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 CERTIFICATIONS


GOOD PRACTICE DEVELOPMENT


DATA COLLECTION, ANALYSIS \& REPORTING

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## 1. SCOPE

This Center for Offshore Safety (COS) publication provides guidance for Leadership Site Engagements (LSE) to:

- Demonstrate visible commitment to safe operations
- Evaluate the effectiveness of the Safety and Environmental Management System (SEMS)
- Evaluate site safety culture

The intent of the guidance is to help industry leadership understand the value of engaging site personnel in delivering and improving Health, Safety and Environment (HSE) performance. The evaluation of the safety culture and effectiveness of the SEMS at the site can occur at several levels within an organization as illustrated in Figure 1.

- Level 1: On a daily or weekly basis, Site Leadership (SL) evaluates safety culture and verifies SEMS conformance for site activities or tasks.
- Level 2: Office-based Operations Leadership (OOL) evaluate safety culture and effectiveness of the SEMS for each site under their responsibility. OOL can also conduct evaluations at other sites to provide peer assistance and to share and take back learnings.
- Level 3: Senior Level Leadership (SLL) may evaluate safety culture and the effectiveness of the SEMS at all sites on a periodic basis.
- Level 4: Formal evaluations of safety culture and audits of the SEMS may be conducted periodically at a selected number of sites.


FIGURE 1 - LEVELS OF EVALUATION OF SAFETY CULTURE AND SEMS EFFECTIVENESS

The targeted audience of this guidance is the Level 2 OOL and Level 3 SLL.
SLL and OOL establish SEMS and expectations for how work should be done that drive operating discipline and safety culture. These COS guidelines focus primarily on barriers that prevent and mitigate major hazards. Technical, organizational, and administrative changes occur frequently on facilities and SEMS require continual maintenance to avert deterioration. It is important that SLL and OOL visibly engage the workforce regularly and review the SEMS and the barriers to verify existing barrier integrity.

The general lines of inquiry the SLL and OOL may engage the workforce on include:

- What are the major hazards?
- Who is accountable for the integrity of the major hazard prevention and mitigation barriers?
- How are procedures used and maintained?
- How are individual and team skills and knowledge verified before their work commences?
- How is stop work authority exercised? How often is work stopped?
- Do the site verification processes demonstrate systematic control of barrier integrity?

Where barriers are found to be meeting performance requirements, SLL and OOL can reinforce expectations and encourage the workforce to maintain the barriers. Where barriers are found to be weak or inadequate, SLL and OOL should take action to ensure that the barriers are restored and functioning as intended or new barriers are put in place so that the hazards are being managed to the required or acceptable level. When new requirements are introduced to the site, it is important that SLL and OOL communicate their purpose and express clear expectations for conformance.

A limitation of LSE is that they provide only a snapshot of safety culture and SEMS performance at the time of the engagement. However, LSE can support and reinforce the verifications that occur regularly by the SL and the less frequent formal evaluations and audits.

## 2. DEFINITIONS

- Asset - Equipment (individual items or integrated systems) or software used offshore.
- Barrier - A Barrier is a Risk Control that meet all the following criteria:
- Fully Capable - can fully prevent the unintended event or fully mitigate the specified undesired consequence(s).
- Independent - can function independent of the initiating event and the design or operation of any other Barriers.
- Verifiable - evidence exists that the barrier is real, present, and will function as intended.
- Contractor - The individual, partnership, firm, or corporation retained by the Operator to perform work or supply services or equipment. The term contractor includes sub-contractors.
- $\quad$ Critical Equipment (CE) - Equipment and other systems determined to be essential in preventing the occurrence of or mitigating the consequences of an uncontrolled release. Such equipment may include vessels, machinery, piping, blowout preventers, wellheads, and related valves, flares, alarms, interlocks, fire protection equipment and other monitoring, control and response systems.
- Critical Positions - Any Asset position that includes key activities, tasks, supervision, and/or responsibilities for component procedures critical to the prevention of and recovery from major accident events.
- Effective - The extent to which the desired result or outcome is achieved.

