

Gulfof**Mexico**



GoM Safety & Operational Risk
GoM Management of Lifting Operations

AMENDMENT RECORD

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1 Purpose / Scope

This policy describes the requirements for safe crane and mechanical lifting operations offshore. Cranes & mechanical lifting devices shall be operated in accordance with the requirements set forth in this policy. This policy complies with BP's E&P UDP for Management of Lifting Operations and API RP 2D Maintenance and Operation of Offshore Cranes. This policy also satisfies the requirements of OMS Elements 3.1, 4.5 and 5.6. The GoM Region Lifting Engineer is responsible for maintaining this policy to reflect BP's requirements and current industry standards.

The accountability for implementation of this policy is with the Offshore Installation Manager (OIM) and Well Site Leader (WSL).

This policy applies to all GoM lifting operations on "BP owned facilities" or on "BP managed facilities". For drilling facilities (non-BP owned), the bridging document shall be updated to include the relevant requirements that the drilling contractor will follow. This policy does not apply to the following operations:

- Forklift operations (See ["GoM Management of Forklift Operations"](#))
- Drill floor operations, such as crown block, traveling block and top drive operations
- Goods and personnel elevators
- Anchor handling, marine towing and support / specialty vessels (See ["MV Lifting Appliance Inspection & Acceptance"](#)) **Note: vessels are covered under bridging documents.**
- Earth moving equipment
- Helicopter lifting operations
- Offshore facility survival craft / Fast Rescue Craft (FRC)

NOTE: All personnel are authorized and obligated to exercise Stop Work Authority when they identify unsafe crane and rigging operations.

No one shall override a decision by the crane operator or boat captain to cease crane and rigging operations they deem unsafe.

2 Definitions

Bending reduction: The reduction factor as applied to the breaking load or SWL of a rope to take account of the reduction in strength caused by bending round a shackle, trunnion or crane hook.

Blind Lift: A lift where at any point in time during the lifting operation the appliance operator cannot clearly see the load and personnel from the boom tip camera.

Cargo Carrying Unit (CCU): A portable unit intended for repeated use in the transportation of goods or equipment handled in open seas to, from or between fixed and / or floating installations and ships.

CCM 7000: Crane control module 7000, a device installed on Seatrax cranes that displays current information on various crane system and alerts operators when the winch drums counter rotate.

Certification (certificate): An approved and legally compliant document providing written evidence that a piece of equipment meets a required standard or process.

Competent Person: An individual, who through training, experience and assessment, is knowledgeable of applicable standards, is capable of identifying workplace hazards relating to the specific operation, is designated by the employer, and has authority to take appropriate actions.

Defect: A defect is a fault or weakness in equipment, or any of its components, which could arise during the manufacture, construction, installation, or use.

Determinate lift: This is a lift where the slinging arrangement is such that the sling loads are statically determinate (calculable) and not significantly affected by minor differences in sling length or elasticity.

Drop cone: The predicted path and landing area of dropped object.

Dynamic (lift): A lift where the load applied to the lifting equipment can be more or less than the weight of the load.

Dynamic Amplification Factor (DAF): The factor by which the gross load weight is multiplied, to account for accelerations and impacts during the lifting operation.

Exclusion zone: This is an area where personnel are not allowed to be during a lifting operation, for example, because it would be dangerous.

Freefall capability: This is a means of releasing the hoist brake completely to lower the load or hooks, with gravity and inertia allowing the load or hook to descend. Freefall is uncontrolled lowering, as opposed to controlled load lowering where the operator uses the machine gearing or a hydraulic means of control.

Indeterminate lift: This is any lift where the sling loads are not statically determinate (calculable).

Hazard Identification & Risk Assessment Form (HITRA): The process used to identify the hazards involved with a job as well as the recommended action(s) / procedure(s) that will mitigate or reduce the identified hazards and risks.

Lifting accessory: This is any device that is designed or used directly or indirectly to connect a load to a lifting appliance

Lifting appliance: Any mechanical device capable of raising or lowering a load, e.g. cranes, jacks, mobile aerial platforms, pad eyes, forklift trucks, powered hoists, manual hoists, lever hoists, beam trolleys, beam clamps, sheave blocks, winches, runway beams, mono-rail hoists, etc.

Lifting equipment: Includes lifting appliances (equipment performing the lifting) and lifting accessories (devices that connect the load to the lifting appliance).

Lifting operation: An operation concerned with the lifting or lowering of a load.

Lift Plan: A document, which sets out how the lift will be completed. The lift plan address's the steps required, equipment, weather conditions, personnel, SIMOPS, etc.

Load (Gross weight): The total weight lifted including accessories, contents, etc.

Load (Tare / Net weight): The weight lifted without contents.

Load chart: A diagram or table showing the rated capacity relative to the radius, environmental conditions, out of plane influences and type of operation.

Personnel Transfer: The action of transferring personnel to and from a vessel or platform using a crane.

Man Riding: Refers to, but not limited to, for example, using a winch to lift and lower personnel suspended in a carrier (harness), using a crane to lift, lower and position personnel in a carrier (basket), using a mobile elevated work platform or using a forklift truck to lift, lower and position personnel in a carrier (integrated basket), etc

Overload: This is a condition where the applied load exceeds the designed capacity, or SWL, of the lifting equipment.

Person in Charge (PIC): Stands for the person with the applicable competence level, who is required to take responsibility for a lifting operation.

Pre-use inspection: This inspection is a visual check and, where necessary, a function check of the lifting equipment by a Competent Person before each use. In determining the suitability and scope of the inspection, reference should be made to such information as manufacturer's instructions and relevant industry standards.

Radius: The horizontal distance between the axis of rotation of the lifting appliance (crane) and the vertical centre line passing through the boom head sheave and load hook.

Rated capacity: This is the load that the lifting appliance is engineered to lift for a given operating condition.

RLE: Regional Lifting Engineer

Safe Working Load (SWL): The maximum load that an item of lifting equipment may raise, lower or suspend under particular service conditions.

Skew load (SKL): This is the factor by which the load on any lift point, or pair of lift points, and rigging is multiplied to account for sling length mismatch in a statically indeterminate (incalculable) lift.

Tag lines: Rope attached to loads to aid in their orientation during lifting.

Termination efficiency: The factor by which the breaking load of a wire is multiplied to take into account the reduction of breaking load caused by a splice or mechanical termination.

Thorough examination: An assessment carried out by a sufficiently independent Competent Person (Lifting Equipment Inspector) using visual inspection, measurement and non-destructive testing to detect defects or weaknesses in order to assess their importance in relation to the safety and continued use of the lifting equipment. This may also include testing where deemed appropriate by the Competent Person.

Toolbox talk: Short, daily discussions or presentations focused on task specific topics and provides an opportunity for the supervisor to emphasize the importance of particular issues or procedures and for personnel to ask questions or make comments.

Uncertified: Lifting equipment or steelwork that does not have the requisite official documentation or endorsement and has not been proof tested.

Working Load Limit (WLL): The maximum load that an item of lifting equipment may raise, lower or suspend under particular service conditions.

3 Overview

This policy is not intended to be a comprehensive and technical procedure for lifting, but does set out the principal BP GoM and BP Segment operational requirements that the company shall meet for company lifting activities as well as contractor's lifting activities on BP sites.

The requirements for safe lifting operations are:

- Planning
- Control of Work (CoW)
- Competency of personnel
- Equipment
- Inspection, maintenance and certification
- Load integrity and stability
- Lifting of personnel
- Monitoring and audit

4 BP's Golden Rules of Safety for Lifting

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 qualified 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 the 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.

5 Roles and Responsibilities

This section details the roles and responsibilities of those personnel involved in lifting operations. Each operating hub should identify and appoint responsibility for the following roles.

- BP Site Manager or designee
- Regional Lifting Engineer
- Site Lifting Coordinator
- Site Lifting Competent Person
- Person in Charge (PIC)
- Crane Operator
- Signaller
- Rigger

BP Site Manager or Designee (OIM, OPM, WSL, etc.)

The Site Manager shall ensure that lifting operations are conducted in a safe manner and that lifting equipment is maintained per regulations and this policy.

- Establish arrangements for monitoring lifting operations to ensure conformance with this policy.
- Effectively identify, appropriately assess and mitigate the risks to plant equipment and personnel involved in lifting operations.
- Formally appoint the Site Lifting Coordinator, who should fulfill the competence requirements established by the Regional Lifting Engineer.
- Require assurance that anyone involved in lifting operations is trained and competent to perform the work safely.
- Ensure sufficient competent resources are available to manage effectively lifting operations in conformance with this practice.

Regional Lifting Engineer

The Regional Lifting Engineer shall have a documented BP level 4-competency assessment. The RLE shall establish arrangements for technical advice and support for lift planning and lifting operations. This may include appointing individuals with the necessary knowledge, experience and training to endorse lifting plans. The RLE will monitor the adequacy of these arrangements. A technical support engineer may provide expertise on behalf of the RLE for the more difficult lifting operations. This may include the development of lifting plans and ensuring that all relevant engineering standards are applied. This engineer may endorse lifting plans on behalf of the RLE.

- Provide the technical overview for lifting operations in the GoM region.
- Establish a system for providing technical expertise for the more difficult lifting operations at the facility. This includes the endorsement of the content of method statements, lifting plans and discussions with specialist engineers and contractors.
- Ensure the application of all relevant engineering standards during the development phase of the work scope, and document and record the results of engineering studies / assessments.
- Establish the technical requirements for examination / inspection regime.
- Training and competence assessment of site-based positions shall be the responsibility of the Regional Lifting Engineer. Further training of personnel can be targeted after gap assessment using the online competency assessment tool. The RLE shall develop intervention or development plans for personnel who do not reach a minimum competency level.

Site Lifting Coordinator

The Site Lifting Coordinator (SLC) shall ensure that all lifting operations and lifting management systems are in conformance with GoM policies through verification and audit of site operations and contractor's site lifting management system. The Site Lifting Coordinator shall not write and approve a lift plan; they approve lift plans that are written and submitted to them for a lifting operation. The SLC needs a good understanding of operational hazards at a site level and a documented competence in lifting. The Site Lifting Coordinator shall have a minimum BP level 2 competency assessment and shall be developing towards BP Level 3.

- Approve and seek required endorsements and authorizations for lifting plans consistent with the lift categorization.
- Ensure proper training, assess as competent all personnel involved with any lifting operation, and maintain a register of such personnel on the facility.

- Provide site-based assurance of lifting operations, system and equipment readiness, including conformance with regulation and the BP Regional Lifting Policy.
- Intervene and escalate as appropriate to ensure corrective actions and mitigation of risk.
- Ensure a learning system is in place to provide continual improvement process for lifting at site level and communicate through a formal community of practice to the Regional Lifting Engineer.
- Manage the facility's lifting equipment registry and rigging loft and ensuring 3rd party lifting equipment meets BP requirements.

