</b>     | All Categories        | Level 2 / 3 EAL / ECITB / CITB or equivalent                                                       |
| <b>Lifting Inspector</b>           | Equipment Inspection  | LEEA / NSL Module 1 or hold current formal qualifications with three years lifting experience      |
| <b>Site Lifting Coordinator</b>    | All Categories        | Level 2 / 3 EAL / ECITB / CITB or equivalent                                                       |
| <b>Lifting Technical Authority</b> | Complicated / Complex | Relevant level of engineering and leadership experience as endorsed by AzSPU Engineering Authority |

## 8 ROLES and RESPONSIBILITIES

Every lifting operation must be:

- Properly planned by a competent person
- Appropriately supervised
- Carried out in a safe manner

Lifting activities usually involve several craft disciplines and authorities.

It is therefore important that any system set up to manage lifting operations safely, must recognize this inherent complexity and must ensure that roles and responsibilities and the competencies for each activity are clearly defined, recognized and that there is a shared view of interfaces and boundaries. This section details the roles and responsibilities of these stakeholders.

Given the differences in job titles for similar roles across the operations, contract strategies etc., the roles listed below are generic. However, each site and installation must translate and appoint the responsibility to suit its own organization.

Lifting operations roles may be combined, e.g. deck foreman and lifting supervisor but it is essential that these roles are clearly stated at each site and understood by all.

The generic stakeholders are:

- Site Manager / Site Coordinator / Offshore Installation Manager
- Area Authority
- Banksman
- Rigger / Slinger/ Load Handler
- Crane Operator
- Forklift Driver
- Site Competent Person
- Lifting Inspector
- Site Lifting Coordinator
- Lifting Technical Authority
- Senior Technical Authority

### 8.1 Site Manager / Site Controller / Offshore Installation Manager:

The Site Manager / Site Controller / Offshore Installation Manager shall be responsible and accountable for the application of this procedure in his area of responsibility. He shall ensure:

- Adequate numbers of Competent responsible persons are appointed to manage and maintain the requirements of this procedure
- This procedure is strictly adhered to for all occasions when it is identified that lifting operations are to take place
- Formal records of all risk assessments are maintained in accordance with this procedure
- A competent person is appointed to inspect and certify lifting equipment is safe to use
- No lifting equipment is allowed or used on site unless it is accompanied by all relevant certification and in date test certificates
- Adequate records are maintained for all lifting equipment, including certification, examination and test reports
- Competent Persons are appointed to compile lifting plans and to perform lifts
- Competent Persons are appointed to control the issue and inspection of lifting equipment
- All lifting operations are planned and that, where necessary, plans are recorded

### 8.2 Area Authority:

The Area Authority shall be responsible for ensuring that the requirements of this procedure are adhered to for all lifting operations within his area of responsibility. He shall ensure:

- The lifting operation has been risk assessed and planned
- All persons involved in lifting operations are instructed on the requirements of risk assessment, permit to work conditions, and any risks or hazards associated with the work activity
- Regular inspection is performed on all lifting activities to confirm that conditions are suitable and sufficient and, that all personnel are in compliance with this procedure
- The Lifting Supervisor conducts risk Assessments, Toolbox Talks, and Task Risk Assessments

### 8.3 Banksman:

A Banksman shall be properly trained, proven to be competent, and is authorized to perform his duties.

The Banksman's duties are to communicate clear and precise commands to the crane operator.

Depending on the complexity and importance of the load and lifting operation, the person in charge will supervise and act as Banksman for all movements and precision positioning lifts.

The Banksman shall accompany and guide the crane assigned to them during all its movements on site.

Lifts are to be carried out only in the Banksman's presence and he is the **ONLY** authorized person to give instructions to the crane driver and the crew during lifting operations.

The Banksman must meet the following requirements:

- Should never be involved in lifting operation itself
- Not touch the load and back from the load in a prominent position with a good view of the lifting activities and any obstructions
- Remain in communication with the slinger / load handler and crane operator at all times
- Keep the load handler in sight during the lifting operation
- Be capable of understanding slinging / lifting arrangements suitable for the load. Understand fully the hand signal codes and be able to give clear and precise signals and / or instructions
- Be capable of directing the movements of the crane and load in such a manner as to ensure the safety of personnel and plant equipment
- Be known and clearly identifiable to all concerned by wearing high visibility identification

#### **8.4 Slinger / Load Handler:**

The Slinger / Load Handler shall prepare the load for lifting according to the lifting plan and:

- Stand clear while lifting or landing a load on the deck, while slack is taken up with or without a load on the hook, and must confirm to the banksman that he is clear
- Prepare load to be lifted using suitable lifting equipment, chain blocks, slings, etc
- Not touch a load until it is landed, or until it is below waist height, and never attempt to manually stop a swinging load
- Be easily identifiable, and distinct from the banksman

#### **8.5 Crane Operator:**

A crane operator shall be properly trained, authorized, competent, and fully conversant with all aspects of safe crane operation. In particular, they must be familiar with the controls and capabilities of the crane that they are to drive and operate.

The crane operator is responsible for ensuring that all servicing routines have been carried prior to crane operation to ensure that the crane can function correctly and is available to carry out the necessary lifting operations as required.

The crane operator must read and understand lifting plans and confirm crane capability with regard to load and boom angles.

Offshore crane operators shall be qualified to the OPITO (Sparrows) stage 3 or equivalent.

Mobile crane operators shall have the correct operators licence for the crane type they are operating.

The crane operator has ultimate responsibility for loads being lifted or moved by the crane. The crane operator should satisfy themselves that the operation in hand has been risk assessed and included in the toolbox talk and that the appropriate Permit to Work and lifting plans are in place.

## 8.6 Forklift Driver:

A forklift driver shall be properly trained, authorized, competent, and fully conversant with all aspects of the machine safe operation.

No untrained person shall operate a forklift.

## 8.7 Site Competent Person:

It is mandatory for all BP controlled sites that carryout lifting operations to have a suitably qualified Site Competent Person onsite.

The Site Competent Person (e.g. deck foreman, site lifting and rigging supervisor) must have adequate technical and practical knowledge and experience to visually inspect lifting equipment to confirm continued fitness to use, answer queries about the suitability of lifting equipment, to advise, develop and execute lifting plans.

The Site Competent Person will:

- Manage and control the rigging and lifting loft inventory
- Maintain the register of generic and specific site lifting plans and risk assessments
- Maintain the register of persons authorized to perform lifting operations
- Assist the Lifting Coordinator with the development of lifting plans
- Develop lifting plans and risk assessments for all lifts
- Continuously review the generic lifting assessments for routine lifts
- Act as the Performing Authority (under PTW if appropriate) for all lifting operations
- Have the responsibility for all site lifting activities deck and / or boat handling operations

## 8.8 Lifting Inspector:

The Lifting Inspector shall:

- Develop a thorough examination program for fixed lifting equipment (excluding offshore pedestal cranes)
- Carry out a thorough examination of fixed lifting equipment and ad hoc inspection of any other relevant types of lifting equipment
- Be responsible for ensuring colour coding and certification of examined equipment
- Ensure that all lifting equipment on site has test and examination certificates
- Ensure that all lifting equipment on site and in use is within current test dates
- Ensure that all lifting equipment on site and in use is colour coded to indicate current usage dates
- Ensure that all lifting equipment on site and not in use is stored according to manufacturers instructions
- Ensure that all lifting equipment on site is inspected either prior to issue or on return from use

## 8.9 Site Lifting Coordinator:

Primary role of the Site Lifting Coordinator is to provide continuous review of lifting practices to ensure compliance with this SSOW.

The Site Lifting Coordinator has a coordination role, and is responsible for ensuring that a regime is established and maintained on the site such that lifting operations are carried out safely. This will require:

- The authorization of all lifting plans and risk assessments for all categories of lifts by the nominated Lifting Coordinator supported by the Lifting Authority and Mechanical Handling Contractor's (MHC) support engineer as appropriate. This includes ensuring that it is clear who is in charge of specific lifting operation.
- Ensuring that all personnel involved with any lifting operations on the site have proper training and are assessed as competent to SSOW standards and that a register and documentation of such personnel is maintained on the installation / site. This includes resident site personnel and any ad hoc personnel. The person must also have an in depth knowledge of the relevant legislation, regulations, standards, company procedures, health and safety aspects, and industry best practice

#### **8.10 Mechanical Handling Contractor's (MHC) Technical Support Engineer:**

The MHC Technical Support Engineer is nominated as the person responsible for providing technical expertise in support of complicated lifts (where applicable) and **ALL** complex lifting operations on the installation / site. This includes the endorsement of the scope of method statements, lifting plans and task based risk assessments, discussion with specialist engineers and contractors. Ensuring all relevant engineering standards are applied during the development phase of the work scope and that the output from the engineering studies / assessments are documented and recorded.

#### **8.11 Lifting Technical Authority (LTA):**

The Lifting Technical Authority is responsible for providing the technical overview for lifting operations on sites.

The LTA is responsible for ensuring complicated lifts (where applicable) and **ALL** complex lifts are engineered to the relevant standards.

The LTA is the Technical Authority for this SSOW.

#### **8.12 Senior Technical Authority (STA):**

Has overall technical responsibility for all Lifting and Rigging operations. The STA is responsible for nominating and ensuring competency of LTA.

### **9 COMMUNICATIONS**

A uniform communication system clearly understood by all site personnel taking part in lifting operations including radio sets and hand signals, shall be established and used in the process of all lifting operations.

The communications that are required for lifting operations shall be specified in the lifting plans.

**Note:** In noisy areas, headsets for radios will be required. If radios are to be used, crane operators shall have hands free sets.

Charts with standard hand signals for controlling lifting operations explaining the system of signals used shall be conspicuously posted in the vicinity of the areas dedicated permanently for lifting operations.

## 10 RISK ASSESSMENT AND PLANNING OF LIFTING OPERATIONS

### 10.1 Strategy

#### Risk Assessment

**All lifting operations** must undergo a risk assessment in accordance with Safe Systems of Work procedure. Simple and Routine operations require a Level 1 risk assessment and Complicated and Complex require a Level 2 risk assessment. Guidance for lifting operations risk assessment is included in this document in Section 10.3.

**Generic lifting operations** shall be reviewed on a regular basis to ensure that the original risk assessments remain valid.