Engagement - Face-to-face observation of, and interaction with, site leaders and work force and evaluation of the safety culture and SEMS effectiveness to meet planned objectives and/or respond to real-time issues.

- Hazard - An object, physical effect, or condition with the potential to harm people, the environment, or property.
- Interface Agreement - Agreement that provides clarity on which SEMS policies, processes, practices or procedures will be followed for the performance of work.
- Leadership Site Engagement (LSE) - Site engagements by Senior Level Leadership and Office-base Operations Leadership.
- Major Hazard - A hazard that can reasonably be foreseen as having the potential to cause a major incident.
- Mitigation Barrier - Barrier that can reduce the probability of actual harm as a result of an incident. For example, active fire protection is a mitigation barrier.
- Office-Based Operations Leadership (OOL) - In the context of this publication, OOL are defined as onshore direct supervisors of Site Leadership e.g., Operations Manager, Drilling Manager, Rig Manager.
- Operator - The individual, partnership, firm, or corporation controlling or managing the operations.
- Prevention Barrier - Barrier that can prevent or reduce the probability of an incident occurrence. For example, a pressure safety valve is a prevention barrier.
- Procedure - Approved and documented instructions about a specific task or activity that is used to enable the safe and consistent execution of that task or activity.
- Production - Petroleum and natural gas production activities, including administrative and engineering aspects, repairs, maintenance and servicing, materials supply, and transportation of personnel and equipment
- Projects - Construction activities including administrative and engineering aspects and materials supply and transportation of personnel and equipment.
- Risk Control - The actions (human or otherwise), equipment, or administrative measures to be established, implemented, or maintained to eliminate, reduce, or mitigate the identified safety and environmental risks, including risks from the interactions of individuals with each other, equipment and systems
- Safety - As used in this publication, 'safety' may relate to personal safety, process safety, health, environment, and security.
- Safety Performance Indicator (SPI) - A measurement that provides insights into the strength of barriers. SPIs are inclusive of those that measure performance with respect to protection of personnel, the environment, and offshore facilities and property.
- Senior Level Leadership (SLL) - Any management position higher than Office-based Operations Leadership e.g., head of production, head of drilling and completions, head of projects, head of health, safety and environment, head of engineering, head of process safety
- Site - An Asset, including its workforce, its SEMS and, for offshore sites, all supporting marine vessels within the 500-meter zone of the Asset.
- Site Leadership (SL) - In the context of this publication, SL is defined as supervisors working on a site assigned accountability for operations and personnel e.g., Offshore Installation Manager, Maintenance Supervisor, Wells Site Supervisor
- Subject Matter Expert (SME) - In the context of this publication, these are technical specialists e.g., Engineering Authority, Lifting Authority, Marine Authority.
- Wells - Includes exploration, appraisal and production drilling, wireline, completion, workover and intervention activities as well as their administrative, engineering, construction, materials supply, and transportation of personnel and equipment.


## 3. ACRONYMS

- API - American Petroleum Institute
- BOP - Blowout Preventer
- CE - Critical Equipment
- COS - Center for Offshore Safety
- HAZID - Hazard identification Study
- HAZOP - Hazard and Operability Study
- HSSE - Health, Safety, Security and Environment
- JSA - Job Safety Analysis
- LOTO - Lock Out Tag Out
- LSE - Leadership Site Engagement
- MOC - Management of Change
- OOL - Office-based Operations Leadership
- P\&ID - Piping and Instrumentation Diagrams
- PPE - Personal Protective Equipment
- PSR - Pre-start Up Review
- SL - Site Leadership
- SLL - Senior Level Leadership
- SIMOPS - Simultaneous Operations
- SPI - Safety Performance Indicator


## 4. IEADERSHIP SIIE ENGAGENENT FOR SENOR LEVEL LEADERSHIP

### 4.1 GENERAL

Senior Level Leadership (SLL) may conduct engagements on a selected number of sites and may use all or parts of the guidance provided in Section 5.0 for OOL. The objectives of the SLL engagement may vary but the general lines of inquiry sill apply:

- What are the major hazards?
- Who is accountable for the integrity of the major hazard prevention and mitigation barriers?
- How are procedures used and maintained?
- How are individual and team skills and knowledge verified before their work commences?
- How is stop work authority exercised? How often is work stopped?
- Do the site verification processes demonstrate systematic control of barrier integrity?