Site Lifting Competent Person

The site lifting competent person will be the individual who plans and coordinates lifting operations and seeks necessary approvals and endorsements from the Site Lifting Coordinator.

- They coordinate the day-to-day lifting operations, making sure routine jobs are still applicable and ensuring higher risk jobs are properly identified. Therefore, the person needs a good understanding of operational hazards and the GoM lifting policy. This position can be filled by a qualified rigger or crane operator.
- Coordinates with the Site Lifting Coordinator as required.
- Ensure lifting personnel are working within BP and local regulation requirements.
- Ensure compliance with local (site) procedures.
- Coordinate all lifting plans, risk assessment and endorsements as required.
- Facilitate higher reviews and approvals where required.
- Ensure the HITRA process is adhered to.
- Provide self-verification on lifting operations.
- Ensure that all personnel involved with any lifting operations are properly trained and assessed as competent, and that a register of such personnel is maintained on the facility.

Lift Person in Charge (PIC)

The Lift PIC is the person who has operational control of the lifting operation. The Lift PIC shall ensure:

- Lift plan requisite reviews, approvals, authorizations and endorsement are in place
- Valid permit is issued (if required)
- Personnel involved or affected by the lifting operation have been briefed
- Correct equipment is available as detailed within the lift plan
- Task is accurately defined in the lift plan
- Mitigations and risk control measures are in place
- Personnel involved in the lift have the requisite level of training, competency or supervision
- Personnel involved in the lift have been briefed on their roles and responsibilities
- Pre-lift safety meeting has been completed and recorded
- Communication method is agreed, especially where everyone involved does not speak a common language
- Lift team have and are wearing correct PPE requirements
- Pre-use inspection of all lifting equipment and the load, including the potential dropped objects, has been completed
- Exclusion zone is established and access is restricted to essential personnel only
- Route to be travelled by the load and the landing area are clear
- Load is free to lift

- Safe access to connect the load to the lifting appliance
- Load is landed and stable before disconnection of rigging or appliance
- Safe access to disconnect the rigging/appliance from the load
- Tag lines are used only after assessment
- Personnel involved in the lift are instructed that anyone can “STOP the job”
- Load is stable and secure before disconnecting lifting appliance
- Exclusion zone is removed and site reinstated
- Lifting Equipment has had a post use inspection
- Lifting accessories are returned to the Rigging Loft
- Lessons learnt session is conducted

Crane Operator

The crane operator shall be properly trained and competent with all aspects of safe crane operation for the particular equipment in use. Operators shall have a valid certificate from an accredited agency that meets local regulatory requirements and BP requirements. Operators shall be certified to standards recognized by the Regional Lifting Engineer and be trained on the crane they are operating.

- Ensure completion of all servicing routines and pre-use checks before starting crane operations.
- Ensure that all safety devices fitted on the crane are operational.
- Ensure that the crane can function correctly and is fit to carry out the required lifting operations.
- Ensure that the crane has current and proper certification for usage.
- Participate in the planning, including risk assessment) of each lifting operation.
- Ensure clear and agreed communication with the signaller prior to undertaking a lift and understand the hand signal codes.
- Operate the crane under the direction of the signaller until the load is clear of obstructions and personnel then verify that the crane operator is taking complete custody of the operation.
- Operate the crane to ensure the safety of personnel, plant and equipment, as recommended by the manufacturer.
- Suspend lifting operations in the event of suspected unsafe situations or conditions.

Signaller

A signaller shall be properly trained and is authorized to give clear, precise commands to the crane operator. Lifts shall be carried out only with the signaller present; only the signaller is authorized to give instructions to the crane operator and the crew during lifting operations. However, anyone can give an emergency STOP signal to the crane operator.

- Accompany and guide the crane assigned to the lift during movements on-site.
- Remain in communication with the riggers and crane operator at all times.
- Understand the proper radio communications and hand signal codes as well as be able to give clear and precise signals and / or instructions.
- Keep the riggers in sight at all times during the lifting operation.
- Direct the movements of the crane and load to ensure the safety of personnel and plant equipment.
- Be clearly identifiable and distinguished from others by wearing high-visibility identification.

- Function only as signaller during the operation and not perform rigger duties while load is suspended.
- Always have a good view of the lifting activities.

NOTE: *Blind lifts may require more than one signaller.*

Rigger

This role pertains to personnel who work with the crane crew or utilizes loose lifting gear of any type in the course of their job. Riggers shall be competent to sling, lift, move and manipulate loads with a wide variety of lifting equipment.

- Prepare the load for lifting according to the lifting plan.
- Stand clear while lifting and landing a load off the deck, while taking up slack with or without a load on the hook and confirm to the signaller that everyone is clear.
- Avoid touching a lifted load with hands and never manually attempt to stop a swinging load.
- Use tag lines only as determined by the job safety and environmental analysis (JSEA) and lift plan.
- Ensure lifting equipment and loads are properly inspected before use.
- Ensure that all lifting equipment is secure, located correctly, has freedom of movement and is used within its WLL or SWL.
- Ensure that slings are not used at an excessive angle.
- Ensure the route to be traveled is clear and the landing area is suitable.
- Identify / remove potential snagging points.
- Assume a safe position during lifting operations and be aware of the position of others.
- Continuously monitor the lifting operation.
- Remain in communication with all parties at all times.
- Ensure equipment is de-rigged, inspected, stored or quarantined correctly.

6 Lift Planning

Understanding the hazards involved is an essential part of the lift planning process. There are often several different ways to perform a lifting operation. It may be necessary to perform a formal lifting hazard and risk assessment to determine the best lifting method. The need to minimize risks to personnel or plant involved in concurrent operations or restrictions on the type of lifting equipment available may decide the lifting method.

The lift plan defines how to perform the lifting operation and identifies the necessary equipment and personnel resources. The complexity of the lifting operation governs the information contained in a lift plan. Proper planning for lifting operations is essential to preventing incidents.

When establishing a lifting operation involving the use of a crane or mechanical lifting device, analyze the particular operation to see if the facility has completed the lift before, as a HITRA and lift plan may already exist.

If a particular, HITRA and lift plan do exist, assess the documents to confirm that they are still applicable to the job; changes to personnel, site layout or work environment could all result in the need for a reassessment of hazards. Assuming that a significant change has not taken place, lifting operations may proceed under the requirements of the lift plan, subject to the normal approvals.

If the lifting operation has not been completed before on the facility, then a HITRA and lift plan shall be completed and required approval obtained prior to commencing lifting operations.

The planning process shall address:

- Identification of hazards and restricted areas
- Selection of competent personnel
- Specification of the minimum number of people required to conduct the lifting operation
- Selection of lifting equipment
- Communication of lift requirements and hazards
- Procedures for changing the lift plan
- Emergency, recovery and contingency plans

6.1 Lifting Over Live Plant

Lifting over live plant is defined as any lifting operation, where there is a risk of the load, lifting appliances and / or lifting accessories affecting, damaging and / or rupturing live plant.

- On an offshore facility, this shall mean where live plant will be directly below or in close proximity to the suspended load.

The term “lifting over live plant” is deemed to include lifting over or in close proximity to live plant. The following characteristic examples include:

- Pipes or vessels that are pressurized, energized or containing process fluids.
- Pipes or vessels containing hydrocarbons, electric cables that effect live plant, equipment cooling water supplies that effect live plant, etc.

The layout of a process plant offshore sometimes makes it almost impossible to avoid lifting over a live plant or process equipment at all times. The methods of control will differ from facility to facility due to the differences in process equipment, plant layout and access, as well as lifting methods and equipment. Generally, lifting over live facilities should be avoided at all times and engineering solutions should be sought to eliminate the need for the lift and / or to protect the live plant and process equipment.

In addition to the engineering solutions outlined above, all facilities shall develop site-specific “no lift zone” deck plans ([example in Appendix E](#)), which highlight the live plant areas of the facility. These documents shall list the facility’s zone areas with lists of all potential exposed process equipment for that area. The facilities shall also design the best swing path of the cranes to avoid lifting over live plant and document these paths on the no lift zone deck plans.

As with all lifting operations, the management of lifts over live plant shall be categorized to reflect the associated risk and the consequent level of control required. All lifts over live plant shall follow the categorization requirements in [“Table 1”](#) and the review and approval requirements in [“Table 2”](#).

All lifts executed over live plant shall have a contingency plan regardless of the categorization level. The plan shall ensure that where there is a risk of the load, lifting appliances and / or lifting accessories affecting, damaging and / or rupturing live plant, operational staff are prepared and ready with an effective response, e.g. to the effects of any loss of containment, fires, explosion, electrocution, loss of production, environmental contamination, etc.

Operational contingency plans may be reused for repeat operations where the original operation lift plan, equipment, assumptions made and operating conditions are verified as unchanged.

Categorize lifting operations to reflect increasing risk and the consequent increasing level of control required. The categories of lifting operation are as follows:

Table 1: Lift Categorization and Requirements Table

Category 1 - Routine Lifts
Category 1 lifting operations can be executed under a generic lift plan. These plans must clearly define the limitations on the loads, lifting methods, weights of equipment and areas of operation. Routine lifting operations shall not be covered under one lift plan / HITRA for the entire day. Operations such as unloading / back loading boats is different than moving equipment around on deck and therefore a separate lift plan and HITRA shall be used for the different lifting operations. Prior to any lifting operation starting, a review of the lift plan and HITRA shall be conducted.
Required Documentation and Controls
<ul style="list-style-type: none"> • Completed level 1 HITRA • Completed lifting categorization flow chart (appendix F) • GoM Standard Lift Plan (lifting operation specific) (Appendix B) • On-site pre-job review / tool box talk • Work Control Certificate (WCC) <p>Note: For lifts over live plant, a contingency must be included in the lift plan</p>
Category 2 – Critical Lifts
Category 2 lifting operations shall be executed under a dedicated lift plan for that job only. These plans must clearly define the limitations on the loads, lifting methods, weights of equipment and areas of operation.
Required Documentation and Controls
<ul style="list-style-type: none"> • Completed level 2 HITRA • Completed lifting categorization flow chart (appendix F) • BP GoM Region Lift Plan (job specific) (Appendix C) • Formal Risk assessment (for engineered lifting operations) • Work Control Certificate (WCC) • On-site pre-job review / tool box talk • Rigging drawings <p>Note: For lifts over live plant, a contingency must be included in the lift plan</p>
Category 3 – Complicated Lifts
Category 3 lifting operations shall be executed under a dedicated lift plan for that job only. These plans must clearly define the limitations on the loads, lifting methods, weights of equipment and areas of operation. Category 3 lifts require the Regional Lifting Engineer's endorsement.
Required Documentation and Controls
<ul style="list-style-type: none"> • Completed level 2 HITRA (job specific) • Completed lifting categorization flow chart (appendix F) • BP GoM Region Lift Plan (job specific) (appendix C) (this lift plan is not required if an approved lift plan by a vendor is used) • Formal risk assessment (for engineered lifting operations) • Work Control Certificates (WCC) • On-site pre-job review / tool box talk • Rigging drawings <p>Note: For lifts over live plant, a contingency must be included in the lift plan</p>

7 Lift Plan Review & Authorization

All lifting plans shall be developed by a competent person and shall be submitted to the SLC for approval. The level of review required for authorization shall depend on the lift category. The SLC may decide that a higher level of review should be undertaken.