For all lifting operations, the degree of risk identified during the risk assessment shall determine the level of supervision required for the operation and the required experience of the personnel involved. In particular, the risk assessment should account for:

- Working under suspended loads
- Attaching and detaching the load
- Overloading
- Overturning
- Breakdown in communication during lifting (especially blind lifting)
- The environment and location
- Proximity hazards
- Pre-use checks by the operator
- Deterioration in the condition of lifting accessories
- The experience, competence, and training of available personnel

Risk Assessment shall specifically consider manning requirements for safe conduct of complex and blind lifts to ensure clear communication between all team members participating in the lifting operation.

#### Planning

Following a risk assessment, and the preparation of a standard instruction or procedure, the person using the equipment can normally plan routine lifts on an individual basis. In any event, the person planning the operation shall have adequate practical and theoretical knowledge and experience of planning lifting operations.

The degree of planning will vary depending upon the:

- Type of lifting equipment
- Complexity of the lifting operation
- Degree of risk involved.

As a minimum, the plan shall address the risks identified and should identify all resources, procedures and responsibilities necessary to ensure a safe operation.

**All lifting operations shall be:**

- Properly planned by a competent person
- Appropriately supervised
- Carried out in a safe manner

In addition to the above requirement, the AZSPU-HSSE-DOC-00063-2 Task Risk Assessment SSOW imposes a duty to carry out a suitable and sufficient risk assessment to identify the nature and level of hazards associated with work.

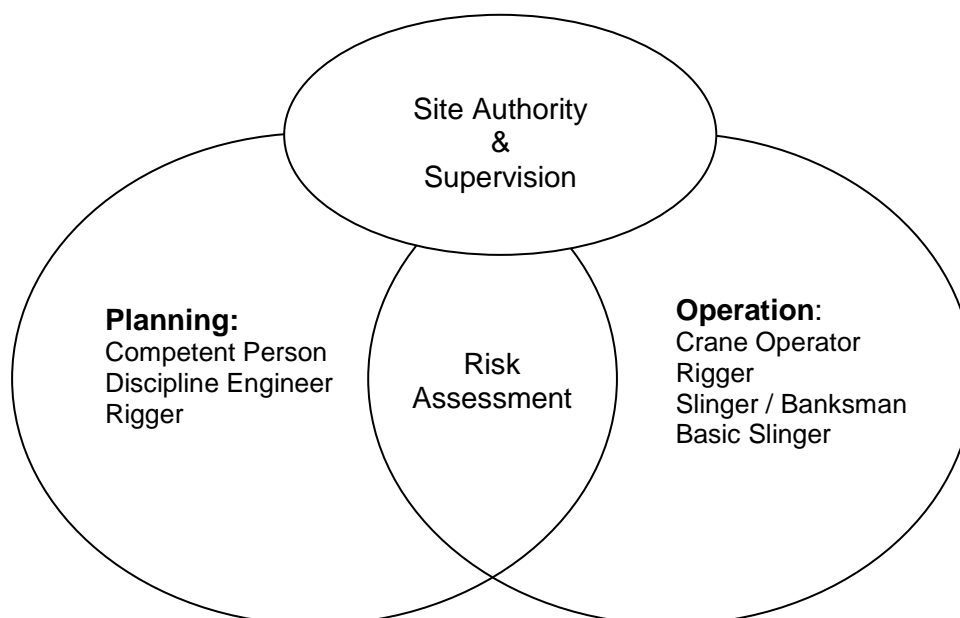
No lifting and rigging operations should be carried out without a lifting plan produced by a competent person and approved by relevant authority, unless an approved site specific procedure is in place and approved by the relevant Lifting Technical Authority.

To remain cognisant of this SSOW, it is recommended that the asset management compile a series of generic lifting plans to cover routine lifting duties.

A number of Integra generic lifting plans and risk assessments for general lifting operations on and offshore have been prepared. This format is approved for generic routine lifting operations only and planning for non routine lifting operations shall be carried out on the format demonstrated in this document. Refer to Integra generic lift plans and risk assessments in Appendix

## 10.2 Spheres of Responsibility

The spheres of responsibility and interfaces for lifting operations are as shown below.





### 10.3 Planning Process

#### Lift categories

To assist with the risk assessment process, lifting operations are divided in four categories, which are:

- Routine
- Simple
- Complicated
- Complex

#### Routine and simple lift:

This category of lifting operation is implemented using generic lifting plans and risk assessments, each with clearly established criteria and limitations. Competent lifting personnel then review the generic plan at a toolbox talk prior to implementation.

#### Complicated lift:

This category of lifting operation requires a written method statement in addition to the lifting plan, risk assessment, and the approval of Site Lifting Coordinator and / or Mechanical Handling Contract Technical Support or the Lifting Technical Authority. Competent lifting personnel then review the specific plan at a toolbox talk prior to implementation.

#### Complex lift:

If a lifting job involves divers or subsea work or the plan indicates the selected route for the load to travel is over live plant or a confined space, it is classed as a complex lift. This category of lifting equipment requires a written method statement in addition to the Lifting plan, risk assessment, and the approval of Site Lifting Coordinator and/or the Mechanical Handling Contract Technical Support or the Lifting Technical Authority.

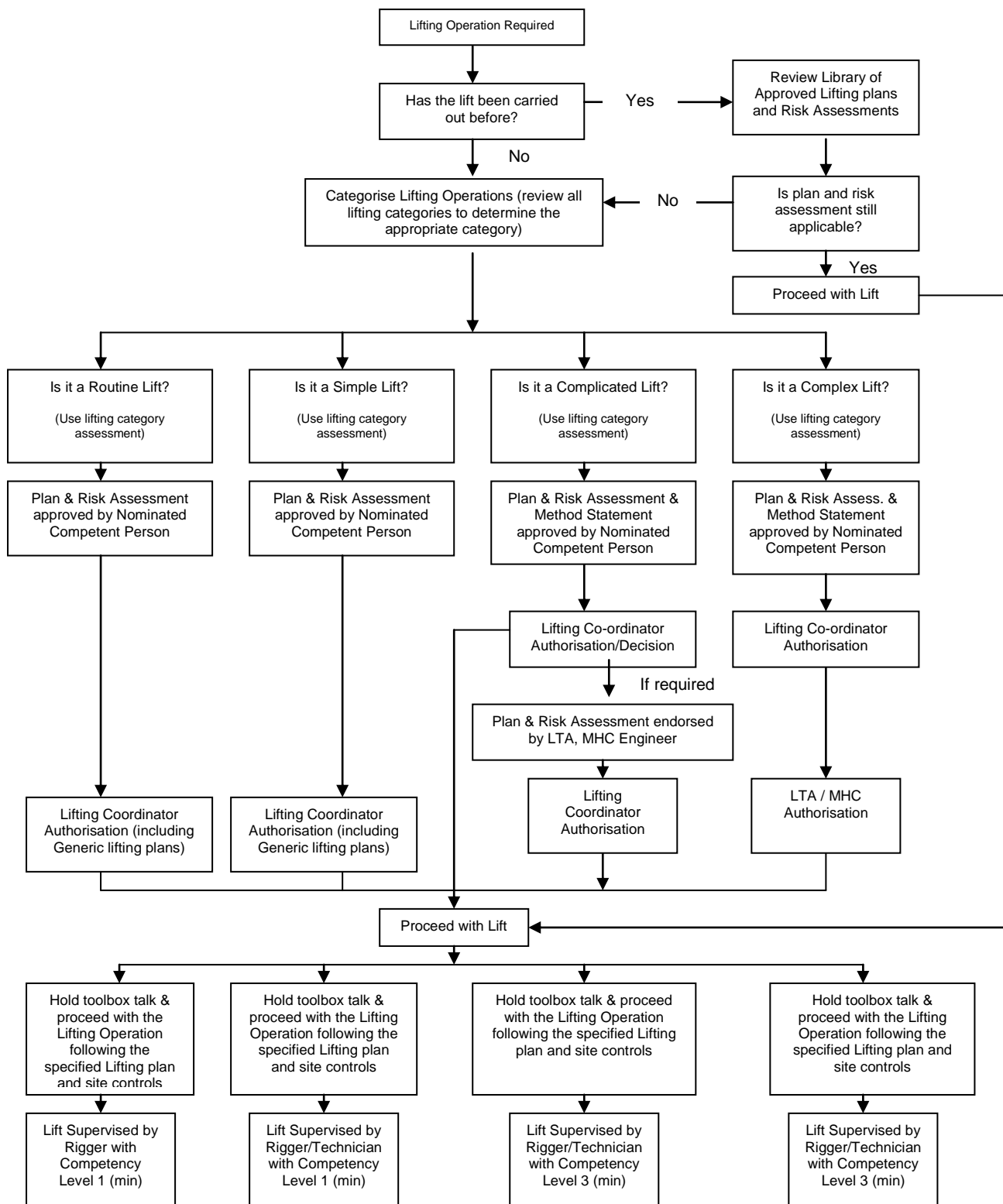
**Minimum number of people required to carryout the complex or complicated lifts safely shall be risk assessed and established prior to start the lifting operation.**

**Note:** Where the lifting activities – routine, simple, complicated, or complex – are likely to be repeated, the assessments, lifting plans and method statements should be held on file for subsequent review and reuse.

Routine activities by definition are repetitive and as such, the method statements, risk assessments, plans, and any supporting procedures should be held on file.



# Lifting Plan Decision Tree



## Wind Speed Limitations

No cranes shall be operated outside of manufacturers recommendations

It is responsibility of the Site Lifting Coordinator to utilize accurate and realistic wind speed readings using an anemometer set in an appropriate location.

Suspend lifting operations when average wind speeds reach:

- Onshore – 25 knots (12.86 m/sec)
- Offshore – 35-40 knots (18 – 20.5 m/sec)

Lifting operations may be allowed to restart following:

- A formal task specific risk assessment involving Site Manager, Site Lifting Coordinator and HSE Advisor taking into consideration site conditions, industry guidelines, crane manufacturers recommendations, type / weight / shape / of load being lifted
- Upgrading the lift category to 'complicated'.
- Continuous monitoring of the weather / site conditions including wind gust speeds.

It is the accountability of the Site Manager / Site Controller / Offshore Installation Manager to ensure that when lifting operations are restarted the above items shall be considered and the appropriate limits are agreed, understood, and recorded.

## Risk Assessment – guidance notes:

This section is for guidance purposes only. Whilst it tries to incorporate the main hazards associated with lifting operations, these notes are not intended to be exhaustive. Other equally significant hazards may be present.

Where other hazards are identified, these shall be assessed in a similar fashion to those identified on the notes, with due consideration to possible causes, consequences and appropriate solutions.

Planning for the worst case scenario should ensure that all hazards have been brought to ALARP Level and the necessary mitigation actions are in place.

## Important:

Lifting more than one dedicated load at a single time is strictly prohibited and should not be carried out under any circumstances.