### 4.2 SAFETY CULTURE EVALUATION

### 4.2.1. SAFETY CULTURE OBJECTIVES

SLL may target the objectives of the engagement to address the site's safety culture. Some safety culture characteristics to consider evaluating might include those found in Figure 2.

### 4.2.2. QUESTIONS

Potential open-ended questions SLL might ask the workforce to evaluate the site's safety culture are:

- How do SLs receive feedback from you, both positive and negative? Provide examples where SLs have genuinely listened to you.
- How do you stay constantly mindful of the work that is occurring at this site and what could go wrong?
- How do you demonstrate continual improvement through learning, particularly in building your knowledge and skills?
- How are expectations and boundaries communicated? Provide examples where understanding was sought, and clarity was given.
- How are your ideas and concerns received by others? Provide examples where you voiced an idea or concern and the response you received.
- Can you give an example of work that was stopped as a result of a safety concern that was raised by you or others?


### 4.2.3. FREQUENCY

SLL site engagements should occur on a quarterly or annual basis at a selection of sites. It is recommended that SLL commit to engagement frequency targets as part of their annual objectives.


# 5. LEADERSHIP SIIE ENGMGEMENT FOR OFFIGE-BASED OPERAIIONS LEADERS 

It is recommended that OOL follow a three-phase process in conducting an engagement as illustrated in Figure 3.


FIGURE 3-THREE PHASES OF A LEADERSHIP SITE ENGAGEMENT.

The first phase is Preparation where the OOL establishes the scope of the engagement, collects information about the site, reviews major hazards at the site, sets objectives, gets ready personally, and then documents a LSE plan. The second phase is Execution of the plan which may involve a site orientation, meetings with SLs and the workforce, and a site walk around. The third phase is Closure where the OOL should communicate and document the results of the LSE. Guidance for each of these phases is provided in Section 5.1 to Section 5.3.

### 5.1 LEADERSHIP PREPARATION

### 5.1.1. GENERAL

The first phase of a LSE is Preparation. In this phase, OOL will determine the scope and objectives of the engagement based on information that is gathered on the site's operations, major hazards, performance, and status. Six steps are recommended to prepare for an engagement which are illustrated in Figure 4.


### 5.1.2. STEP 1: SCOPE

The preparation phase starts with defining the scope of the engagement, specifically which site(s), on which date(s) and with which OOL. For OOL, the site(s) might be selected on the basis of a planned activity, such as a commissioning of new equipment, isolation of a hydrocarbon formation, start up after a turnaround or an emergency response exercise. The site(s) may be selected on other criteria, such as communication of a new requirement or learning, or recognition of a significant achievement.

For OOL, the engagement should occur on a monthly or quarterly frequency per site and preferably include at least one overnight stay. Personnel to engage at the site will depend on the objectives of the engagement. At a minimum, the engagement should include those ultimately accountable for the site and its operations. OOL should commit to LSE frequency targets as part of their annual objectives.

In selecting a site(s) and the date(s), the OOL should consider the activities that are scheduled to occur at that time and assess whether the engagement might cause a distraction for site personnel. However, demonstrating visible commitment to HSSE and evaluating the safety culture and effectiveness of the SEMS may have its greatest impact during key operations.

### 5.1.3. STEP 2: COLLECT INFORMATION

The next preparation step is to gather relevant and current information about each site and the workforce. The most important information is the current activity that will be occurring during the engagements date(s). The nature of that activity may be the driver for the engagement, as OOL may want to evaluate whether barriers are meeting performance requirements for the major hazards associated with the activity.