A Peer review shall be conducted for lifts categorized during risk assessment as equal to or exceeding Blue C or Purple (as per [GDP 3.1-0001](#)).

The Regional Lifting Engineer shall request a peer review for lifts considered outside the normal working parameters of a region. This peer review shall be conducted by the Segment Lifting Team and is designed to provide an independent view of high-risk lifting operations.

The SLC shall manage and control the administration of approvals, endorsements and authorizations.

Approval: Signifies confirmation by a site competent person that a lifting plan is safe to execute, it mitigates all risks and hazards, provides a safe system of work and is in accordance with BP and regulatory requirements for lifting operations.

Endorsement: Signifies confirmation by a Lifting Engineer or competent delegate that a lifting plan is safe to execute, it mitigates all risks and hazards, provides a safe system of work, is in accordance with BP and regulatory requirements for lifting operations and that all required technical support has been provided and incorporated.

Authorization: Signifies confirmation by a BP site manager or designee that the lifting plan has been completed, that the correct management processes have been followed during the applicable approval and endorsement stages and has adequately considered and mitigated all personnel safety and process safety.

Table 2 provides an overview of the review, approval and authorization requirements for lifting operations. Where site based personnel have not achieved the required level, then duty shall be escalated to a suitably competent person nominated by the BP Regional Lifting Engineer or BP Segment Technical Authority as appropriate.

Table 2: Approval, Endorsement and Authorization for Lifts

Category of Lift	Approval	Endorsement	Authorization
	Lifting Competent Person	Regional Lifting Technical Authority (or delegate)	Site Lifting Coordinator
Category 1	X		X
Category 2	X	On Request	X
Category 3	X	X	X

8 Lift Plan Requirements

All lifting operations shall have a lift plan supported by an analysis of the hazards and risks (HITRA). Lift plans are separate documents that set out the required steps for the operation, equipment and personnel needed. The HITRA identifies the risk of the lift plan and steps to

mitigate each risk. Routine lift plans shall be reviewed during the pre-job meeting and updated as needed if hazards / controls have changed or been added. .

The lift plan shall address all of the following:

- PIC of operations, number of personnel required, their roles and responsibilities
- Configuration / weight of load and lifting points
- Pick-up and set-down areas with any constraints, such as space and stacking
- Equipment required and certification
- Sequence of events (steps)
- Communication to be used
- Contingency plans
- Restrictions on lifting operations, e.g., weather, lighting, sea state
- Access and egress for slinging and un-slinging the load
- Simultaneous, conflicting or nearby operations
- WCC (Work Control Certificate)
- Load integrity checks (i.e. doors properly secured, tools removed from loads, etc.)
- Consideration of the placement of lifting equipment, plus potential consequences of catastrophic failure or unintended motion of the load or equipment, with particular attention to areas where people congregate.
- An assessment of whether to use tag lines, including their hazards and limitations ([see section 10.4](#)).

9 HITRA Requirements

Every lifting operation has inherent risks that shall be assessed and controlled. A level 1 HITRA shall be carried out and documented for all category 1 lifting operations. A level 2 HITRA shall be carried out and documented for all category 2 & 3 lifting operations. The HITRA shall identify associated hazards and the mitigations to each prior to any work taking place.

The HITRA should address (but not be limited to) the pre-lift checks identified in Appendix B or C.

10 Control

During all lifting operations, personnel shall position themselves safely and have an identified escape route. Lift personnel also have a responsibility to correct the position of others if they move into an unsafe position e.g. areas under a load, areas where they might be injured by a dropped object or a shifting load, between loads and walls, bulkheads or other immovable surfaces, etc.

10.1 Controlling Access to the Lift Area

All access to the work area(s) and to the crane shall be appropriately controlled during operations, which shall include the use of security measures and barriers. Prior to the start of any lifting operations, an exclusion zone shall be established and all non-essential personnel removed. At a minimum, announcements over the PA shall be made prior to lifting and the PIC should monitor and ensure unauthorized personnel are clear of the lift area. However, the use of red "DANGER" tape or hard barricades may be appropriate depending on the area.

Lift team personnel shall correct the position of others if they move into an unsafe position i.e., areas under a load, areas where they might be injured by a dropped object or a shifting load, between loads and walls, bulkheads or other immovable surfaces).

No personnel shall be allowed under a load without an independent second barrier being in place. Carry out a full risk assessment to ensure that the barrier is sufficient, access is controlled and failure of the primary restraint, e.g. the crane or rigging, will not result in the injury of personnel.

10.2 Minimum Personnel Requirements for Lifting Operations

A minimum of five competent personnel (including the PIC) is required for all marine transfers (i.e. a crane operator, a designated signalman, a rigger on the vessel, as well as a designated signalman and a rigger on the facility).

A minimum of three competent personnel (including the PIC) is required for crane material transfers within the facility (i.e. a crane operator, a designated signalman and a rigger).

NOTE: Critical lifts may require more personnel.

10.3 Communications

Before starting lifting operations, an on-site pre-job meeting shall be held to explain the lift plan to each person on the lift team to confirm their understanding of the plan and hazards involved. All personnel involved shall have the opportunity to review the findings of the risk assessment and the details of the lift plan to ensure that they clearly understand and agree with the methods and control measures. All personnel involved in the lifting operation shall have their individual responsibilities clearly allocated at the time of the pre-job.

A loading / offloading sequence shall be established for all marine vessels prior to starting the lifting operations. This sequence will be communicated by the PIC of the lifting operation to the captain of the vessel to ensure all are in agreement with the plan. There may be times when loads will remain sea fastened to the deck of the vessel while the crane remains connected because of operational or safety issues. When this arises, it shall be risk assessed to address any specific hazards to personnel, the crane or the vessel; this shall be communicated to the captain, who shall be in agreement with this decision. The PIC of the lifting operation, the crane operator and the boat captain will be jointly responsible for determining when to begin loading and unloading operations. The SLC, PIC or site manager shall retain the right to shut down crane operations, but will not override a decision to suspend crane operations made by the crane operator or boat captain.

- Particular attention needs to be placed on verifying the effectiveness of communications for blind lifts (e.g. designated channels on radio for the operation).
- Communications between the crane operator and the designated signalman shall be discernable – audibly or visually – at all times. When using radio communication, continuous verbal instruction shall be used. The operator shall stop whenever there is no clearly understood signal.
- Two-way radio communication is required between the vessel captain, crane operator and designated signalman on the back deck of the vessel during marine transfers.
- The PIC and the designated signalman shall be identified and documented on the lift plan and be communicated to the lift team. The designated signalman shall be clearly identified by a high visibility vest or hardhat cover that is different from the red vest of the fire watch.

10.4 Hands Free Lifting

The most hazardous part of any lifting operation is when the load is lifted and when it is being set down, therefore at the critical stages personnel must be as far away from the load as possible. Once the slings are connected to a load, personnel should not touch a load with any part of their body as the load is being lifted or before the load is set down and all potential energy has been released from the slings.

There will be certain exception to the hands free lifting; drill string related components, pipe and pipe handling equipment, related rig floor tools and other loads may require precision for landing, such as setting a coil tubing unit. Any exceptions shall be fully risked assessed.

The use of tag lines shall only be authorized as determined by the HITRA and lift plan as other alternatives such as push pull poles may be a safer alternative to a tagline.

Lifting operations to and from vessels should only use taglines if it is necessary for personnel to be around the load; this shall be agreed between the vessel and the lifting team, risk assessed and particular care and attention shall be exercised. Taglines should be used on all loads that may spin or swing.

Taglines shall be made of a suitable non-rotating fiber rope, preferably a 100% polyester braid on braid rope (braided core covered with braided cover). The use of ordinary polypropylene rope is strongly discouraged due to its rotating properties. The length of the tagline shall be sufficient given the characteristics of the lifting operation and be at least long enough to keep persons clear from the dangers of the load, equipment or other hazards. The end of the rope shall be secured against fraying, but knots shall not be used at the free end of the rope.

The tagline shall be attached to the load only and not to the lifting and hoisting accessories.

Taglines should be held securely at a 45-deg. angle to prevent personnel from being too close to the suspended load.

Boat hooks or similar devices shall be used to retrieve taglines hanging down vertically from a load.

You shall never have a tagline wrapped around any part of your body or any fixed point.

All sections of the tagline, including the slack, must be kept in front of the handler at all times. When two or more riggers are on one tagline, all personnel must be on the same side with the slack in front of them.

Taglines shall be used to keep control of a load, not to gain control over a load. Manual load handling shall never be used to stop a swinging load.

10.5 Conducting the Lifting Operation

The following are requirements for conducting the lifting operation:

- Ownership of the lifting operation will begin when lifting activities commence with the vessel, not as the vessel enters the 500-meter zone. The vessel captain will maintain ownership and control of the vessel at all times.
- The vessel should never change position while a load is connected to the crane.
- The Site Manager or designee shall, at all times, continue to hold ultimate authority for the safe execution of all activities on their respective facilities.

- The crane operator shall obey an emergency stop signal at all times, no matter who gives it.
- The load to be lifted shall be confirmed as within the rated capacity of the lifting equipment and attached by means of suitable lifting accessories.
- The operator of the lifting appliance shall not leave the operating controls while the load is suspended.
- Personnel shall not undertake more than one task at a time, e.g. the signaller shall not handle suspended loads and signal at the same time.
- All personnel and third parties shall be kept out of any area where they might be struck or crushed by a load or lifting equipment if it swings, shifts or falls. No one shall stand or work directly below a load. Physical barriers may be required to maintain this separation.
- Operators shall never move a load or crane boom directly over people.
- Personnel shall have an escape route in case of an unexpected movement of the load or equipment.
- Manual load handling shall not be performed to stop a swinging load at anytime.
- Operating cranes is prohibited while a helicopter is landing, taking off or running on the heliport (crane operator should set the brakes and step out of the cab during helicopter operations; they should not leave the crane though).
- At no time shall any lifting or rigging equipment be attached by any means to process related equipment.
- The use of chain slings is not permitted in the GoM Region. Chains should only be used as part of approved and certified equipment, i.e., chain falls, bushing pullers, tie down chains etc.
- Flame cut pad eyes of any type shall not be used for lifting or tie down applications.
- For beam clamp and trolley installations, rope access shall only be used where there is access to all sides and the top and bottom of the beam so that visual verification of proper installation may be confirmed, if this is not possible, then scaffolding shall be used to install beam clamps and trolleys.