**RISK ASSESSMENT GUIDANCE NOTES****1) The load**

| HAZARD                            | POSSIBLE CAUSE                                                                                      | CONSEQUENCE                                                                               | SOLUTION                                                                                                                                                   |
|-----------------------------------|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Load heavier than expected        | Incorrect weight on manifest<br>Weight unknown / incorrect estimate<br>Lifting equipment overloaded | Equipment failure<br>Load falling<br>Equipment instability / collapse<br>Personnel injury | Trial lift<br>Dynamometer<br>Ensure personnel emergency access route                                                                                       |
| Centre of gravity not as expected | Incorrect information supplied<br>Incorrect slinging<br>Cargo shifting in transit                   | Load swinging<br>Load striking person<br>Load striking plant<br>Personnel injury          | Reposition lifting equipment<br>Trial lift<br>Ensure personnel emergency access route<br>Fit tag lines                                                     |
| Physical dimensions               | Insufficient head room<br>Nearby plant and machinery                                                | Load striking plant<br>Load handling problems<br>Personnel injury                         | Consider alternative slinging method.<br>Use specialised lifting equipment e.g. low headroom hoist<br>Use of additional banksman / radios<br>Fit tag lines |
| Load damaged                      | Transit damage<br>Sharp corners                                                                     | Falling objects<br>Load falling.<br>Personnel injury                                      | Consider alternative slinging method.<br>Pre-lift check<br>Ensure emergency access route.<br>Correct PPE.                                                  |

**2) The environment**

| HAZARD                     | POSSIBLE CAUSE                                                                                                                                     | CONSEQUENCE                                                                                                                                 | SOLUTION                                                                                      |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Adverse weather conditions | Excessive wind speeds.<br>Poor visibility – light, mist or fog<br>High sea states<br>Rain, sleet or snow showers,<br>Ice on load and deck / ground | Load swinging.<br>Load striking person<br>Load striking plant<br>Personnel injury<br>Snatch load<br>Crane overload<br>Slips trips and falls | Fit tag lines<br>Use of additional Banksman / radios<br>Correct PPE.<br>Do not carry out lift |

**3) Controlling the area**

| HAZARD                                | POSSIBLE CAUSE                                                                  | CONSEQUENCE                                                                                                                  | SOLUTION                                                                                         |
|---------------------------------------|---------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Pedestrians                           | Unaware of lifting operation<br>Ignore barriers<br>Unaware of risks             | Load striking person<br>Personnel injury                                                                                     | Barrier off area.<br>Use of additional Banksman assistance / radios.<br><b>Keep people away.</b> |
| Other work activities in the vicinity | Persons involved in lifting operation not aware of other nearby work activities | Lifting over the heads of persons involved in other work front in the vicinity.<br>Load striking person.<br>Personnel injury | Consult Permit issuing Authority.<br>Check area prior to operation                               |
| Breakdown in communications           | Untrained personnel<br>Radio problems<br>Blind lifts.                           | Load swinging<br>Load striking person<br>Load striking plant<br>Personnel injury                                             | Use suitably trained personnel<br>Use of additional banksman assistance / radios                 |

**4) The lifting equipment**

| HAZARD                                     | POSSIBLE CAUSE                                                                                                                  | CONSEQUENCE                                                                         | SOLUTION                                                                                                                       |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Incorrect SWL                              | Incorrect selection of equipment<br>Incorrect assessment of weight of load<br>Incorrect calculations of forces                  | Equipment failure<br>Load falling.<br>Personnel injury                              | Double check SWL required prior to lifting.<br>Use dynamometer<br><b>Remember to include weight of accessories for lifting</b> |
| Lifting accessories not attached correctly | Incorrect selection of equipment<br>Human error<br>Shackles of containers unscrewed in transit<br>Safety latch of hooks damaged | Load falling.<br>Personnel injury                                                   | Pre-use check<br>Ensure tie-rop/safety pin fitted to shackles.                                                                 |
| Mechanical damage                          | Lack of maintenance<br>Incorrect use of equipment<br>Contact with sharp edges<br>General wear and tear                          | Equipment failure<br>Load falling<br>Personnel injury                               | Pre-use check<br>Review and correct maintenance plan.<br>Review and correct storage method                                     |
| Incorrect fleet angle                      | Lifting appliance not positioned directly over load                                                                             | Load swinging.<br>Load striking person.<br>Load striking plant.<br>Personnel injury | Re-position lifting appliance prior to operation                                                                               |
| Equipment out of date                      | No pre-use check                                                                                                                | Equipment failure<br>Violation of procedure                                         | Pre-use check<br>Correct colour code.<br>Check certification.                                                                  |

**5) Personnel**

| HAZARD                                     | POSSIBLE CAUSE                            | CONSEQUENCE                                                                                                                                                                                                               | SOLUTION                                                                                                               |
|--------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| Human factors<br>Inadequate knowledge base | Inadequate training<br>Lack of competence | Incorrect choice of equipment<br>Incorrect attachment of lifting accessories<br>Incorrect operation of equipment<br>Load swinging<br>Load striking person<br>Load striking plant<br>Equipment damage<br>Personnel injury  | Ensure adequate training<br>Check competency level of personnel involved in lifting operation.<br>Increase supervision |
| Human factors / Errors                     | Slips<br>Lapse<br>Mistakes                | Incorrect choice of equipment<br>Incorrect attachment of lifting accessories<br>Incorrect operation of equipment<br>Load swinging<br>Load striking person<br>Load striking plant<br>Equipment damage<br>Personnel injury. | Pre-job safety meetings<br>Realistic time frame to perform job<br>Increase supervision                                 |

**6) Structural**

| HAZARD                             | POSSIBLE CAUSE                                                                                         | CONSEQUENCE                                                                                                                   | SOLUTION                                                                                                                                                             |
|------------------------------------|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Structural collapse                | Incorrect load applied to structural component<br>Lifting equipment not fitted and assembled correctly | Dropped object<br>Load striking person<br>Load striking plant<br>Personnel injury                                             | Engineering calculations<br>Proof load testing<br>Equipment fitted or fitted by trained/competent personnel<br>Thorough examination by competent person prior to use |
| Deck collapse<br>Ground subsidence | Inadequate surface loading<br>Capacity for weight of load<br>Environmental conditions                  | Mobile crane instability<br>Deck failure<br>Dropped object<br>Load striking person<br>Load striking plant<br>Personnel injury | Engineering calculations<br>Correct anchorage<br>Spreader plates placed under load or mobile crane outriggers<br>Soil testing                                        |

## 7) Principles of a safe lift

### Before the lift:

1. Ensure personnel are competent.
2. Assess the load and identify the risks.
3. Select the correct lifting equipment.
4. Carry out a pre-use check.
5. Ensure lifting equipment is fitted correctly.
6. Identify what could go wrong and take appropriate precautions.
7. Control the danger zone during lifting operation.
8. Prevent the load from swinging.
9. Avoid trapping hazards and lifting over personnel.
10. Ensure there is adequate space to land the load.

### After Lift:

1. Check equipment after use.
2. Store in correct conditions.

**All Lifting Operations must have appropriate Lifting Plan in place.**

| Questions                                                             |                                                                                                                                                   | Yes | No |
|-----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----|----|
| 1                                                                     | Has this lifting operation been performed before?                                                                                                 |     |    |
| 2                                                                     | Is an approved procedure available?                                                                                                               |     |    |
| 3                                                                     | Is the lifting team experienced with all the lifting equipment used?                                                                              |     |    |
| 4                                                                     | Has the load been checked and made ready for lifting (e.g. sea fastenings released, hold down bolts removed)?                                     |     |    |
| 5                                                                     | Does the lifting team have the experience to lift a load of this weight or size?                                                                  |     |    |
| 6                                                                     | Is the lifting area free from obstructions and other possible hazards?                                                                            |     |    |
| 7                                                                     | Can the lifting operation be carried out without the use of webbing slings? Is a site specific procedure for the use of webbing slings available? |     |    |
| If the answer to any of the above is “No”, go to Part 2 (Simple Lift) |                                                                                                                                                   |     |    |

**Important: If you find a problem, stop the job and ask!**

### Routine lifts (Part 1)

If the answer to all questions above is “Yes”, proceed with the Routine lift.

Assessment of Part 1 performed by \_\_\_\_\_

Job title \_\_\_\_\_

Date \_\_\_\_\_

**For Standard Form go to:** Baku office on Eubaks5/Operations/Safety & Environment/Checklist

### Simple lifts (Part 2)

|                                                                                     | Questions                                                                                                                                                                              | Yes | No |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----|
| 1                                                                                   | Do you know the weight of the load and does the lifting operation appear to be straightforward?                                                                                        |     |    |
| 2                                                                                   | If the load is heavier than you normally handle, do you have the relevant permission and / or permit?                                                                                  |     |    |
| 3                                                                                   | Is there a crane or certified support steelwork (e.g. runway beam or lifting eye) directly above the load?                                                                             |     |    |
| 4                                                                                   | Does the load have certified lifting points (lifting eyes / collar eyebolts, etc) fitted and if not, can slings be wrapped around easily (e.g. no sharp edges, load not fragile, etc)? |     |    |
| 5                                                                                   | Is there ample headroom for the lifting appliance and slings?                                                                                                                          |     |    |
| 6                                                                                   | Is the lift stable (e.g. centre of gravity below lifting points)?                                                                                                                      |     |    |
| 7                                                                                   | Is the lift balanced (e.g. centre gravity in the middle) or fitted with special slings to compensate?                                                                                  |     |    |
| 8                                                                                   | Is the load free to be lifted (e.g. sea fastenings released, all hold-down bolts removed, not jammed, etc.)?                                                                           |     |    |
| 9                                                                                   | Is the removal route clear of any obstructions?                                                                                                                                        |     |    |
| 10                                                                                  | Can the removal (lift, transfer, and landing) be performed without cross hauling?                                                                                                      |     |    |
| 11                                                                                  | Is there suitable lay down area and does the load come within the allowable load bearing capacity of the ground/deck?                                                                  |     |    |
| 12                                                                                  | Are you experienced in using all the lifting equipment and gear involved?                                                                                                              |     |    |
| 13                                                                                  | Can the lifting operation be carried out without the use of Webbing Slings? Or is a site specific procedure for the use of webbing slings in place?                                    |     |    |
| If the answer to any of the above is ' <b>No</b> ' go to Part 3 (Complicated Lifts) |                                                                                                                                                                                        |     |    |

If the answer to all questions above is "Yes" proceed with the Simple lift.