Information that will help the OOL determine the objectives of the engagement include:

- Major hazards associated with the site and barriers in place to prevent major incidents
- Operating plans that provide schedule for activities at the site including emergency response exercises
- Impact of changes in personnel, contractors, process, or design on barriers
- Recent audit results
- Recent internal and external incident and event reports
- New internal or regulatory requirements impacting the site
- New safety goals and objectives or progress against current safety goals and objectives
- Safety performance indicators results
- Performance of site individuals or teams
- Results of recent safety culture assessments
- Recent concerns or complaints
- Recent LSE Reports for the site and other relevant reports

This information would be available from both onshore and offshore leadership and subject matter experts.

### 5.1.4. STEP 3: REVIEW OF MAJOR HAZARDS

A main focus of the LSE is to evaluate whether the barriers that will prevent a major incident are meeting performance requirements. An operation may be exposed to several major hazards at any given time and it is important that the OOL periodically evaluates both prevention and mitigation barriers at the site. Therefore, OOL should review the major hazards that are present on the site, identify those that will be active during the LSE, or that may be emerging in near-future activities, and target those barriers in the LSE objectives. A review of pertinent hazard analyses may also be valuable.

Examples of major hazards for offshore operations include but are not limited to:

- Hydrocarbons
- Other flammable materials
- Toxic materials
- Pressure hazards
- Objects under induced tension
- Dynamic situation hazards
- Environmental hazards
- Explosives
- Working at height
- Electricity
- Asphyxiates
- Corrosive substances
- Security related hazards
- Helicopter major hazards
- Marine major hazards

The OOL should be cognizant of consequences that could occur if the prevention or mitigation barriers fail. These may include but are not limited to:

- Loss of primary containment
- Loss of integrity
- Exceeding discharge limits
- Dropped or dragged objects
- Falls to lower or same level
- Exposures
- Electrical shock
- Unwanted detonation
- Helicopter Crash
- Marine collision
- Harm to people
- Harm to the environment
- Damage or loss of Asset

These events could lead to major incidents that include harm to people, harm to the environment and loss or damage to facilities.

The OOL can then prepare a set of questions to evaluate the barriers and may choose to target specific barriers. A set of guidance expectations and questions that the OOL can consider is provided in Annex 1.

### 5.1.5. STEP 4: SET OBJECTIVES

Using the information collected in Steps 2 and 3, the OOL should set objectives for the engagement. Items to consider in setting the objectives include:

- Evaluation of whether barriers associated with a current or planned activity meet performance requirements
- Opportunity to reinforce operating discipline or a specific requirement based on findings from a recent audit or incident investigation
- Evaluation of the effective implementation of an action from incident investigation, audit, or risk assessment.
- Communication of new requirements to be implemented at the site
- Communication of new or progress against safety goals and objectives
- Positive recognition of an individual or a team for an achievement or a Stop Work Authority intervention
- Evaluation of the capabilities of new personnel or contractors
- Addressing a specific concern or complaint generated by personnel at the site
- Reinforcement of OOL commitment to safe operations and each element of the safety and environmental management system.


### 5.1.6. STEP 5: PERSONAL PREPARATIONS

The OOL should be equipped with the required personal protective equipment and training and avoid variances from these requirements. Depending on the objectives of the LSE, the OOL may need specific instruction or coaching in order to deliver an effective result. Instruction or coaching could be achieved by meeting with subject matter experts to discuss requirements and develop questions that the OOL would use to engage the site workforce or simply reviewing specific requirements or procedures. If the OOL is going to conduct the engagement with others, such as a subject matter expert, it may be incorporated into the LSE Plan.

If the engagement involves speaking to a large audience, the OOL might be prepared to cover the objectives of the engagement. The OOL could share good practices and experiences to drive key messages but should minimize the use of statistics. Use simple techniques to illustrate and reinforce major hazards and barriers.