11 Competency of Personnel

BP employees or contract personnel shall not physically perform lifting operations unless they are trained and certified to the GoM minimum acceptable competency as defined by the BP Regional Lifting Engineer in [table 3 “competency requirements”](#).

Each person / role identified within this practice shall have achieved a defined level of competence. Where an individual has not yet achieved the defined level of competency or has an agreed development plan, they shall only assist, remaining under the direct supervision of a competent person at all times

Competence assessment of the Regional Lifting Engineer shall be the responsibility of the Segment Technical Lifting Authority.

Assessment and endorsement of dive Supervisor and divers’ competency involved in lifting operations shall be the responsibility of the Regional Diving Technical Authority.

The Regional Lifting Engineer shall define the training and competence requirements for all roles involved in lifting operations, making use of recognized standards. All personnel involved in mechanical handling and lifting operations on BP owned facilities or BP managed facilities shall be appropriately trained and formally assessed as competent in the tasks to be undertaken.

The site manager or delegate are accountable to ensure that everyone who operates or maintains lifting equipment has received formal training and is competent according to his or her tasks and responsibilities. Each facility shall have designated crane operators and riggers. The BP Site Manager shall develop and maintain a register of designated competent personnel authorized to undertake lifting operations ([Appendix D](#)), these registries will be signed by the facility OIM's and the Regional Lifting Engineer. These shall be posted on the information board inside the living quarters.

Documentation of training and competence assurance shall be required before any person is authorized to perform lifting operations. Competence shall be determined through assessment and documented testing to the defined competence standards.

The categories of personnel normally permitted to be involved in lifting operations involving a crane or other mechanical lifting device are described below along with the extent of their training and competence criteria. Any persons who will be hooking or unhooking rigging of any type shall have the appropriate rigger or crane training.

Table 3: Competency Requirements

Lifting Role	Training Requirements
Site Lifting Coordinator	5 Day SLC Classroom Course 12 Segment CBT Learning Modules Online BP level 3 assessment Formal assessment every 5-years <i>(SLC's shall have a plan for developing to a BP level 3 if they are currently a level 2)</i>
Crane Operator	Seatrax 3-day advanced crane operator course completed every 4 years. (stage 2 crane operator) 1-day crane simulator assessment conducted at HOLC and completed every 2-year.
Overhead Crane / Gantry crane operator	Approved 1-day overhead crane operator's course completed every 4 years. (Stage 1 crane operator)
Rigger, PIC, Signalman	2-day advanced offshore riggers training course which API approves, completed every 4 years. (Stage 1 rigger)

11.1 Assurance / Self verification Competency

Training requirements for BP employees and BP contractor personnel shall be targeted after gap assessment using the online competency assessment tool and face-to-face competency interview. The Regional Lifting Engineer shall use the online assessment to target technical training gaps of regional personnel and shall develop a comprehensive succession plan for all lifting safety critical roles.

12 Temporary Crane Operators

There may be times when a facility needs extra crane support for TAR's or construction activities. When situations such as these arise, the facility shall notify the GoM Regional Lifting Engineer and forward all the training records of the individual to the RLE for review and approval.

Any crane operator that will operate a crane on a BP location must meet the same training requirements as our dedicated crane operators, be trained on the specific crane they will operate and will be required to successfully undergo and pass the crane simulator. After this is completed, the Regional Lifting Engineer will approve the operator to go offshore.

Upon arrival on an offshore installation for the first time, the temporary crane operator must receive an appropriate induction to ensure that the crane operator is fully conversant with the controls and characteristics of the cranes to be operated. In addition, the crane operator must be apprised of all procedures and instructions relevant to safe operation of the cranes, which should include the following:

- Crane manufacturer's Operating and Maintenance Manual
- Relevant section of the installation's Safe Operating Procedures Manual
- Installation standing instructions or orders pertaining to crane operation

The facility Site Lifting Coordinator will perform the induction, refer to [Appendix A](#) for a copy of the Installation / Site Familiarization / Training Record Form, which must be completed and forwarded to the GoM Regional Lifting Engineer prior to commencement of crane operations for the first time.

12.1 Temporary Riggers

As with crane operators, there may be times when a facility needs extra riggers for TAR's or construction activities. When situations such as these arise, the facility shall notify the GoM Regional Lifting Engineer and forward all the training records of the individual to the RLE for review and approval.

Any rigger that will be involved in lifting operations on a BP location must meet the same training requirements as our dedicated rigging crews. After this is completed, the Regional Lifting Engineer will approve the rigger to go offshore.

Upon arrival on an offshore installation for the first time, the temporary riggers must receive an appropriate induction to ensure that the riggers are fully conversant with the facility. In addition, the riggers must be apprised of all procedures and instructions relevant to safe rigging on the facility.

The facility Site Lifting Coordinator will perform the induction, refer to [Appendix A](#) for a copy of the Installation / Site Familiarization / Training Record Form, which must be completed and forwarded to the GoM Regional Lifting Engineer prior to commencement of rigging operations for the first time.

13 Lifting Equipment Requirements

BP GoM facilities will maintain a register of all the lifting equipment on the facility. Hard copies of the lifting equipment certifications and a thorough examination certificates shall be maintained

on-site. Each item shall be given a site identification number and the description should include the following information:

- Location
- Area
- Unique identification number
- SWL or WLL
- Test certificate details
- Dates of last and next thorough examination
- Quarantine / defect report number

All lifting equipment purchased by BP facilities shall be purchased through the BP Engineering Procurement Process, with the exception of lifting equipment that is already approved and on the facilities lifting registry. For any equipment not in the lifting registry, when the order is placed, the buyers on shore will run the order through the EPP process and send it out for approval to the Regional Lifting Engineer. Any lifting equipment that is supplied by a vendor or brought out by a 3rd party work group shall meet the above requirements as well. Vendor or 3rd party supplied lifting and rigging equipment shall be supplied with a lifting equipment registry, valid certifications for all lifting and rigging equipment they bring out and be identified by color-coding. Prior to any vendor or 3rd party using their equipment, it shall be inspected and approved by the SLC. Cranes and lifting equipment shall be maintained as per API RP 2D and ASME B30 series current editions and BP maintenance schedules. All lifting equipment shall be color coded for easy identification of current certification status. The BP inspection and testing requirements for lifting devices can be found in section 18 [key documents](#).

Use of lifting equipment shall be prohibited if it:

- Is not currently certified
- Has been homemade
- Has been modified without an approved MOC
- Is defective / not fit for purpose

All facilities shall have a rigging loft onboard that will contain all the rigging equipment for the facility such as chain falls, slings, shackles, come a longs, etc. Lifting equipment or rigging of any type that is located in electrical shops, mechanic shops, etc., shall be relocated to the rigging loft. Due to the design and layout of facilities, it may not be feasible to have only one loft due to available space, incases such as this, multiple rigging lofts are acceptable as long as they are controlled and contain an inventory of all rigging in that particular loft.

The facility's rigging loft should:

- Be placed in a suitable location that provides an adequate degree of protection from site activity and allows good access and egress.
- Be secure (locked), weather tight, well lit, suitably heated or ventilated if required, and of a sufficient size for uncluttered storage of lifting equipment.
- Be fitted with a work area / bench for the loft controller to manage documentation.
- Be supplied with a Lifting Equipment register and control register.
- Be supplied with a secure (locked) internal quarantine area, necessary for pre-shipping storage of equipment removed from service. If located outside, it shall also be secured to prevent unauthorized access.
- Be marked with the current color code.
- Display an authorized list of personnel approved as competent to withdraw and use lifting equipment.

A competent Rigging Loft Controller shall be appointed (typically the SLC) who will issue equipment, accept returned equipment using a logbook and maintain the loft registers. In addition, the Rigging Loft Controller will inspect equipment upon receipt, prior to issue and upon return. Users of the lifting equipment must carry out a pre-use inspection to ensure the equipment is suitable for the task, has not been damaged and is correctly installed.

- General facility and cargo slings shall be certified annually at a minimum, with exception of synthetic / nylon slings, which shall be discarded on an annual basis (from in-service date, in service date shall be tagged on the sling when issued).
- Lifting equipment utilized for lifting of personnel and personnel transfers shall undergo a detailed thorough examination at a minimum of every 6-months.

Equipment that has been involved in any of the following shall be examined equivalent to an annual inspection:

- An incident (lifting incident or damage sustained during storms, e.g. hurricane)
- Overload
- Subject to modification or major repair to components in the load path or other safety critical components
- Changes in condition or use including periods out of service, etc.

ISO / Connex shipping containers without pad-eyes are not designed for offshore crane or marine cargo lifts and shall not be used. ISO / Connex shipping containers that have been re-engineered with certified lifting pad-eyes and proof tested are acceptable for marine lifts.

All lifting points shall be certified.

Suspension points for sheaves in winch systems shall be rated to withstand the maximum credible winch pull.

Marine cargo transfer lifts using the crane auxiliary hoist line shall utilize a stinger (length 6 to 8 feet) to prevent headache ball contact with marine riggers hooking / unhooking loads on vessel decks.

All crane stinger hooks shall be of the "closed" type safety hooks I.E. the Crosby Shurloc hook. The closed type hook has a smooth profile, which will not easily become fouled during lifting operations, and incorporates an offload release trigger mechanism together with an on load automatic latch.

Equipment for lifting people shall be fitted with two distinct mechanisms for preventing the load from falling, one of which shall be a self-acting fail safe. Any freefall capability shall be positively locked out.

Fixed lifting equipment approved for personnel transfers shall be marked as "Suitable for Personnel Transfer."

Fixed lifting equipment used for man riding shall be marked as "Suitable for Man Riding."

The most common lifting equipment accessories (i.e. shackles, slings, etc.) requirements can be found below.

13.1 Wire Rope Slings

All wire rope slings shall be manufactured and rated in accordance with API RP 2D and ASME B30.9. Field-fabricated slings are prohibited in BP GoM operations. Sling certifications to be supplied upon delivery.

Wire rope slings shall:

- Have proper eyes (fold back type eyes with aluminum ferrules are not permitted)
- Be uncovered - no part of a wire rope sling can be covered, thereby preventing a visual inspection

Sling tags shall contain the following information:

- Date of manufacture
- Test date
- Tonnage per angle rating
- Identification number

Certification of slings is required once every 12-months. Conduct a visual inspection and a proof test at two times the slings rated capacity. Replace when deemed necessary by a qualified inspector or after damage to the sling.