Assessment of Part 2 performed by \_\_\_\_\_

Job Title \_\_\_\_\_

Date \_\_\_\_\_

**NOTE:** To the Site Competent Person:

If you can give solutions to the negatives in the above questionnaire to allow the lift to proceed safely, write the instructions in the box. If you cannot supply a solution, seek guidance from the Lifting Coordinator.

**For Standard Form go to:** Baku office on Eubaks5/Operations/Safety & Environment/Checklist

### Complicated Lifts (Part 3)

The personnel about to perform the lifting operation shall complete the table below. Tick against factors, which are applicable and specific to this lifting operation and indicate whether or not you have the relevant experience to deal with them.

|                                                                        | QUESTIONS                                                                                                               | Yes | No |
|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-----|----|
| 1                                                                      | Is the lift stable? (i.e. centre of gravity below the lifting points and not offset) .                                  |     |    |
| 2                                                                      | Is the centre of the gravity for the load viewed as balanced and acceptable?                                            |     |    |
| 3                                                                      | Can the lift be performed without cross-hauling or being restrained by using one or more mechanically driven devices?   |     |    |
| 4                                                                      | Does the load have specific lifting attachments?                                                                        |     |    |
| 5                                                                      | Is the load robust? (not fragile)                                                                                       |     |    |
| 6                                                                      | Does the load have a limited surface area that will not cause instability in the wind?                                  |     |    |
| 7                                                                      | Does the load require only one crane? E.g: no tandem lifting                                                            |     |    |
| 8                                                                      | Can the lift be performed without rotation?                                                                             |     |    |
| 9                                                                      | Uncertified structural components- can the lift be carried out safely without the need for MHC engineering calculations |     |    |
| If the answer to any of the above is “No” go to Part 4 (Complex Lifts) |                                                                                                                         |     |    |

If the answer to all questions above is “Yes” proceed with the Complicated Lifts. See Note for guidance No Answers

Assessment of Part 3 performed by \_\_\_\_\_

Job title \_\_\_\_\_

Date \_\_\_\_\_

Approved/Endorsed by \_\_\_\_\_

Job Title \_\_\_\_\_

Date \_\_\_\_\_

**NOTE :** To the Lifting Coordinator:

If you have experience and can advise personnel involved in the lifting operation how to deal with the complication, allow the task to proceed but only under your guidance. However if



you decide that the operation is out with the scope of your competence, indicate the reasons applicable in the table in Part 4 complex lifts before passing it to the LTA

**For Standard Form go to:** Baku office on Eubaks5/Operations/Safety & Environment/Checklist

### Complex Lifts (Part 4)

Lifting operations or conditions, which would merit additional engineering input

|   | REASONS FOR REQUESTING ENGINEERING INPUT                                                           | Tick box |
|---|----------------------------------------------------------------------------------------------------|----------|
| 1 | The lifting operation involves divers                                                              |          |
| 2 | The lifting operation is sub-sea                                                                   |          |
| 3 | The load will be travelled over unprotected process plant and machinery                            |          |
| 4 | The load is classified as heavy (>80% of crane rated capacity) and is not being transported in CCU |          |
| 5 | The lift involves a floating crane                                                                 |          |
| 6 | The load is critical to business                                                                   |          |
| 7 | The lift is in a confined space and/or an area with very restricted headroom.                      |          |
| 8 | Use of non-certified structural components, which require engineering calculation                  |          |
| 9 | Personnel Transfer / Man-riding activity where no approved site specific procedures exist          |          |

Lifting Plan / Method Statement and Risk Assessment Part 4 performed by

\_\_\_\_\_

Job Title \_\_\_\_\_

Date \_\_\_\_\_

Approved / Endorsed by (delete as applicable)

**For Standard Form go to:** Baku office on Eubaks5/Operations/Safety & Environment/Checklist

## Appendix A

### Glossary of Terms

**Anomaly:**

A condition which falls outside the present design criteria for the equipment.

**Asset**

Offshore complex, sub-sea facility, transportation line an onshore terminal and loading facilities.

**Azerbaijan Strategic Performance Unit:**

All operations conducted by or on behalf of any Performance Unit or Project in Azerbaijan, Georgia, or Turkey.

**Lifting Equipment Engineering Association (LEEAA):**

An independent organisation recognised as the technical authority within the industry responsible for establishing Codes of Practice and training standards.

**Non-Statutory examination:**

Examination carried out by a person deemed to be competent to determine whether or not a lifting equipment item is safe to use.

**Thorough Examination:**

Statutory examination carried out by a competent person for the purpose of certifying that an item of lifting equipment is free from patent defect and is satisfactory for further use as specified by the manufacturer.

**Heavy Lift:**

When a load is equal to or greater than 80% of the rated capacity of the crane, the lift shall be classified as a heavy lift.

## Appendix B

### Inspection & Certification of Temporary or New Cranes

Temporary or new cranes on site must have relevant certification and be inspected before use by a competent person. The certification and inspection should include as a minimum the items on this spread sheet.

#### Crane Certification Details

|                   |                     |                          |
|-------------------|---------------------|--------------------------|
| <b>Make:</b>      | <b>Tag / ID No:</b> | <b>Inspection Date :</b> |
| <b>Serial No:</b> | <b>SWL :</b>        | <b>Test Cert No:</b>     |

#### Previous Inspection Details

|                             |                 |                    |
|-----------------------------|-----------------|--------------------|
| <b>Date of Test:</b>        | <b>Company:</b> | <b>Inspector :</b> |
| <b>Date of Last Visual:</b> | <b>Company:</b> | <b>Inspector :</b> |
| <b>Visual Cert No:</b>      | <b>Company:</b> | <b>Inspector :</b> |

#### Crane Equipment

Main Hoist Rope

|                   |                 |                     |
|-------------------|-----------------|---------------------|
| <b>Serial No:</b> | <b>Cert No:</b> | <b>Date Fitted:</b> |
|-------------------|-----------------|---------------------|

Boom Hoist Rope (Luff) if fitted

|                   |                 |                     |
|-------------------|-----------------|---------------------|
| <b>Serial No:</b> | <b>Cert No:</b> | <b>Date Fitted:</b> |
|-------------------|-----------------|---------------------|

Whip Line (If fitted)

|                   |                 |                     |
|-------------------|-----------------|---------------------|
| <b>Serial No:</b> | <b>Cert No:</b> | <b>Date Fitted:</b> |
|-------------------|-----------------|---------------------|

Headache Ball (If fitted)

|                   |                 |                     |
|-------------------|-----------------|---------------------|
| <b>Serial No:</b> | <b>Cert No:</b> | <b>Date Tested:</b> |
|-------------------|-----------------|---------------------|

Crane Block

|                   |                 |                     |
|-------------------|-----------------|---------------------|
| <b>Serial No:</b> | <b>Cert No:</b> | <b>Date Tested:</b> |
|-------------------|-----------------|---------------------|

Boom Pennant Lines (If fitted)

|                   |                 |                     |
|-------------------|-----------------|---------------------|
| <b>Serial No:</b> | <b>Cert No:</b> | <b>Date Fitted:</b> |
|-------------------|-----------------|---------------------|

Wedge Sockets (If fitted)

|                   |                 |                     |
|-------------------|-----------------|---------------------|
| <b>Serial No:</b> | <b>Cert No:</b> | <b>Date Fitted:</b> |
|-------------------|-----------------|---------------------|

#### Load Indicator and load chart

|                             |                                    |                                       |
|-----------------------------|------------------------------------|---------------------------------------|
| <b>SLI Type:</b>            | <b>Model:</b>                      | <b>Calibration Date:</b>              |
| <b>Load Chart: Yes / No</b> | <b>Load Chart visible Yes / No</b> | <b>Boom Angle indicator: Yes / No</b> |

## Appendix C

### References

1. Use of Equipment Directive (95/63/EC)
2. Health and Safety at Work Act 1974
3. Management of Health Safety at Work regulations 1999 (MHSWR) SI 1999/3242
4. Provision and Use of Work Equipment Regulations 1992 S.I.2306 (PUWER)
5. The Supply of Machinery (Safety) Regulations 1992 S.I.3073
6. Manual Handling Operations Regulations 1992
7. HSE 3268 Lifting Operations & Lifting Equipment Technical Guidance (Relevant to offshore lifting & handling appliances)
8. NSL: International Rigging and Lifting hand book 2001 Rev2.
9. UKCS-TI- 014.
10. BP North Sea Lifting Rules.
11. BS 7121 "Safe use of Cranes"
12. EN 12079 CCUs

## Appendix D

### Generic Lifting Plans – Simple

#### Offshore

[Lift plans for platforms - Integra 001 LP and RA Designated landing areas](#)  
[Lift plans for platforms - Integra 002 LP and RA Bulk hose supply vessel](#)  
[Lift plans for platforms - Integra 003 LP and RA scaffold tubulars](#)  
[Lift plans for platforms - Integra 004 LP and RA back load offload supply vessel](#)  
[Lift plans for platforms - Integra 005 LP and RA wooden crates](#)  
[Lift plans for platforms - Integra 006 LP and RA Rig skidding](#)  
[Lift plans for platforms - Integra 007 LP and RA preslung cargo](#)  
[Lift plans for platforms - Integra 008 LP and RA long awkward loads supply vessel](#)  
[Lift plans for platforms - Integra 009 LP and RA Close to turbine exhausts](#)  
[Lift plans for platforms - Integra 010 LP and RA slew limit override](#)  
[Lift plans for platforms - Integra 011 LP and RA to and from baskets-containers](#)

#### ASCO Base / Quay side

[ASCO lift plans for the lifting SSoW - Integra 001 LP AND RA base-yard-quayside CCU](#)  
[ASCO lift plans for the lifting SSoW - Integra 002 LP and RA base-yard-quayside Tubulars-pre-slung materials](#)  
[ASCO lift plans for the lifting SSoW - Integra 003 LP and RA Supply vessel operations CCU](#)  
[ASCO lift plans for the lifting SSoW - Integra 004 LP and RA Supply vessel long awkward loads](#)  
[ASCO lift plans for the lifting SSoW - Integra 005 LP and RA Supply vessel bulk hose handling](#)  
[ASCO lift plans for the lifting SSoW - Integra 006 LP & RA Supply vessel Attaching and removal of gangways](#)  
[ASCO lift plans for the lifting SSoW - Integra 007 LP and RA Supply vessel operations LDCB empty](#)  
[ASCO lift plans for the lifting SSoW - Integra 008 LP and RA Supply vessel LHM 250 Crane operations LDCB full](#)  
[ASCO lift plans for the lifting SSoW - Integra 009 LP and RA Excavator, Supply vessel Attaching and removal of gangways](#)  
[ASCO lift plans for the lifting SSoW - Integra 010 LP and RA Excavator, base-yard-quayside Tubulars-pre-slung materials](#)