### 5.1.7. STEP 6: COMPLETE A LSE PLAN

The OOL may formalize the LSE by completing a LSE Plan. The LSE Plan can then be used to structure the engagement, communicate its objectives and logistics to those who need to support it, and to gain alignment from those who may be impacted by it.

The LSE Plan could include specific structural or logistical information. It could also state the objectives of the LSE as determined in Step 4.4. It could list the people or job titles that will be engaged and through what mechanism, i.e., Site Leadership meeting, Contractor Leadership meeting, workforce meeting and/or walk around.

The Plan should include what activities will be observed such as lifting, energy isolation, or emergency response exercises and what barriers and supporting processes and assets will be evaluated e.g., maintenance, procedures and practices, or management of change, and BOPs, cranes or dynamic positioning equipment.

The Plan should also include a structure for capturing the outcomes of the LSE and what needs to be done for effective closure. This information should include opportunities for improvement; recognitions of individuals, teams and good practices, interventions, and agreed actions with accountable persons and due dates.

Once the Plan is developed, it may be communicated to the SL for their input and concurrence. The final deliverable of the preparation phase of the LSE is the completion of the Plan. Upon completion, the OOL is now ready to execute the LSE which begins when the OOL arrives at the site.

A template for a LSE Plan is provided in Annex 2.

### 5.2 LEADERSHIIP SITE ENGAGEMENT EXECUTION

### 5.2.1. GENERAL

The first principle is that the OOL will stop work, as appropriate, if a safety concern is discovered during a LSE. The subsequent response depends on the severity of the concern.

The execution phase of the LSE involves the steps illustrated in Figure 5. A site orientation should be attended, meetings could be held with SLs and the workforce and a walk around should be conducted dependent on the objectives of the LSE.


### 5.2.2. SITE ORIENTATION

Upon arriving at the site, the first action by the OOL should be to participate in the site orientation. During the orientation, the OOL should listen for and potentially evaluate and reinforce the following:

- SEMS
- Station bill - muster point location and an alternate, if available
- Emergency shutdown device stations
- Stop work authority
- Major hazards
- Local site rules and restrictions e.g. medication, drugs, alcohol, smoking, firearms
- Major activities currently underway and planned
- Alarms - purpose and types
- Environmental requirements
- Regulatory requirements
- Incident reporting requirements
- Safe work practices
- Organizational structure - accountabilities

The OOL should demonstrate safety leadership by listening, showing interest, asking questions for clarity and understanding, and providing constructive feedback.

### 5.2.3. SITE LEADERSHIP MEETING

A meeting can then be held with the SL. The main purpose of this meeting may be to check the status of current activities and to confirm what operational risks exist during the LSE. The objectives may include:

- Reconfirming the LSE scope and objectives
- Reviewing the LSE schedule
- $\quad$ Status of current activities (emphasis on high risk activity)
- Exploring possible operational concerns regarding major hazards, including recent incidents or conditions
- Reviewing stop work authority events and their impact, specifically those prompted by the SL.
- Reviewing by-passed or inhibited safety devices or systems
- Reviewing current work permits
- Reviewing local verification processes relating to the LSE objectives
- Updating the closure or progress of actions from last LSE

The OOL can use this meeting to set the context for the engagement and ask open-ended questions to evaluate changes in activities or new concerns that may impact the original LSE Plan. The OOL may defer to the SL's advice regarding any concerns that may have arisen that could impact the execution of the Plan. This meeting could result in changes to LSE Plan.