Note: *X-904 slings shall default to manufactures two-year refurbishment protocol or as inspection deficiencies dictates.*

13.2 Synthetic / Nylon / Web Slings

Synthetic slings must be designed and built in accordance with the latest edition of the Web Sling Tie Down Association specification, manufacturer's guidelines and industry standards (ASME B30.9). Design shall specify the use of the synthetic sling (e.g. vertical, basket, and choker). Sling certification to be supplied upon delivery.

Synthetic / nylon / web slings shall:

- Be made of the continuous fiber-type construction
- Have UV protection

Sling tags shall contain the following information:

- Date of manufacture
- In-service date (should be marked when the sling is put into service)
- Tonnage per angle rating
- Identification number

All synthetic / nylon / web slings shall be replaced annually and have a certificate of conformity available upon request from the sling owner indicating that the sling is not greater than one-year old.

Slings that are heavily oiled, soiled and torn, slings with abrasive edges and dry rot, and slings without markings shall be discarded immediately.

13.3 Synthetic Round Slings (single path / twin path)

Synthetic round slings shall be manufactured in accordance with the latest edition of the Cordage Institute Roundsling Standard (CI 1905-14) & ASME B30.9 (Slings). Design shall specify the use of the synthetic sling (e.g. vertical, basket, and choker). Sling certification to be supplied upon delivery.

Synthetic round slings shall:

- Have an overload tell tails and a fiber optic internal inspection system
- Have UV protection

Sling tags shall contain the following information:

- Date of manufacture
- In-service date (should be marked when the sling is put into service)
- Tonnage per angle rating
- Identification number

All synthetic round slings shall be replaced or repaired when deemed necessary by a qualified inspector or after major damage to the sling.

Synthetic round slings that are heavily oiled, soiled, torn, slings with abrasive edges and dry rot, and slings without markings shall be discarded immediately.

13.4 Stinger Requirements

When a wire rope is used to extend the load block of a lifting appliance, it must meet API RP 2D and ASME B30.9 standards. Stinger requirements are the same as wire rope slings and are subject to the same periods of inspection and testing criteria. Proof test certification to be supplied upon delivery.

Stingers shall:

- Meet the wire rope sling requirements
- Have a hard eye termination incorporating a hook at one end and a master link at the other
- Have a Crosby Shurloc hook

Sling tags shall contain the following information:

- Date of manufacture
- Test date
- Tonnage per angle rating
- Identification number

Stingers shall be re-certified one-year from service date.

13.5 Master Links and Rings

Master links shall be drop-forged (preferred on sizes up to 2 1/4-in.) or welded and shall be built to the specifications of ASME B30.26

All master links and rings shall be marked in raised or stamped letters with the following information:

- Manufacturer's trademark or logo
- Size
- Rated load capacity and grade
- Identification code (for material traceability)

The master links arranged with wire rope sling legs are required to be tested according to ASME B30.26 proof load test requirements based on the number of slings.

13.6 Shackles

All shackles shall meet the requirements of ASME B30.26.

Each shackle body shall be marked in raised and or stamped letters with the following information:

- Shackle Body:
 - Manufacturer's trademark or logo
 - Rated load
 - Size
 - Identification code (for material traceability)
- Shackle Pin:
 - Secondary securing through end of pin after thread nut is applied

13.6.1 Shackle Inspection

Shackle inspections are conducted at the manufacturer. A visual inspection is required before use and every 12-months by a competent person. The manufacturer's batch metallurgical certification shall be requested upon order and maintained on the facility for that lot of shackles.

13.7 Eyebolts

Eyebolts shall meet the requirements of ASME B30.26 and ANSI 8620.

Eyebolts shall be marked in raised or stamped letters with the following information:

- Manufacturer's trademark or logo
- Size and grade - "A" for alloy, "C" carbon steel
- Rated load

13.8 Rigging Blocks

Rigging blocks shall be manufactured to the specifications of ASME B30.26.

Rigging blocks shall be marked with raised or stamped letters with the following information:

- Manufacturer's trademark or logo
- Rope size(s)
- Rated load

13.9 Uncertified Steelwork and Lifting Points

Uncertified steel work and lifting points such as I-beams, girder beams etc. Shall not be used for lifting unless an assessment of the beam has been undertaken and its use has been approved by a competent structural engineer or competent delegate.

The Regional Lifting Engineer & Structural Technical Authority has established a system to permit small loads to be lifted from uncertified steel (i.e. I-Beams / girder beams) in defined areas without having to seek approval for each lift. [Appendix G "Beam Clamp Allowable Loadings Matrix"](#) shall be used and referenced on the lift plan for any lifts involving beam clamps. Any lifts

that cannot be identified on the matrix shall only be used after an assessment has been completed and approved by a competent structural engineer or competent delegate.

Uncertified steelwork and lifting points used repeatedly or periodically shall be:

- Assessed
- Examined
- Overload tested, unless the RLE and Structural Technical Authority give approval for verification by calculation.
- Certified
- Color coded
- Marked with a SWL and unique identification number

14 Load Integrity and Stability

BP employees and contractors shall utilize certified slings within all operations both at dock facilities as well as within operations in the Gulf of Mexico. Those contractors providing services to BP at dock facilities and on BP sites offshore shall be required to utilize certified slings and equipment. The slings shall be inspected prior to each use and the slings will either be replaced or re-certified on an annual basis. Certification means that a proof test was performed on the sling. Utilization of rubber hoses that act as a protective cover on slings is prohibited. All certified slings will comply with API RP 2D and ASME B30.9 and have a label from the manufacturer that identifies the sling certification date and safe working loads. Equipment that is built to or certified to DNV standards shall have an equivalent certification tag on them that meets API RP 2D and ASME B30.9 requirements and contain the same information as indicated in [section 13.1](#) of this document.

NOTE: *With the exception of synthetic round slings, all synthetic / nylon / web slings shall be discarded 1-year from their in-service date.*

Rigging shall be designed so personnel can hook / unhook from the deck, dock or platform level. Proper length slings will prevent personnel from climbing or using ladders to hook / unhook equipment. The rating on the shackles will be equal to or greater than the rating on the slings. All shackles utilized shall be Crosby or equivalent and utilize a secondary securement method (i.e. bolt and pin, safety wire or tie-wrap). The preferred shackle to use is the safety shackle or 4 part shackles. It is prohibited to weld shackle pins to any shackle.

In addition, those contractors that provide equipment to our offshore operations (i.e. production, drilling and construction) shall attach certified slings and shackles to their equipment in baskets under the following circumstances:

- Equipment exceeds 5,000-pounds (or)
- Equipment exceeds 6-feet in height (or)
- Equipment requires a 4 point hook-up

Those contractors that are sending equipment (i.e., welding machines, compressors, skid mounted equipment, wire line units, etc.) to BP shore bases for transportation offshore shall ensure that the equipment is designed appropriately and that the weight of the equipment is permanently marked on the equipment. Any equipment not properly marked will not be transported offshore and rejected. All cargo baskets will be pre-slung for a single point lift utilizing a 4-point sling arrangement. Flame cut pad eyes shall not be allowed on baskets and shall be rejected and sent back to the vendor. The safe working load of cargo baskets shall also be permanently marked on the basket. Contractor / vendor supplied equipment that does not

meet these criteria will be returned to the contractor at their expense. In addition, BP shore bases shall mark all outbound loads as to their weight according to BP load marking criteria.

All tubular's (casing, drill pipe, tubing, etc.) shall be pre-slung with certified slings prior to transport to / from offshore facilities, unless they are being transported in bolsters. All tubulars, subs, stabilizers, bits, mills, etc. less than 4-feet in length shall have a fit for purpose and engineered lifting cap installed that is of a non casting construction and will be transported in a container, bolster or basket provided by the vendor. All tubulars, subs, stabilizers, bits, mills, etc. greater than 4-feet in length will not be required to have lifting caps but shall be pre-slung with certified slings prior to arriving at a BP Dock Facility and will be transported in a container, bolster or basket provided by the vendor.

There shall be no stacking of containers, baskets or tanks unless prior approval has been obtained from the OIM and the following requirements are met:

- Equipment is specifically designed for that purpose and suitable for stacking on facilities operated by BP or on BP-contracted facilities.
- Stacking is confined to pre-designated areas.
- Risk assessment of stacking operations is performed and documented showing that the risk involved in stacking and de-stacking is less than the risk of alternative approaches.
- Stacked containers must have an additional pennant line so that the crane hook can be attached / detached while the rigger is standing at deck level.
- Stacking and de-stacking shall be controlled by a WCC.

15 Manifesting and Material Identification

For shipping all cargo from shore base to offshore facility, from offshore facility to offshore facility, and from offshore facility to shore base:

- All transported material shall be manifested on a BP cargo manifest. A description of the material must also include an accurate weight.
- Any special lifting instructions (e.g. high center of gravity) shall be noted on the cargo manifest and verbally communicated to receiving facility.
- A digital picture of the back deck of the loaded vessel shall be taken and sent to the receiving facility.
- All facilities will affix a BP color-coded weight decal (described below) to every manifested lift:

GREEN DECAL - all lifts under 4,999-pounds.

YELLOW DECAL - all lifts between 5,000- and 9,999-pounds.

RED DECAL (Octagon shaped) - all lifts 10,000-pounds and higher.

- Color-coded decals also have blank spaces for date, actual weight, and from and to. An indelible marker should be used to:
 - Insert date of shipment
 - Insert actual weight of cargo in space provided on decal
 - Insert shipping point and destination of cargo
- All facilities will have available an 8-1/2-in. x 11-in. laminated sheet collectively displaying all color-coded decals posted around the deck. These shall also be posted in the crane cab for easy reference by the crane operator.

It is incumbent on every facility to ensure they have an adequate supply of color-coded decals.

16 Lifting of Personnel

Lifting of personnel shall include:

- Personnel that are lifted with cranes
- Forklift trucks with personnel carriers
- Man riding winches

The common terms used to describe personnel lifting operations are man riding and personnel transfer:

- Man-riding refers to using a winch to lift and lower personnel suspended in a carrier (harness)
- Personnel transfer refers to using a crane to lift and transport personnel in a carrier (e.g., Frog, Billy Pugh X904) from one location to another.

Note: Personnel lifts, elevators, drilling articulated elevated platforms, mobile elevated work platforms (MEWP) / Aerial Work Platforms (AWP) are not covered in this document.