## Examples of Lifting Plans – Complicated

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>Title</b><br>Remove Runway Beam                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             | <b>Area</b><br>AIOC Chirag 1M2A CD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |
| <b>Lifting Plan No.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | CH-P-LP-002 | <b>Generic / Specific:</b> Specific                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |
| <b>Risk Assessment No.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             | <b>Category Of Lift Complicated</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |
| <b>Date</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             | <b>Revision Rev 1</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>Rev 1</b> |
| <b>Diagrams, Drawings or Sketches attached.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             | <b>Max Weight of Load :</b><br>Actual / Assumed / Calculated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |
| 1.4te Actual.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| <b>Brief Description of Lifting Operation / Sketch:</b><br>Remove the maintenance runway beam.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| <b>Certified Lifting Equipment and Accessories to be Used (Specify Type, SWL and Colour Code):</b><br>4 x 2te swl chain-blocks, 8 x 3 et swl wire slings, 6 x 4.75 te swl bow shackles, 1 x 3te pull-lift. Colour code green.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| <b>Cross Reference Relevant Procedures and Documents: i.e. DOG, engineering Calcs etc</b><br>Ref; EQ KA00-EQ104.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| <b>All Lifting Operations Require The Following To Be Considered But This List Is Not Exhaustive</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| <b>Every Lift Every Time</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             | <b>Specify, Yes / No</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |
| <ul style="list-style-type: none"> <li>Pre-use equipment checks by competent person.</li> <li>All lifting equipment should have SWL identified.</li> <li>Weight, size, shape, certification and centre of gravity.</li> <li>Proximity hazards, obstructions, path of load, laydown area load bearing capacity</li> <li>Environmental conditions including weather / Sea.</li> <li>Responsibilities clearly defined eg rigger / slinger / banksman.</li> <li>Experience, competence and training of personnel.</li> <li>All lifts must be checked for loose objects.</li> <li>PTW to be raised / TRA level 1</li> </ul>                                                                                                                                                                                                                                                                                                                                                                      |             | <ul style="list-style-type: none"> <li>Working under suspended loads. Yes/No</li> <li>Route adjacent to or over live plant: Yes/No</li> <li>Conflicting tasks in area/adjacent worksites. Yes/No</li> <li>Trial lift required. Yes/No</li> <li>Risk of overturning, Cross hauling, tandem lift: Yes/No</li> <li>Method of slinging/attaching/detaching the load. Yes/No</li> <li>Availability of certified lifting points. Yes/No</li> <li>Lift is in Crane Radius. Yes/No</li> <li>Safe access / Scaffolding. Yes/No</li> <li>TRA level 1/2 – agree with AA</li> <li>Confirm No of Tag Lines Required: 1</li> <li>Confirm Number of personnel required for task: 4</li> </ul> |              |
| <b>Task Details (step by step)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| <p>Safety.</p> <p>All rigging equipment being used for this task will have a minimum SWL of 2Te.</p> <p>A minimum of 2 pieces of rigging equipment will support the beam at all times.</p> <p>Barriers must be erected to ensure nobody can walk under this load.</p> <p>A tannoy announcement will be made to stay clear of the area.</p> <p>Isolate the line of sight gas detectors. Ash 016.</p> <p>Care must be taken whilst rigging close to Ash 016, hold back rigging must be in place to ensure the beam does not touch the monitor.</p> <p>Pre-rigging</p> <p>Safely secure a 3 Te Swl sling 2.5mtrs from the North end of the runway beam.</p> <p>Safely secure 2 x 3 Te Swl sling 2.5mtrs from the South end of the runway beam.</p> <p>Safely secure 4 x 3Te chain blocks to the sub main deck 300mm x 152mm "I" beams.</p> <p>Safely secure 4 x 2te minimum swl wire slings directly under the chain-block locations , secure the chain blocks to the slings, take weight.</p> |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| <b>Methods of communication to be used :</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             | <b>Radio / verbal / hand signals</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |
| <b>Steps to be taken to eliminate danger to personnel:</b> barriers / permit to work procedure / tannoy / toolbox talks / lifting plan / no conflicting tasks in the area. (delete as appropriate)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| <b>Authorisation:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| <b>Level of Operational Control:</b> Area Authority / Permit to Work                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| <b>Engineering Support Required:</b> No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |
| <b>Competent Person</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |             | <b>Signature</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Date</b>  |
| <b>Reviewed by</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             | <b>Signature</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Date</b>  |
| <b>De-brief and Learning Points</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |

Control Tier: &lt;&lt;2&gt;&gt;

Document Number: &lt;&lt; AZSPU-HSSE-DOC-00056-2&gt;&gt;

Revision Date: 27 April 2010

Print Date: 2/1/2011

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## Examples of Lifting Plans – Complex

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                             |                                                       |                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------------------------------------------------------|--------------------------|
| <b>Title</b><br>Lifting plan for the purpose of lifting drilling template and associated floatation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                             | <b>Area</b><br>Azfen fabrication yard quayside (Baku) |                          |
| <b>Lifting Plan No.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>CH-P-LP-002</b>          | <b>Specific:</b>                                      | <b>Specific</b>          |
| <b>Risk Assessment no.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                             | <b>Category Of Lift</b>                               | <b>Complex</b>           |
| <b>Date</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                             | <b>Revision Rev 1</b>                                 | <b>Rev 1</b>             |
| <b>Diagrams, Drawings or Sketches attached.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Max Weight of Load :</b> | Actual / Assumed / Calculated.                        | Cradle- (Design) 50500kg |
| <b>Task Details (step by step)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                             |                                                       |                          |
| <p>Lift template onto the cradle using Titan crane barge (interface test as detailed in FAT E687)</p> <ul style="list-style-type: none"> <li>• Attach 4 25 tonne safety bow shackles to the lifting points/pad eyes (identified on drawing 3847/01).</li> <li>• Whilst at ground level, attach 4 off single leg "jumper" slings (Single leg wire rope sling " 3,5Mx38mm dia, 6x36 IWRC RHOL Galv C/W soft eye each end, 18.6 tonne SWL template lift sling via 4 off 25 tonne shackles.</li> <li>• Crane hook to swivel sling (2 leg wire rope Assy 3 metre x 64 mm dia, 6x36IWRC galv RHOL fitted to HA 70 ML masterlink C/W hard eyes all round.</li> <li>• Attach a 55 tonne safety bow shackle to the aforementioned sling master-link.</li> <li>• Fit 55 tonne swivel to the aforementioned 55 tonne safety bow shackle keeping any manual handling (lifting/bending) to an absolute minimum.</li> <li>• Attach the other 55 tonne safety bow shackle to the bottom of the 60 tonne swivel.</li> <li>• Attach the (2 off-2 leg wire rope sling assy 4.1Mx38mm dia 6XiwrC GALV RHOL fitted to HA 45 ML masterlink C/W hard eyes) and 4 off single leg template lifting sling assembly to the 55 tonne shackle via the master link.</li> <li>• Attach tag lines to the end of the lift assembly.</li> <li>• Under the supervision of the lift supervisor, slowly lift and position each individual sling assembly leg such as it can be assembled to the template via the 4 off previously attached 25 tonne shackles on the template.</li> <li>• Then commence when lift supervisor determines it is safe to do so, slowly lift the template and carry out the interface test As specified in E687.</li> <li>• When test is determined to be successful, slowly lift the template from the cradle and place in an appropriate location in preparation for the other aspects of testing as specified in E687.</li> <li>• Disconnect the lower 55 tonne safety bow shackle, remove template lift sling assembly lay-down in an appropriate position on the template. Taking care to ensure that all equipment is prevented from 'swinging' and manual handling is kept to a minimum.</li> </ul> |                             |                                                       |                          |
| <b>Methods of communication to be used :</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                             | <b>Radio / verbal / hand signals</b>                  |                          |
| <b>Steps taken to eliminate danger to personnel:</b> barriers / permit to work procedure / tannoy / toolbox talks / lifting plan / no conflicting tasks in the area. (delete as appropriate)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                             |                                                       |                          |
| <b>Authorisation:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                             |                                                       |                          |
| <b>Level of Operational Control:</b> Area Authority / Permit to Work                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                             |                                                       |                          |
| <b>Engineering Support Required:</b> No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                             |                                                       |                          |
| <b>Competent Person</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                             | <b>Signature</b>                                      | <b>Date</b>              |
| <b>Reviewed by</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                             | <b>Signature</b>                                      | <b>Date</b>              |
| <b>De-brief and Learning Points</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                             |                                                       |                          |

## Appendix E

### Check List for Pre-use Mobile Crane Inspection Form

At the beginning of each shift or working day that the crane is in use, the following routine as appropriate for the type of crane shall be carried out as a minimum.

Note: The Site Lifting Coordinator may add specialized equipment, e.g. vacuum lifting equipment to this lift.

| To be completed by the Site Competent Person (Deck Foreman / Site Lifting and Rigging Supervisor) |                                                                                                                                                              | Comments |
|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 1                                                                                                 | Owner                                                                                                                                                        |          |
| 2                                                                                                 | Crane model                                                                                                                                                  |          |
| 3                                                                                                 | Date of last inspection                                                                                                                                      |          |
| 4                                                                                                 | Date of last test                                                                                                                                            |          |
| 5                                                                                                 | Current certification number                                                                                                                                 |          |
| 6                                                                                                 | Makers serial number                                                                                                                                         |          |
| 7                                                                                                 | Visual examination of jib sections                                                                                                                           |          |
| 8                                                                                                 | Function test of limit / safety devices                                                                                                                      |          |
| 9                                                                                                 | Outriggers, functioning properly and can take the full weight of the crane and load                                                                          |          |
| 10                                                                                                | Daily checks specified in the manufacturer's handbook.                                                                                                       |          |
| 11                                                                                                | A check that all ropes are correctly positioned in their sheaves and that drums are not displaced.                                                           |          |
| 12                                                                                                | A visual check that electrical equipment is not exposed to contamination by oil, grease, water, or dirt.                                                     |          |
| 13                                                                                                | A visual check by inspecting relevant levels and/or components, that no loss of fluids (e.g. lubricant oil, coolant) is apparent.                            |          |
| 14                                                                                                | A check for correct operation of all limit switches or cut-outs and the dead man's handle or lever, applying caution during checking in case of malfunction. |          |
| 15                                                                                                | A check that the automatic safe load indicator is correctly set and that the manufacturer's daily test is carried out.                                       |          |
| 16                                                                                                | A check that the correct air pressure is maintained in any pneumatic control system (e.g. brakes).                                                           |          |



|    |                                                                                                                                                                                                                   |  |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 17 | A check that lights, windscreen wiper(s) and washers operate efficiently.                                                                                                                                         |  |
| 18 | A visual check for security of wheels and the condition of tyres, on wheel-mounted cranes.                                                                                                                        |  |
| 19 | A check for correct function of all crane controls without load.                                                                                                                                                  |  |
| 20 | A check for correct operation of audible warning devices.                                                                                                                                                         |  |
| 21 | A check that the crane is in tidy condition and free from tins of oil, rags, tools, or materials other that sufficient access and egress are provided, and that appropriate fire fighting equipment is available. |  |
| 22 | A check that there are no obstructions in the path of travel of the crane.                                                                                                                                        |  |
| 23 | Drivers experience to be reviewed.                                                                                                                                                                                |  |
| 24 | Crane maintenance / certification to be reviewed.                                                                                                                                                                 |  |
| 25 | Written pre-use check to be carried out prior to crane use.                                                                                                                                                       |  |