16.1 General Requirements

- Lifting of personnel regardless of lift environment shall be considered a high-risk operation and shall be categorized as a category 2 lift.
- Lifting of personnel shall only be used when it is not practicable to gain access by a less hazardous means, and when it is rigorously risk assessed and fully managed in accordance with strict procedures.
- Lifting of personnel shall only be carried out when the risk of personnel falling from a carrier, or being crushed, trapped or struck while being transported in a carrier has been mitigated to as low as reasonably practicable.
- Rescue plan shall be developed, implemented and effectively communicated.
- Rescue equipment shall be readily available and operational at the lift location before the lifting operation starts.
- The Region Lifting Engineer shall establish a system that monitors and records the quantity and type of personnel lifting operations performed at each facility.
- Lifting equipment for lifting personnel shall be thoroughly examined for the purposes of recertification at least every six months.
- Site Lifting Coordinators shall consult Site Managers before approving any lift plan, which involves the lifting of personnel.
- Where it is necessary to transfer personnel to or from a vessel, the Crane Operator shall always have a clear view, (line of sight) of the embarkation areas, load path and landing areas
- Lifting of Personnel should only be conducted within daylight hours, unless approved by the Site Manager in consultation with the Region Lifting Engineer.

Lifting of personnel shall only be carried out with lifting equipment that has been:

- Specifically designed for lifting personnel
- Certified for lifting personnel

Crane operator offshore shall:

- Meet the training requirements approved for BP GoM operations in [table 3](#)
- Be briefed in the operation to be performed
- Check prevailing weather conditions, (e.g., wind speed, sea-state) to conform to criteria listed in the installation's safe operating procedures / lift plan.

- Perform a trial lift without personnel prior to the actual lift.
- Perform a pre use inspection of the crane prior to the lifting operation

Persons operating or using equipment for personnel lifting (excluding cranes) shall be:

- Properly trained
- Deemed competent for the task by the Site Manager to a standard recognized by the GoM Region Lifting Engineer.

Passengers being lifted shall be briefed by the Lift PIC. The Lift PIC shall confirm:

- Passengers are wearing type 1 lifejackets
- Personnel have been trained and or have experience of personnel lifting
- Passengers have been briefed on all aspects of the transfer
- Signaller is in place on platform and or vessel
- Roles and responsibilities are assigned and coordinated
- Radio communication established with the master of the supply vessel prior to commencing lifting operations
- Plan is in place for radio communication failure
- Visual contact is maintained throughout lifting operation
- Crane Operator has been trained and assessed as competent for this type of operation
- Environmental conditions have been established by SLC, crane operator and vessel master as being suitable for lifting / transferring personnel by this method
- Second Crane Operator and / or Mechanic is available and capable of operating the crane in the event of an emergency, unless self-rescue equipment is available, or the rescue plan addresses this risk
- Personnel carrier is visually inspected before use

16.2 Suitability of Cranes for Personnel Lifting and Personnel Transfers

- Lifting equipment with a free fall mode that cannot be effectively locked out shall not be used for lifting personnel.
- Competent person shall verify that the crane is certified and is marked "suitable for lifting personnel" before each operation.
- Hoisting systems shall have a device, other than the load hoist brake, which regulates the speed at which the load can be lowered.
- Before a Personnel Transfer operation takes place, the competent person shall define a communication method and verify that the operation conforms to Local OMS requirements.
- Floating cranes should have suitable station keeping ability (e.g., DP – Class 2 or multi point mooring system)

16.3 Suitability of Winches for Man-Riding

- Competent Person shall verify the winch is certified and marked "suitable for man-riding"
- Before a Man Riding operation takes place, the competent person shall define a communication method and verify that the operation conforms to Local OMS requirements

16.4 Personnel Transfer Capsules (PTC)

PTC shall:

- Not be used as a workbasket.
- Be specifically designed and certified to a standard that is acceptable to the GoM Region Lifting Engineer
- Be fitted with floatation and be Self-righting
- Conform to local legislation
- Be inspected and certified every six months
- PTCs shall be capable of carrying casualties plus an attendant in the event of an incident.
- Competent Person shall accompany a casualty.
- PTCs shall be detached from the crane prior to installing or removing a stretcher from within the capsule.
- Once landed, the crane shall lower the hook approximately 3m / 10ft to allow sufficient slack in the line to prevent snatching of the capsule due to unexpected heave or loss of vessel station.
- When landing PTC, it shall be guided to a suitable pre-designated marked area and positioned with the aid of taglines or push pull poles.

16.5 Personnel Work Baskets

A. Standard cargo baskets shall not be used personnel work baskets.

B. Personnel Work Baskets being utilized shall be:

- Suitably designed to a standard recognized by the GoM Region Lifting Engineer
- Constructed and certified for the purpose of lifting personnel
- Marked with a SWL
- Securely attached to the crane, (e.g., by safety pin, four part shackle, positive lock hook)
- Fitted with a redundant sling, preventing a single point of failure of below the hook rigging
- Fitted with internal handrails to prevent hands / fingers being trapped if the basket swings against an obstruction
- Fitted with a roof to protect personnel, if there is a risk of falling objects
- Fitted with slip resistant floor
- Fitted with internal anchor points for safety harnesses
- Fitted with inwardly opening doors that have a locking mechanism to prevent inadvertent opening
- Fitted with integral ladder for access / egress, if required

16.6 Rescue Plans

Rescue Plans are critical if personnel become unconscious while hanging in a harness as this can result in suspension trauma, which can be fatal in a very short time (20 – 30 minutes).

- Rescue plans shall detail a method of retrieving personnel safely, in the event of an accident or incident.
- Personnel who are required to carry out a rescue with a descent / ascent device shall be trained and competent in its use.

- Rescue operations can introduce additional hazards, which shall be detailed during the planning and risk assessment stage.

The following equipment should be considered as part of a rescue plan:

- Alternative power supply to hoist
- Emergency manual lowering device on hoist
- Secondary hoist
- Rescue basket (for use with alternative hoist)
- Full body type harness fitted with a 'D' ring / lanyard suitable for rescue purposes
- Availability of another lifting device
- Emergency descent / ascent device

In addition to the foregoing equipment, the rescue plan should provide for the engagement of the emergency response team to confirm capability of rescue

17 Monitoring and Audit

After completing the lifting operation, everyone involved in the lift should have the opportunity to discuss and make improvements to the lift plan. Any learning points noted on the plan should be reviewed by a competent person and, where appropriate, action taken. Learning points may include feedback on equipment effectiveness, lifting techniques, personnel, etc.

Periodically, but no less than weekly, facility leadership shall perform Safety Observation Conversations (SOC) and site inspections of lifting operations to ensure lifting operations comply with the BP GoM Management of Lifting Operations Policy. SOC's shall be documented in Tr@ction so that trends can be tracked.

All BP GoM facilities shall conduct a quarterly Crane and Rigging Safety Meeting which should be led by the facility Site Lifting Coordinator's to provide a forum whereby policies, best practices and lessons learned can be shared and discussed in order to improve the safety of crane and rigging operations. Personnel in attendance should include crane operators, riggers, HSE site leads, contract crane companies leadership (where applicable) and BP facility leadership (Facility SLC's and BP facility leadership will ensure that the correct policy interpretation is provided).

The objective of the quarterly crane and rigging safety meeting is to develop and implement solutions to reduce incidents and promote safe work practices, identify training needs, share best practices, share incidents and lessons learned and establish performance expectations. The quarterly meetings should be documented on existing facility safety meeting forms and maintained onboard and a copy sent to the GoM Regional Lifting Engineer. The report should reflect the issues discussed, resulting ideas and implementation plans. The GoM Regional Lifting Engineer will then communicate the issues and lessons learned as appropriate throughout GoM operations.

18 Key Documents

[GoM Lifting Device Inspection and Testing Requirements \(UPS-US-SW-GOM-HSE-DOC-00175-2\)](#)

[GoM Region Control of Work \(COW\)](#)

[Upstream Defined Practice \(3.2-0002\) – Management of lifting operations](#)

[Group Defined Practice \(GDP 3.1-0001\) - Assessment, Prioritization and Management of risk](#)

[Beam Clamp Allowable Loadings Matrix](#)

[GoM Lift Categorization Form](#)

[GoM Category 1 Lifting Plan](#)

[GoM Category 2 & 3 Lifting Plan](#)

A copy of this manual can be found online at the BP GoM HSSE website.

Appendix A – Installation/Site Familiarization Record Form

Installation/Site Familiarization Record Form		
Location:	Supervisor:	Employee initial in shaded areas
Employee:	Position:	
Part 1 - Installation Safety Induction		
Installation safety induction and orientation completed, all personnel shall comply with the facilities safety requirements.		
Part 2 - Lifting Plans and Risk Assessments		
Review and understand generic and site-specific lifting plans and risk assessments relative to crane operations, including their implementation and application.		
Part 3 - Crane Related Incidents		
Review facilities incidents for the previous 3 months, discussing lessons learned		
Part 4 - Introduction to Key Personnel		
Introduction to all relevant key personnel for crane hoisting and lifting operations		
Part 5 - Accident / Incident Reporting		
Emphasize that the BP accident / incident reporting procedures shall be fully complied with and ALL incidents reported to your supervisor immediately.		
Part 6 - Documentation		
Review and discuss all company documentation relevant to crane operations, including where records are stored.		
Part 7 - Crane Operation Familiarization and Instruction on the Crane(s) by a Competent Person		
Pre-start and pre-operational checks / inspections		
Crane controllers identified and each mode function tested		
Operating controls, techniques and characteristics demonstrated		
Safety devices identified and function checked		
Instrumentation function and layout		
Emergency safety equipment, e.g. fire ext., lifejackets etc.		
Installation specific problems relating to crane operations		
Part 8 - General Installation Orientation by a Competent Person		
A walk around orientation for all crane operators of the installation lay-down areas, position of drilling derrick (if applicable), blind lift areas, bulk transfer sites, obstructions within crane operating radius, rigging loft etc.		
I confirm I have received a complete familiarization of the facility cranes and understand the above to.		
Employee Signature		
Name of Person Conducting Familiarization Form (print)		
Signature of Person Conducting Familiarization Form		
OIM Signature		
Date		

Appendix B – Category 1 Lift Plan

Instructions for using this form:

This lifting Operations Plan shall be completed prior to all routine lifting operations. This plan must be filled out completely and approved prior to starting the lifting operation.