**Extracted from standard BS 7121 – this list does not replace the standard Crane Driver Check List**

**Crane accepted/rejected (underline).**

**Name:**

**Position:**

**Date:**

**For Standard Form go to:** Baku office on Eubaks5/Operations/Safety & Environment/Checklist

## Appendix F

### BP North Sea Lifting Rules

The following fundamental rules will be applied to all lifting operations with zero tolerance:

1. All personnel must keep out of any area where they might be injured by a falling or shifting load. Do not stand below loads. Never stand between loads and walls / bulkheads etc. Always ensure an escape route is available.
2. If a lift deviates from plan or any complication arises, the lifting operation must be stopped and made safe. All personnel should remain in positions clear of the lift until reassessment / re-planning of the lift is carried out.
3. Lifting operations will be undertaken by a minimum of three competent people: crane operator, banksman / flagman, and load handler.
4. The banksman / flagman controls the initial lifting of the load, lay down of the load, and lifts that are out of the line of vision of the crane operator. The crane operator is responsible while the load is in the air. The banksman must:
  - a) Ensure clear identification from other personnel by wearing a hi-vis jacket or waistcoat clearly marked to indicate the authorized crane banksman.
  - b) Not touch the load and stand back from the load in a prominent position with a good view of the lifting activities.
  - c) Remain in communication with the load handler and crane operator at all times.
  - d) Keep the load handler in sight during the lifting operation.
5. The load handler must:
  - a) Stand clear while lifting or landing a load on the deck, while slack is taken up with or without a load on the hook, and must confirm to the banksman that he is clear
  - b) Not touch a load until it is landed, or until it is below waist height, and never attempt to manually stop a swinging load
  - c) Be easily identifiable, and distinct from the banksman
6. Stacking of containers, baskets, tanks, and half heights shall not be allowed on BP operated installations and onshore sites

Where this is not practicable, stacking requires prior permission of the relevant Performance Unit Leader and:

- a) Equipment is specifically designed for that purpose, and clearly marked as suitable for stacking
- b) Stacking is confined to pre-designated areas
- c) Conduct a risk assessment of stacking operations ensuring that the risk involved is as low as is reasonably practical
- d) Stacked containers must have an additional pennant so that the crane hook can be attached / detached while the load handler is standing at deck level
- e) Stacking and unstacking is controlled by permit

The attached notes are an integral part of the North Sea Lifting Rules

These rules are developed for deck lifts or deck / boat lifts using pedestal cranes on offshore installations. They will also be applicable to similar lifts using mobile cranes, crawler cranes etc on BP operated onshore sites.

Lifts with other devices (e.g. workshop cranes, winches, hiabs) Rules 1 and 2 will always be applicable. Consider the application of rules 3 through 6 during job planning and risk assessment. The rules do not specifically apply to the holding in position of items of equipment during well servicing / wire line activities. These specialist activities should be covered by job specific procedures, permit, and detailed risk assessment.

1. Rule 1: This includes not getting under slung loads, not getting into areas where they could be trapped between the load and something else. Third parties not involved in the lifting operation also have a responsibility to keep out of areas where lifting is being conducted.
2. Load Handler may also be designated as Slinger, Deck Operator or Hookman.
3. Rule 5b) In some essential lay-down areas it is necessary to manoeuvre containers into limited landing areas adjacent to handrails, where the handrails are slightly in excess of waist height. Where it is considered essential to continue using these lay-down areas, and the lowest practicable risk is provided by touching the load above waist height to orient it, installations must identify and document steps to be taken to mitigate the risk to the load handler.
4.
  - i) The intention is to eliminate stacking of containers and other loads as identified in rule 6.
  - ii) For some installations (particularly some MODUs) this may not be practicable due to limitations on deck space. Exception to the no stacking rule is intended to cater for these installations and not to provide a general opportunity for all installations to stack as soon as deck space becomes congested.
  - iii) BUs must designate where stacking may be undertaken and document why the decision to allow stacking was made.
  - iv) For those installations where no stacking is not currently practicable, a review should be undertaken to consider what would be required to be able to operate on a no stacking basis.
  - v) However, after appropriate review and documentation, particular equipment (e.g. sphere racks) may be authorized as suitable for stacking even though stacking of other containers is banned on that installation.
  - vi) Assets should reassess the design of equipment currently designated as suitable for stacking, to confirm that it is fit for purpose both loaded and empty.
  - vii) Installations who intend to designate equipment or areas suitable for stacking should consider using the MOC process to review and document the justification.
5. These rules are not exhaustive. They reinforce behavioural aspects of lifting. Procedural and equipment issues such as risk assessment, lifting equipment specification, lifting plans, regulation (e.g. LOLER) are also essential to safe lifting. Crane drivers, load handlers and check operators should comply with contractors' procedures, comply with regulatory requirements, use risk assessments and toolbox talks where appropriate and must be prepared to stop the job at any stage if the safety of the operation may be compromised.

## Appendix G

### **BP AzSPU reference document for the Selection, Application and Control of Man Made Fiber Slings for Lifting Operations**

#### **Purpose**

The purpose of this reference document is to describe the current AzSPU Policy and Procedures for the safe selection, application and control of man-made fibre slings for lifting operations, their subsequent inspection requirements and discard process following completion of the lifting operation.

**The use of any type of man made fiber slings in lifting operations will automatically categorize the lift as Complicated.**

Certification for this type of sling is valid for 6 months only after which time it will be removed from service and destroyed. Man made fiber slings will not be recertified.

#### **Introduction**

All lifting operations on AzSPU sites, including those undertaken by third party contractors, shall be implemented under the principles of Lifting Operations & Lifting Equipment Regulations (LOLER 98/SI-2037).

Regulation 8 of LOLER stipulates that **all** lifting operations using Lifting Appliances and Accessories should be carried out in a safe manner, under adequate supervision and following a lifting operation risk assessment and predetermined plan. The degree of planning is dependent on the lifting equipment to be used, the category of the lifting operation and the degree of risk involved.

#### **Lifting Sling Selection**

When planning the lifting operation consideration should be given to the working load limit, the mode of use, the nature of the load and the environment in which it is to be used. Wherever possible, it is recommended that wire rope slings be used for lifting operations. Never use a man made fiber sling of any type if, during the lifting operation, it can be subjected to shock or snatch loading and never use this type of sling on boat lifting operations.

Man made fibre slings are available in five basic formats, the two most commonly used in lifting operations are the Flat Soft Becketed Eye type webbing sling and the Endless Round Sling.

The Endless Round sling is the most adaptable for general-purpose use as they are more flexible, and when choked, provide a more efficient 'grip' on the load. Flat Soft Becket Eye type webbing slings are more suitable for use in a "basket type" lifting mode rather than in 'choke' mode.

## **Examination and Discard Criteria**

Slings constructed in man-made fibers are easily damaged and can be sensitive to chemical attack.

Strength is lost if there are any cuts, tears, abrasion, fraying and burst stitching, therefore this sling type requires close examination by a competent person for any signs of damage prior to every lifting operation. Endless Round Slings are manufactured with an outer protective sheath, which prevents the ingress of chemicals and dirt, which can lead to the deterioration of the sling fibers in service. The protective sheath also makes the examination for defects more difficult and onerous than that of the Flat Webbing Sling.

### **Man-Made Fibre Endless Round Slings:**

Endless Round slings shall only be used for general purpose lifting duties on the site providing the sling has a current certificate of conformity and there is an approved lifting plan and risk assessment for the operation. Site Lifting Coordinator shall inspect slings for suspected or evident damage prior to use. The sling(s) shall be physically removed and destroyed if any damage is suspected or evident. Certification for this type of sling is valid for six months after which time it will be removed from service and destroyed.

### **Man-Made Fibre Flat Webbing Slings:**

Flat Webbing Slings shall only be used for special lifts where the component to be lifted can be damaged by the use of conventional wire rope slings. Flat webbing slings shall be used for lifting duties on the site providing the sling has a current certificate of conformity and there is an approved lifting plan and risk assessment for the operation. Site Lifting Coordinator shall inspect slings for suspected or evident damage prior to use. The sling(s) shall be physically removed and destroyed if any damage is suspected or evident.

Certification for this type of sling is valid for six months after which time it will be removed from service and destroyed.

## Appendix H

### Wind Force Scale

| Wind Force in points |                 | Wind Force, mps | Wind Force, knots |
|----------------------|-----------------|-----------------|-------------------|
| 0                    | Calm            | 0-0.5 (0)       | 0-0.97 (0)        |
| 1                    | Light air       | 0.6-1.7 (1)     | 1.16-3.3 (1.9)    |
| 2                    | Light breeze    | 1.8-2.3 (2.1)   | 3.5-4.5 (4.1)     |
| 3                    | Gentle breeze   | 3.4-5.2 (4.5)   | 6.6-10.1 (8.7)    |
| 4                    | Moderate breeze | 5.3-7.4 (6.5)   | 10.2-14.4 (12.6)  |
| 5                    | Fresh wind      | 7.5-9.8 (8.5)   | 14.5-19.1 (16.5)  |
| 6                    | Strong wind     | 9.9-12.4 (11)   | 19.2-24.1 (21.4)  |
| 7                    | High wind       | 12.5-15.2 (14)  | 24.2-29.5 (27.2)  |
| 8                    | Very hard wind  | 15.3-18.2 (17)  | 29.7-35.4 (33.04) |
| 9                    | Storm           | 18.3-21.5 (20)  | 35.5-41.8 (38.8)  |
| 10                   | Hard storm      | 21.6-25.1 (23)  | 41.9-48.8 (44.7)  |
| 11                   | Heavy storm     | 25.2-29.0 (27)  | 48.9-56.4 (52.5)  |
| 12                   | Tornado         | More than 29.0  | More than 56.4    |

## Appendix I: Procedure Summary



### LIFTING OPERATIONS



#### Lifting Appliances

Any mechanical devices capable of raising or lowering a load e.g. cranes, fork lift trucks, suspended cradles, powered and manual hoists, lever and rope hoists, beam trolleys, winches and chain blocks

#### Lifting Accessories

Any device which is used or designed to be used directly or indirectly to connect a load to a lifting appliance and which does not form part of the load, e.g. wire, fibre and chain slings, hooks and fittings, swivels, shackles, eye bolts and plate clamps.

#### BP Golden Rule

Lifts utilizing cranes, hoists, or other mechanical lifting devices will not commence unless:

- An assessment of the lift has been completed and the lift method and the equipment has been determined by a competent person(s)
- Operators of powered lifting devices are trained and certified for that equipment
- Rigging of the load is carried out by a competent person(s)
- Lifting devices and equipment have been certified for use within the last 12 months (at a minimum)

- Load does not exceed dynamic and/or static capacities of the lifting equipment
- Any safety devices installed on lifting equipment are operational
- All lifting devices and equipment have been visually examined before each lift by a competent person(s)

#### Personnel in Charge of Lifting Operations

Personnel in charge of lifting operations are responsible for ensuring:

- The immediate safety of all personnel involved in the lifting activity
- That all equipment used is suitable for the task and is within test date
- That the lifting operation has been risk assessed and planned
- That the activity is executed in accordance with the plan
- That lifting operations are halted if an unsafe situation occurs

#### Banksman

No lifting operation will take place without an appointed banksman who will be easily identified by wearing a high visibility vest. The banksman must be suitably trained and have adequate experience for the role.

His primary role is to guide the crane operator, and must never be physically involved in the lift.

#### Crane Driver / Operator

Cranes shall only be operated by properly trained and qualified personnel who have been

authorized by site management. They must not perform other work and must never leave the controls until a load is safely landed.

#### Riggers & Slings

All personnel who use rigging equipment must have completed a basic rigging training course, approved by BP and appropriate to the site / installation operational needs.

#### The Load

The weight of all loads should be known and particular care must be taken when calculating the weight of any plant or equipment prior to lifting, especially when it may contain a liquid (for example, coiled tubing reels, heat exchangers, etc). The crane operator must be advised of the weight of each load to be lifted.

#### Lift Planning & Risk Assessment

All lifts must follow a documented procedure and the risks must be assessed.

A complex lift study is required if:

- The lift involves more than one crane
- The load has a very high \$ value
- The load is above 90% of the cranes load chart capacity
- The load is in excess of 20,000 kilograms
- The load is being lifted in and out of a confined space

All other lifts which do not fall under the above criteria shall be covered by the Project Crane Set-



up and Basic Lifting Plan which is contained in the operator's cabin of each crane.

### Certification, Examination & Testing

All lifting equipment shall be inspected and certified. A colour coding system shall be in place to prove that loose equipment has been inspected at least once every 6 months. Written records of these inspections are to be maintained.

The following colour code cycle will be used on portable lifting equipment of categories 1 and 2 to indicate that they have been examined and fit for use for a six-month period:

|        |                              |
|--------|------------------------------|
| Green  | (October 2008 to April 2009) |
| Blue   | (April 2009 to October 2009) |
| Yellow | (October 2009 to April 2010) |

Then back to **Green**

**NOTE:** Colour Code for the 6 month period shall be clearly identified and posted in Permit offices and security entrances to the site or facility.

All transit slings will be colour coded as shown below. This will ensure that all lifting equipment is easily identified and kept separate from the transit slings. The control and re-certification of unused transit slings shall be the responsibility of the site manager / Site Controller / Offshore Installation Manager.

|        |                    |
|--------|--------------------|
| Brown  | (April to October) |
| Purple | (October to April) |

Cranes are to be formally inspected and certified every 12 months by a competent 3<sup>rd</sup> party agreed by BP and contractor.

Where possible all lifting equipment should be hard stamped with the safe working load (SWL). Where it is not possible to hard stamp the SWL directly onto the equipment, the following alternatives are acceptable:

- Hard stamp the safe working load on ferrules (for example on wire rope slings)
- Hard stamp the safe working load on a metal plate securely attached to equipment (for example, on chain hoists)

### Safe Working Load Indicators

All cranes must be fitted with a Safe Working Load Indicator. It is the responsibility of the crane driver/operator to stop lifting a load that causes the Safe Load Indicators to alarm. In particular, crane drivers/operators must not use the load radius alarms as an indication of working within safe limits.

Safe Working Load Indicators, or any other alarms fitted to lifting appliances shall not be disconnected or made unserviceable at any time whilst the equipment is in service. Wherever such warning devices have been disconnected or made unserviceable, the lifting equipment shall be taken out of service

immediately and remain so until the devices are reinstated.

### Lift Area

All lift areas must be barricaded off to keep unauthorized personnel out. Loads should not be moved over a work area. If this cannot be done, work should be temporarily halted and the area cleared while the lift is taking place. The work area must be organized so that all trip or slip hazards are removed from the travel path before the load is suspended.

### Wind Speed

It is the responsibility of the site / installation Lifting Coordinator to ensure that accurate and realistic wind speed readings using an anemometer set.

Lifting operations shall be suspended when average wind speeds reach:

- Onshore – 25 knots (12.86 m/sec)
- Offshore – 35-40 knots (18 – 20.5 m/sec)

Cranes shall not be operated past this point unless all of the following criteria are met:

- The lifting equipment (crane) is rated by the manufacturer to operate in higher winds
- All risks have been identified and mitigation measures are in place and documented
- The responsible Area Authority has reviewed and approved all documentation



- The operation is immediately stopped if conditions deteriorate beyond those identified in the risk assessment
- The work is restricted to low level lifts
- The operating limitations shall be clearly displayed in the cab of the crane.

### Outriggers

Statistics show that at least 50% of crane incidents occur because the mobile crane or outriggers are not set-up properly. Specific hazards that can cause or contribute to failure or collapse include:

- Failure to extend the outriggers fully
- Not extending all outriggers
- Failure to get completely “off-rubber”
- Not accounting for poor ground conditions
- Failure to level the crane

Poor conditions reduce the amount of load a crane can safely place on the outrigger pad. Because of this, all outriggers must have additional “blocking” under them. Blocking will help disperse the weight of the crane and its load over more ground area than does the fixed pads.

**Leveling** – If the outrigger pad is set down on unlevelled “blocking”, the outrigger pad may slide off when under load, causing the crane to tip.

**Excavations** – Cranes must be set-up so that no outrigger is closer than 1.5 times the depth of the excavation.

### Man-riding Operations

Due to specific verification requirements, the suitability of cranes for man-riding shall be assessed by Site Manager’s / Site Controller’s / Offshore Installation Manager’s and Site Lifting Coordinator’s for each and every operation.

### Tag Lines

Tag lines shall be used as and when required during lifting operations to control the load from a safe distance. When used the operation shall be risk assessed. A tag line is used to enable the load to be moved and positioned by allowing the rigger to stay out of harms way. The minimum diameter of tag line shall be 16mm. Tag lines should never be looped around hands, arms or other parts of the body. General purpose gloves are to be worn when using tag lines.

To prevent slips, trips and falls when guiding a load with a tag line, the travel path must be clear and safe before the load is suspended.

### Lift Categories

To assist with the risk Assessment process, lifting operations have been divided into four categories, which are Routine, Simple, Complicated, and Complex.

Lift Categorization Assessments are as follows:

#### Routine Lifts (part 1)

| CHECKLIST                                        | YES | NO |
|--------------------------------------------------|-----|----|
| Has the lifting operation been performed before? |     |    |

|                                                                                                                                                     |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Is there a documented procedure?                                                                                                                    |  |  |
| Are you experienced with all the lifting equipment to be used?                                                                                      |  |  |
| Has the load been checked and made ready for lifting (e.g. sea fastenings released, hold down bolts removed)?                                       |  |  |
| Do you have the experience to lift a load of this weight?                                                                                           |  |  |
| Is the lifting area free from obstructions and other possible hazards?                                                                              |  |  |
| Can the lifting operation be carried out without the use of webbing slings? Or is a site-specific procedure for the use of webbing slings in place? |  |  |

**If the answer to any of the above is “NO”, go to Part 2 (Simple Lift)**

#### Simple Lifts (part 2)

| CHECKLIST                                                                                                         | YES | NO |
|-------------------------------------------------------------------------------------------------------------------|-----|----|
| Do you know the weight of the load and does the lifting operation appear to be straightforward?                   |     |    |
| If the load is heavier than you normally handle, do you have the relevant permission and/or permit?               |     |    |
| Is there a crane or certified support steelwork (e.g. runway beam or lifting eye) directly above the load?        |     |    |
| Does the load have certified lifting points (lifting eyes/collar eyebolts, etc.) fitted and if not, can slings be |     |    |

|                                                                                                                                                     |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| wrapped around easily (e.g. no sharp edges, load not fragile, etc.)?                                                                                |  |  |
| Is there ample headroom for the lifting appliance and slings?                                                                                       |  |  |
| Is the lift stable (e.g. centre of gravity below lifting points)?                                                                                   |  |  |
| Is the lift balanced (e.g. centre gravity in the middle) or fitted with special slings to compensate?                                               |  |  |
| Is the load free to be lifted (e.g. sea fastenings released, all hold-down bolts removed, not jammed, etc.)?                                        |  |  |
| Is the removal route clear of any obstructions?                                                                                                     |  |  |
| Can the removal (lift, transfer, and landing) be performed without cross hauling?                                                                   |  |  |
| Is there suitable lay down area and does the load come within the allowable load bearing capacity of the ground/deck?                               |  |  |
| Are you experienced in using all the lifting equipment and gear involved?                                                                           |  |  |
| Can the lifting operation be carried out without the use of Webbing Slings? Or is a site specific procedure for the use of webbing slings in place? |  |  |