Section 1. General Lift Information:

FACILITY NAME:

DATE OF LIFT:

DESCRIPTION OF LIFTING OPERATION:

MARINE LIFT: ☐

DECK LIFT: ☐

LIFTING OVER LIVE PROCESS EQUIPMENT: ☐ Yes ☐ No

COMMUNICATION METHOD TO BE USED:

ENVIRONMENTAL CONDITIONS:

Wind speed & direction:

Sea state:

Sky conditions:

Comments: Chain Hoist Lift

Section 2. Pre-Lift Checks (list is not exhaustive):

- | | |
|---|---|
| <input type="checkbox"/> Swing Room Checked during "dry run" | <input type="checkbox"/> Lifting Pad eyes Checked |
| <input type="checkbox"/> All Crane Safety Devices Operational | <input type="checkbox"/> Visual Inspection of Lifting Equipment Completed |
| <input type="checkbox"/> Are rigging certifications available for slings | <input type="checkbox"/> Is Load Evenly Balanced |
| <input type="checkbox"/> Load Chart Available and Used | <input type="checkbox"/> Non-Essential Personnel Notified of Lift |
| <input type="checkbox"/> Signalman Wearing High Visibility Vest | <input type="checkbox"/> Personnel Basket Inspected (if required) |
| <input type="checkbox"/> Shipping Manifest Complete/Available | <input type="checkbox"/> Helicopter Activity Checked |
| <input type="checkbox"/> Tag Line (if required by JSEA) | <input type="checkbox"/> Adequate Personnel Escape Routes |
| <input type="checkbox"/> Load Center of Gravity Verified | <input type="checkbox"/> Will lift require stacking |
| <input type="checkbox"/> Lift is Away from Critical Underwater Equipment | <input type="checkbox"/> Consideration of deck strength / loading |
| <input type="checkbox"/> Pad-eye/ shackle interface issues with non pre slung loads | <input type="checkbox"/> Load integrity / dropped objects inspections completed |
| <input type="checkbox"/> Verify integrity of lift points | <input type="checkbox"/> Perform a function test on installed trolleys (temporary or permanent) to ensure the end stops will stop the trolley fully |
| <input type="checkbox"/> Confirm stops on trolley beams are adequate for the trolley being utilized | <input type="checkbox"/> Proper contact points and installation (for beam clamps) |

☐ Is there a potential for SIMOPS (If so describe SIMOPS below): Personnel in area that is not part of the work crew.

Explain mitigations to eliminate conflict of SIMOPS: Discuss in morning meeting with every one on board.

Section 3. Planned lifting sequence for the lifting operation (press enter for more lines):

ANY PERSON INVOLVED WITH THE JOB CAN CALL AN ALL STOP AT ANY TIME FOR ANY REASON

Section 4. Rigging Equipment List:

Chain Falls	
Come-a-Longs	
Shackles	
Beam Clamps Proper Contact Points? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Trolleys End stops on beam clamp suitable and stops the trolley? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Nylon slings	

Crane Stingers		
Eye-Bolts		
Tag Lines		

Section 5. Personnel required for the lifting operation (Name of each, do not use nicknames):

<u>Print Name:</u>	<u>Signature:</u>	<u>Print Name:</u>	<u>Signature:</u>
Person In Charge (PIC):		Rigger (Facility):	
Chain hoist Operator:		Rigger (Facility):	
Chain hoist Operator:		Rigger (Facility):	
Signalman (Facility):		Rigger (Facility):	
Signalman (Facility):		Rigger (Facility):	

Section 6. Review & Approvals:

<u>Approver Role:</u>	<u>Printed Name:</u>	<u>Signature:</u>	<u>Date:</u>
Prepared by:			
Site Lifting Coordinator:			
OIM / Delegate Approval:			
Regional Lifting TA:			

Section 7. Lift Plan Amendments:

Appendix C – Category 2 and 3 Lift Plan

Instructions for using this form:

This lifting Operations Plan shall be completed prior to all category 2 & 3 lifting operations. This form shall be filled out completely and approved prior to starting the lifting operation.

For category 3 lifting operations, this form shall be filled out in its entirety and forwarded along with rigging drawings to jacob.reidenbach@bp.com for final approval. *(Please allow 24 hours for approval)*

Section 1. General Lift Information:

FACILITY NAME: DESCRIPTION OF LIFT: WCC NUMBER: LIFTING OVER LIVE PROCESS EQUIPMENT: <input type="checkbox"/> Yes <input type="checkbox"/> No LIFT CATEGORY: <input type="checkbox"/> CATEGORY 2 <input type="checkbox"/> CATEGORY 3 ENVIRONMENTAL CONDITIONS: Wind speed & direction: / Sea state: Sky conditions: Comments:	DATE OF LIFT: MARINE LIFT: <input type="checkbox"/> DECK LIFT: <input type="checkbox"/> RIGGING DRAWING NUMBER: COMMUNICATION METHOD TO BE USED:
--	--

Section 2. Pre-Lift Checks (list is not exhaustive):

- | | |
|--|--|
| <input type="checkbox"/> Swing Room Checked during "dry run"
<input type="checkbox"/> All Crane Safety Devices Operational
<input type="checkbox"/> Are rigging certifications available for slings
<input type="checkbox"/> Load Chart Available and Used
<input type="checkbox"/> Signalman Wearing High Visibility Vest
<input type="checkbox"/> Shipping Manifest Complete/Available
<input type="checkbox"/> Tag Line (if required by JSEA)
<input type="checkbox"/> Load Center of Gravity Verified
<input type="checkbox"/> Lift is Away from Critical Underwater Equipment
<input type="checkbox"/> Pad-eye/ shackle interface issues with non pre slung loads
<input type="checkbox"/> Verify integrity of lift points
<input type="checkbox"/> Confirm stops on trolley beams are adequate for the trolley being utilized | <input type="checkbox"/> Lifting Pad eyes Checked
<input type="checkbox"/> Visual Inspection of Lifting Equipment Completed
<input type="checkbox"/> Is Load Evenly Balanced
<input type="checkbox"/> Non-Essential Personnel Notified of Lift
<input type="checkbox"/> Personnel Basket Inspected (if required)
<input type="checkbox"/> Helicopter Activity Checked
<input type="checkbox"/> Adequate Personnel Escape Routes
<input type="checkbox"/> Will lift require stacking
<input type="checkbox"/> Consideration of deck strength / loading
<input type="checkbox"/> Load integrity / dropped objects inspections completed
<input type="checkbox"/> Perform a function test on installed trolleys (temporary or permanent) to ensure the end stops will stop the trolley fully
<input type="checkbox"/> Proper contact points and installation (for beam clamps) |
|--|--|
- ☐ Is there a potential for SIMOPS (If so describe SIMOPS below):
 Explain mitigations to eliminate conflict of SIMOPS:

Section 3. Planned lifting sequence for the lifting operation (press enter for more lines):

ANY PERSON INVOLVED WITH THE JOB CAN CALL AN ALL STOP AT ANY TIME FOR ANY REASON

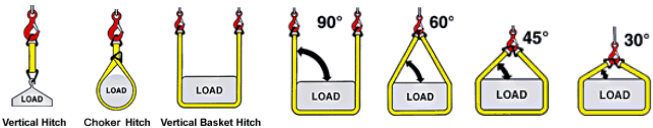
Section 4. Personnel required for the lifting operation (Name of each, do not use nicknames):

<u>Print Name:</u>	<u>Signature:</u>	<u>Print Name:</u>	<u>Signature:</u>
Person In Charge (PIC):		Rigger (Boat):	
Crane Operator:		Rigger (Boat):	
Crane Operator:		Rigger (Facility):	
Signalman (Boat):		Rigger (Facility):	
Signalman (Facility):		Rigger (Extra):	

Section 5. Rigging Equipment List:

Chain Falls	
Come-a-Longs	
Shackles	
Beam Clamps Proper Contact Points? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Trolleys End stops on beam clamp suitable and stops the trolley? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Nylon slings	
Crane Stingers	
Eye-Bolts	
Tag Lines	

Section 6. Load Calculations & Rigging to be used:

Actual weight of lift: LBS.		Dimensions of lift: x x	
How was the weight confirmed (i.e. drawings, etc):		Comments:	
Slings being used and weight of them: <i>(i.e 4 way 20 ft set of 1" wire rope slings rated at 10,000 in vertical)</i>	Certification Date:	Weight of load: Weight of lifting gear (shackles, slings, etc) Extra equipment being added: Describe extra equipment:	LBS LBS LBS
Number of shackles & size including weight of them:		TOTAL WEIGHT OF LOAD:	LBS
Sling Configuration (circle appropriate configuration and sling angle):			Sling Angle Tension per leg: LBS

Does the actual rigging scheme differ from the approved rigging diagrams?
☐ Yes ☐ No If yes, explain why:

Required angle of boom for lift:	SWL of crane at lift angle:
Percentage of cranes rated capacity being utilized: Total weight of lift:	DIVIDED BY SWL of crane at radius: =
Percentage of sling set rated capacity being utilized: Total weight of lift:	DIVIDED BY SWL of slings: =
Percentage of shackles rated capacity being utilized: Total weight of lift:	DIVIDED BY SWL of shackles: =
Comments:	

Section 7. Crane inspection history:

Make & model of crane:	Serial no. of crane:	Hour meter reading:
Pre-Use: / /	Quarterly: / /	Annual: / /
Last Pull Test: / /	Last Load Test: / /	Comments:

Section 8. Review & Approvals:

Approver Role:

Prepared by Competent Person:

Site Lifting Coordinator:

OIM / Delegate Approval:

GoM Lifting Authority:

Printed Name:

Signature:

Date:

Section 9. Lift Plan Amendments:

Appendix D – Designated Crane Operator Form



BP Exploration and Production Inc.
200 WestLake Park Boulevard
Houston, Texas 77079

P. O. Box 3092
Houston, Texas 77253-3092

(281) 366-2000

January 13, 2016

Subject: Personnel authorized for lifting operations

This letter is to document the following personnel as trained and competent crane operators and riggers who are authorized to undertake lifting operations on the Mad Dog Spar, Official Number CG669538. Designated individuals will adhere to all industry regulations and company policies concerning lifting operations. All have demonstrated their knowledge of crane and rigging operations and emergency conditions. Each person listed below holds the appropriate certifications, and may perform the duties of crane operators and riggers.