**If the answer to any of the above is “NO”, go to Part 3 (Complicated Lift)**  
**Complicated Lifts (part 3)**

| CHECKLIST                                                                                                               | YES | NO |
|-------------------------------------------------------------------------------------------------------------------------|-----|----|
| Is the lift stable? (i.e. centre of gravity below the lifting points and not offset) .                                  |     |    |
| Is the centre of the gravity for the load viewed as balanced and acceptable?                                            |     |    |
| Can the lift be performed without cross-hauling or being restrained?                                                    |     |    |
| Does the load have specific lifting attachments?                                                                        |     |    |
| Is the load robust? (not fragile)                                                                                       |     |    |
| Does the load have a limited surface area that will not cause instability in the wind?                                  |     |    |
| Does the load require only one crane? e.g: no tandem lifting                                                            |     |    |
| Can the lift be performed without rotation?                                                                             |     |    |
| Uncertified structural components- can the lift be carried out safely without the need for MHC engineering calculations |     |    |

**If the answer to any of the above is “NO”, go to Part 4 (Complex Lift)**

#### Complex Lifts (part 4)

| REASONS FOR REQUESTING ENGINEERING INPUT                                | YES | NO |
|-------------------------------------------------------------------------|-----|----|
| The lifting operation involves divers                                   |     |    |
| The lifting operation is sub-sea                                        |     |    |
| The load will be travelled over unprotected process plant and machinery |     |    |

|                                                                                                                 |  |  |
|-----------------------------------------------------------------------------------------------------------------|--|--|
| The load is classified as heavy (as specified by Site Lifting Coordinator*) and is not being transported in CCU |  |  |
| The lift involves a floating crane                                                                              |  |  |
| The load is critical to business                                                                                |  |  |
| The lift is in a confined space and/or an area with very restricted headroom.                                   |  |  |
| Use of non-certified structural components, which require engineering calculations                              |  |  |
| Personnel Transfer / Man-riding activity where no approved site specific procedures exist                       |  |  |

#### Checklist Prior to Lifting Operation Taking Place

| QUESTIONS                                                                           | YES | NO |
|-------------------------------------------------------------------------------------|-----|----|
| Lift has been planned and risk assessed and Crane Set-up booklet has been completed |     |    |
| The weight of the load is known by the crane operator and the person in charge      |     |    |
| Wind speed is known and within acceptable limits                                    |     |    |
| Crane operator certification is current                                             |     |    |
| Banksman is easily identifiable “High Viz” jacket                                   |     |    |
| Banksman is not physically involved in the lift, guiding crane operator only        |     |    |

|                                                                         |  |  |
|-------------------------------------------------------------------------|--|--|
| Adequate means of communication between the crane operator and banksman |  |  |
| Equipment has been inspected and is painted the correct colour          |  |  |
| Lift area is barricaded off                                             |  |  |
| Lift will not endanger other operations                                 |  |  |
| Lift area is well organized and slip and trip hazards have been removed |  |  |
| Outriggers are in "full out" position                                   |  |  |
| Outriggers are correct distance from excavations                        |  |  |
| Outriggers are set on "blocks"                                          |  |  |
| Crane is level                                                          |  |  |
| Tag line is connected to load and used to control load                  |  |  |

### Checklist for Suitability of Cranes for Man-riding Operations

| QUESTIONS                                                                                                                             | YES | NO |
|---------------------------------------------------------------------------------------------------------------------------------------|-----|----|
| Has it been established that no other viable option of carrying out the work is available?                                            |     |    |
| Are all the necessary certificates for the crane wire ropes, slings and other associated equipment current?                           |     |    |
| Has the crane and associated equipment been thoroughly inspected by a suitably qualified / competent person within the last 6 months? |     |    |

|                                                                                                                                                                                                                                     |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Is the crane in good condition, regularly inspected and maintained and are records kept to substantiate this?                                                                                                                       |  |  |
| Are all the safety features and systems working properly? e.g. Rated Capacity Indicators (RCIs), overhoist limiters, etc.                                                                                                           |  |  |
| In the event of a complete power failure, will the crane maintain the load in a safe condition (e.g. do the brakes fail to the applied position)?                                                                                   |  |  |
| Are the brakes applied progressively (e.g. to avoid shock or snatch loading)?                                                                                                                                                       |  |  |
| In the event of a complete power failure can the personnel be recovered safely? (Is there a recovery plan in place).                                                                                                                |  |  |
| In the event of a primary brake or transmission system failure, will the load be prevented from free-falling (e.g. is there a secondary braking system or does the transmission system have hydraulic retardation to prevent this)? |  |  |
| Is the crane fitted with an emergency stop, which is located for immediate operation by the crane operator?                                                                                                                         |  |  |
| Is the crane so designed that inadvertent freefall is prevented when the drive train is in motion or the hook is loaded?                                                                                                            |  |  |

**If the answer to any of the above is "NO", "DO NOT" carry out man-riding operations**

## APPENDIX J – Feedback & Improvement Suggestions

[illegible]

**Revision/Review Log**

| Revision Date | Authority                                                | Custodian                                                                              | Revision Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------|----------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 06 July 2004  | Central Engineering Senior Authority                     | Lifting Technical Authority                                                            | Initial issue as controlled document                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 18 June 2007  | Steve Grittner<br>(Central Engineering Senior Authority) | John Thompson<br>Eldar Fiahardinov<br>Barry Riddell<br>(Lifting Technical Authorities) | <p><b>Table of Contents:</b><br/>Section 2 is now Definitions &amp; Abbreviations. All other sections moved forward, but remain the same headings.</p> <p><b>General:</b><br/>Throughout the procedure the document control numbering for referred procedures has been changed.</p> <p><b>Section 1. Introduction:</b><br/>1.1 is now Document Purpose. 1.2 is now Document Scope, <u>with first 4 paragraphs added</u>. <u>The following are new sub-sections:</u><br/>1.3 is now Stopping Unsafe Work. 1.4 is now Deviations. 1.5 Document Review. 1.6 is now SSOW Specific Cross References. 1.7 is now BP Golden Rules of Safety 1.8 is now Language Facilitation. 1.9 Procedure Summary.</p> <p><b>Section 2. Definitions:</b><br/><u>This is a new section</u></p> <p><b>Section 3. Lifting equipment:</b><br/>First paragraph includes <u>Safe Working Load</u>.<br/>3.1 CATEGORY 1. <u>Now combined with CATEGORY 2</u>. 3.4 CATEGORY 4. 2 <u>additional bullet points</u>. 3.5 CATEGORY 5. <u>This section completely re-worded</u>. 3.6 CATEGORY 6. <u>Additional paragraph added</u>. 3.7 Man-riding. <u>This sub-section has been deleted</u>.</p> <p><b>Section 4. Examination Philosophy:</b><br/>4.1 Examination of Portable Lifting Equipment. <u>Additional paragraph entered</u>. 4.2 Examination of Fixed Lifting Equipment. <u>Last paragraph removed</u>. 4.4 Examination of CCU's. <u>This sub-section completely re-worded</u>. 4.5 Examination of Mobile lifting Equipment. <u>This sub-section completely re-worded</u>.</p> <p><b>Section 5. Reports / Records:</b><br/><u>Paragraphs re-worded with bullet point added</u>. <b>Section 6. Control Processes:</b><br/>6.1 Rigging Loft (storage area). <u>New sub-section</u>. 6.2 Colour Coding. 3 paragraphs added. 6.3 Control of Portable Lifting Equipment. <u>Examination and colour code periods updated</u>. Also <u>"NOTE" added</u>. 6.8</p> |

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| 15 December 2008 | Chris Houghton<br>(AzSPU Engineering Authority) | Eldar Fiahardinov<br>(Lifting Technical Authorities) | <p>Control of Third Party Contractor Lifting Equipment. <u>Additional paragraph added.</u> 6.10 Control of Webbing &amp; Round Slings. <u>Section added on control of man-made fibre slings.</u></p> <p><b>Section 7. Competency:</b><br/>7.1 Competencies and Training of Personnel. <u>Levels of competency updated on the matrix.</u></p> <p><b>Section 8: Roles and Responsibilities:</b><br/><u>2 bullet points added to the generic stakeholders.</u> 8.1 Site Manager/Site Controller/Offshore Installation Manager. <u>This is a new addition to R&amp;R's.</u> 8.2 Area authority. <u>This is a new addition to R&amp;R's.</u> 8.4 Rigger / Slinger. <u>1 bullet point added.</u> 8.5 Crane Operator. <u>Additional paragraph added.</u> 8.8 Lifting Inspector. <u>5 bullet points added.</u></p> <p><b>Section 9. Communications</b><br/><u>New section</u></p> <p><b>Section 10. Risk Assessment and Planning of Lifting Operations:</b><br/>10.1 Strategy. <u>Additional paragraph added after All lifting operations shall be:</u></p> <p><b>Appendices:</b><br/><u>3 appendices included to the document as follows:</u></p> <ul style="list-style-type: none"> <li>• Appendix B: Inspection and Certification of Temporary or New Cranes</li> <li>• Appendix I: Procedure Summary</li> <li>• Appendix J: Feedback &amp; Improvement Suggestions</li> </ul> <p><b>Table of Contents:</b><br/>Paragraph 1.5 is now "Medical". All other paragraphs moved forward, but remain the same headings.</p> <p><b>General:</b><br/>New paragraph 1.5, Medical, is added to Section 1.</p> <p>Paragraph 3.1, Portable Lifting Equipment. Clarification Note on 4 leg sling set is added.</p> <p>Paragraph 3.5, Transit Slings, is reworded.</p> <p>Paragraph 4.4, Examination of CCU,s – new wording is added.</p> |
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|                  |                                                      |                                                              | <p>Paragraph 10.1, Strategy – new wording in regard to Integra Team is added.</p> <p>Appendinx A – additional definition is given to Heavy Lift.</p> |
| 02 February 2009 | Chris Houghton<br>(AzSPU Engineering Authority)      | Eldar Fiahardinov<br>(Lifting Technical Authorities)         | <p><b>Appendix D</b><br/>Generic Lifting Plan, Simple, for Offshore and ASCO base / quay side is added to the Procedure.</p>                         |
| 07 October 2009  | Chris Houghton<br>(AzSPU Engineering Authority)      | Eldar Fiahardinov<br>(Lifting Technical Authorities)         | <p>Minor change was made to Paragraph 6.6 in regard to relevant preliminary permission in case of Drilling &amp; Completions.</p>                    |
| 26 April 2010    | Chris Houghton<br>(AzSPU Engineering Authority)      | Eldar Fiahardinov<br>(Lifting Technical Authorities)         | <p>Extension date of procedure requested due to need for clarity with standards</p>                                                                  |
| 05 August 2010   | Yuliy Zaytsev<br>Safety & Compliance Systems Manager | Eldar Fiahardinov,<br>Lifting Operations Technical Authority | <p>Additional time for research requested in line with crane operators qualifications criteria</p>                                                   |