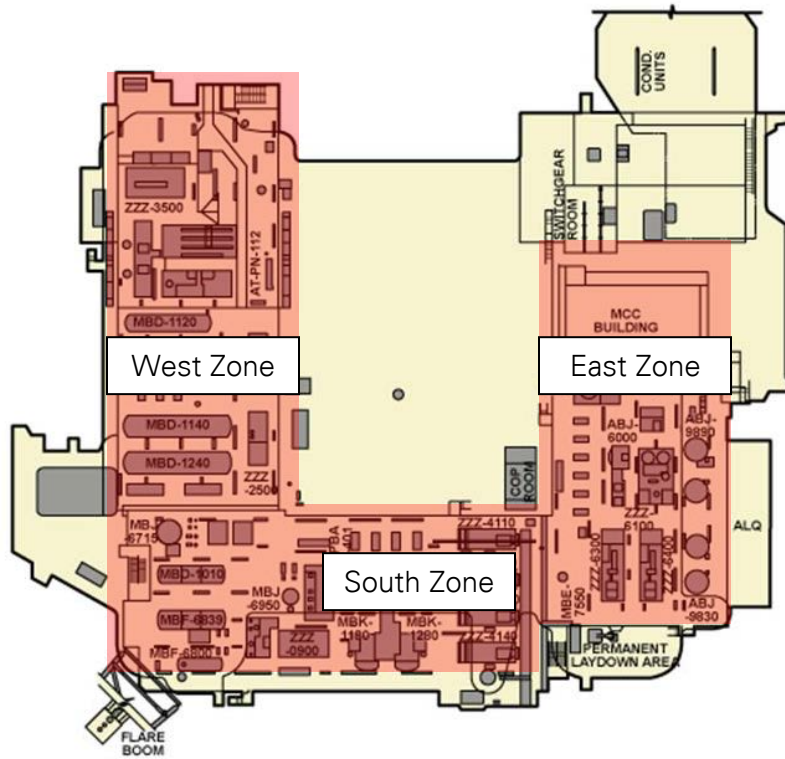
- Mad Dog Mike – Crane Operator
- Mad Dog Pete – Crane Operator
- Mad Dog Ken - Rigger
- Mad Dog Albert - Rigger

Mad Dog OIM

Mad Dog OIM

GoM Region Lifting Engineer


Appendix E - Example of Facility Specific No Lift Zone Plan



Platform Location	Live or Vulnerable Plant
West Zone	<ul style="list-style-type: none"> Compressors Pipeline Pumps Coolers 4th Stage Compressors, Heat
East Zone	<ul style="list-style-type: none"> Well Bay Separator Heater
South Zone	<ul style="list-style-type: none"> Umbilical's Pigging Pumps Glycol Contactor

***This is only an example and does not represent an actual No Lift Zoning Plan.**

Appendix F – Lift Categorization Form

<div style="display: flex; align-items: center;">  <div> LIFTING CATEGORIZATION FLOW CHART OFFSHORE (In Air Lifts only) </div> </div>				
LIFT PLAN No: TITLE				
●	Start at the top of the chart; answer all the questions. The first question that is answered “YES” will identify the lift category in the right hand column			
	Tick YES if statement is true or correct Tick NO if incorrect or false	NO	YES	CATEGORY
●	Is the Pedestal crane whip line utilization above 90%?			3
●	Is the Pedestal crane main block utilization above 80%?			
●	Does the lift require additional technical input? (Lift being engineered by 3 rd party company)			
●	Does the lift have limited boom clearance? (i.e. less than 1 metre or 3.3 feet)			
●	Is the lift to be performed by an external team? (i.e. not a lifting team which normally perform lifts at the facility)			
●	Is the lift above or in close proximity to live plant, or in the event of an incident can the lift affect any offshore or subsea assets? (Crane utilization equal to or exceeding 70%)			
●	Will the load be, upended, rotated or overturned by 2 or more powered lifting devices?			
●	Is the fixed lifting system utilization above 95%? (Overhead crane, runway beam or davit etc)			
●	Is the load extremely valuable or irreplaceable? (a lift that has been assessed with an equal to or greater than a level F business impact of \$500K to \$5m, as per GDP 3.1-0001)			
●	Is the lift non-returnable or classed as demolition? (when a load once lifted cannot be returned to its location or a load that has to be cut out of it's location)			
●	Will the consequences of failure of equipment or procedure be significant for the asset? (Process safety risk)			
●	Can the load bearing pressure, exceed the Deck strength?			
●	Are the lift characteristics unusual for the assets? (i.e Heavier, more complex than normally performed)			
●	Is the load to be lifted or cross hauled or restrained using two or more non powered lifting appliance without 100% redundancy? (one of the appliances cannot hold the entire load)			
●	Is the load to be lifted or cross hauled or restrained using two or more non powered lifting appliance with 100% redundancy? (one of the appliances can hold the entire load)			
●	Does the load have a C of G above the lifting points or a high C of G or the potential to become unstable?			
●	Is the lift above or in close proximity to live plant, or in the event of an incident can the lift affect any offshore or subsea assets? (Crane utilisation below 70%)			
●	Is the lift blind or conducted within a confined space? (when the crane operator cannot directly see the load and personnel by line of sight or with the boom tip camera, this can be the case with crane loads or air tugger and chain fall loads)			
●	Does the load have an offset C of G without special slings to compensate or is it an awkward shape or have a large sail area?			

●	Is the load fragile or is its integrity uncertain? (The integrity of the load is unknown, weak, could be damaged using normal lifting practices or load is subject to restrictions)			
●	Are slings to be used at an angle of below 60 degrees from Horizontal? (for loads that are slung on the facility, does not include engineered pre-slung loads)			
●	Is the lift in an area with restricted head room for the lifting appliance?			
●	Does the load need to be slung (i.e. no certified lifting points) if so does the load have any hazards such as sharp edges, made of wood, etc.?			
●	Does the lift involve lifting of personnel?			
●	Will temporary installed powered winches or cranes be used?			
●	None of the above apply to this lift i.e. the load is pre slung or very easily slung, with no external factors that complicate the operation and is performed by a competent team which have recent experience of performing this type of operation.			1
Competent Person:		Authorized by Site Lifting Coordinator:		
Name:		Name:		
Signature: DATE:		Signature: DATE:		

May 2015, Rev 0

Appendix G – Beam Clamp Allowable Loadings Matrix



Gulf of Mexico

Revision	0
Date	6/25/2013

Maximum Safe Lift Loads for Simply Supported AISC Wide-Flange (W) Shape Beams (lb)

Member Size (Height x Width)	Span (feet)									
	6	8	10	12	14	16	18	20	22	24
W8" X 4"	243	97	23	None	None	None	None	None	None	None
W8" X 5 1/4"	835	652	533	426	321	237	179	137	105	82
W8" X 6 1/2"	1957	1064	880	748	657	572	487	419	353	291
W8" X 8"	2299	2169	1275	1090	956	846	764	698	612	539
W10" X 4"	299	121	29	None	None	None	None	None	None	None
W10" X 5 3/4"	1571	866	695	558	460	381	295	232	186	149
W10" X 8"	2345	2246	1401	1188	1043	933	804	699	612	540
W10" X 10"	3587	3307	3074	2129	1850	1652	1495	1366	1258	1156
W12" X 4"	391	172	56	None	None	None	None	None	None	None
W12" X 6 1/2"	1913	1164	928	765	635	530	441	372	305	251
W12" X 8"	3289	3018	1793	1534	1347	1194	1034	903	796	706
W12" X 10"	3839	3547	3303	2382	2091	1851	1677	1535	1417	1253
W12" X 12"	3954	3721	3521	3347	2850	2534	2277	2084	1906	1771
W14" X 5"	902	683	538	432	301	202	148	109	81	60
W14" X 6 3/4"	1964	1307	1044	868	726	613	508	427	364	302
W14" X 8"	3513	3212	1927	1648	1448	1236	1070	937	828	737
W14" X 10"	4757	4375	4060	2837	2467	2204	1998	1830	1674	1485
W14" X 14 1/2"	4993	4764	4558	4373	4169	4021	3703	3391	3114	2874
W16" X 5 1/2"	1128	849	673	551	448	340	238	178	139	109
W16" X 7"	2430	1604	1285	1072	902	769	648	542	473	420
W16" X 10 1/4"	5075	4682	4355	3190	2795	2472	2239	2023	1802	1602
W18" X 6"	2300	1254	1010	829	692	571	473	409	338	279
W18" X 7 1/2"	4164	2487	2022	1690	1425	1230	1060	921	818	731
W18" X 11"	5205	4849	4548	3813	3322	2940	2661	2375	2118	1903
W21" X 6 1/2"	2750	1584	1279	1058	896	755	635	537	465	415
W21" X 8 1/4" (**)	2403	2243	1804	1507	1281	1112	970	835	720	622
W21" X 12 1/4"	6775	6361	6003	5688	4866	4322	3883	3555	3224	2913
W24" X 7"	3395	2097	1681	1408	1192	1022	871	745	640	566
W24" X 9"	4345	3979	2999	2510	2144	1876	1655	1452	1280	1119
W24" X 12 3/4"	5977	5680	5381	5130	4906	4420	3996	3532	3206	2901
W27" X 10"	4989	4586	4275	3381	2906	2534	2250	2013	1805	1601
W27" X 14"	9430	8921	8473	8078	7728	7031	6303	5733	5304	4843
W30" X 10 3/8"	4555	4230	3975	3560	3069	2684	2370	2123	1910	1719
W33" X 11 1/2"	6193	5813	5483	5195	4521	3983	3530	3156	2860	2602
W36" X 12"	6889	6483	6129	5815	5263	4625	4113	3720	3350	3057

Beam Section:

AISC W-shape Beams

Beam's depth, see pages 1-10 to 1-32

Beam's flange width, see pages 1-10 to 1-32

* Minimum weight AISC W-shape beam
 ** For W21" X 8 1/4" is 48 lb/foot per

Notes:

- 1) Only used for Cross
- 2) Maximum angle between beam and vertical is 15° maximum wind and inertial loads
- 3) Allowance for stresses in the W-shape beam's
- 4) Maximum allowable lift operation is limited
- 5) The maximum safe lift operation is limited
- 6) Beam is only used for
- 7) For beam with both ends away from the snip
- 8) If any of the conditions are not met, the beam must be submitted for review

Title of Document:	Maximum Safe Lift Loads for Simply Supported Beams	Document Number:	2012-T2-164-RP-0002
Authority:	Jason Caldwell	Revision:	0
Custodian/Owner:	Zhiling Li	Issue Date:	6/25/2013
Warning: Check DW Docs revision to ensure you are using the correct revision.			

Gulf of Mexico

Document Authorization Form

Navigate through the form with the Tab key to fill in data. Just click on the boxes you wish to check



Document Details			
Special Instructions			
Document Number	2456-T2-HS-PL-0001	Revision	1
Document Title	GoM Management of Lifting Operations		
Next Review Date	2017		
This form to be used for authorizing new, revised and obsolete documents, please indicate clearly which category applies:			
Reason for Issue: (check as applicable)	<input type="checkbox"/> New Document	<input checked="" type="checkbox"/> Revised Document	<input type="checkbox"/> Obsolete Document

Document Sign Off

	Print Name & Title	Signature	Date
Custodian	Jake Reidenbach GoM Region Lifting Engineer		6/18/2015
Reviewer(s)			
Authority	Eric Cloti Mechanical Team Leader		6/18/2015

For Document Control Use Below

Document Posted: <input type="checkbox"/>

2020-T2-DM-FM-0002	1	Document Authorization Form
Document Number	Rev	Title