### 5.2.4. CONTRACTOR LEADERSHIP MEETING

An optional meeting could be held with the Contractor Leadership depending on the objectives in the LSE Plan. The purpose of this meeting may be to check the status of current activities from the Contractor's perspective, to share learnings, and to visibly demonstrate the OOL's commitment to safe operations. The meeting agenda could include some of the following:

- Communicate the LSE objectives and schedule
- Evaluate appropriate knowledge of the major hazards involved in the current activity, including those under work permits, and priorities for the duration of the engagement
- Explore potential operational concerns, including recent incidents and observations
- Explore potential culture concerns, particularly in prioritization of safety, production, cost and schedule.
- Evaluate knowledge of by-passed or inhibited safety devices or systems
- Evaluate commitment to Stop Work Authority and seek out examples
- Review local verification processes related to the LSE objectives
- Evaluate understanding of any aspects of the safety and environmental management system, especially those that have been agreed through interface agreements
- Inquire about work that Contractors are doing internally to improve their performance at the site
- Inquire about the date of the last LSE that occurred by a Contractor's OOL, what was discussed and what was the outcome
- Communicate actions taken from OOL's most recent LSE and check awareness of its impact

The OOL can take this opportunity to lead by example and 'walk the talk', specifically in actively listening to the Contractor Leadership. Ask open-ended questions to create a two-way conversation, listen for concerns, and provide constructive and informative feedback. The result of the meeting may be changes to the original objectives and schedule of the engagement based on what is happening and any concerns heard.

### 5.2.5. WORKFORCE MEETING

A second, optional meeting could be held with the entire or a cross-section of the workforce depending on the objectives in the LSE Plan. The purpose of this meeting is to check the status of current operations from the broader workforce perspective, to share learnings, and to visibly demonstrate the OOL's commitment to safe operations. The meeting agenda could include some of the following:

- Communicate the LSE objectives and schedule
- Evaluate appropriate knowledge of the major hazards involved in the current activity, including those under work permits, and priorities for the duration of the engagement
- Explore potential culture concerns, particularly in prioritization of safety, production, cost and schedule.
- Explore possible operational concerns, including recent incidents and observations
- Evaluate knowledge of by-passed or inhibited safety devices or systems
- Evaluate commitment to Stop Work Authority and seek out examples
- Review local verification processes related to the LSE objectives
- Evaluate understanding of any aspects of the safety and environmental management system, especially those that have been agreed through interface agreements
- Communicate actions taken from OOL's most recent LSE and check awareness of its impact

The OOL can take this opportunity to lead by example and 'walk the talk', specifically in actively listening to the workers. The OOL should ask open-ended questions to create a two-way conversation, listen for concerns, and provide constructive and informative feedback. The result of the meeting may be changes to the original objectives and schedule of the engagement.

### 5.2.6. SITE WALK AROUND

The final step in executing the engagement is a site walk around, which should be done at every LSE. The purpose of the walk around is to evaluate whether specific barriers targeted in the Plan meet performance requirements, observe the execution of the work and the behaviors of people, and evaluate the equipment and work conditions. The walk around involves engaging the people doing the work in the actual work environment. The engagement can evaluate that:

- Documented practices and procedures are used to conduct the work and manage the barriers
- Accountabilities are known and understood for managing and using the barriers
- People have the knowledge and skills to manage and use the barriers
- Site verification processes are working effectively to demonstrate systematic and reliable control of the barrier

Trust and respect permeate the site organization where safety concerns are freely raised and addressed and clear, realistic and acceptable criteria are established for decision-making in discussing and resolving conflicting objectives.

In conducting the walk around, the OOL should lead by example and 'walk the talk', particularly in following all site safe work practices. It is important that the OOL consider conducting the walk around during the night shift as well as the day shift and observe shift handovers and job safety analyses. The OOL should be in observation mode and approach workers only when safe to do so.

The OOL should ask open-ended questions and actively listen to the responses, paying specific attention to concerns and anomalies from expectations. The OOL can provide constructive and informative feedback, share personal experiences and lessons learned, and ask if there is anything that can be improved in the way work is done at the site. Any observations of unsafe behaviors or conditions during the engagement may be addressed through corrective action agreements with the worker(s). OOL should recognize, reinforce and encourage good performance by individuals and teams. Any concerns that point to potential systemic issues may be captured for discussion with the SL, as appropriate.

The result of the walk around is an evaluation of the targeted barriers from the activities engaged as well as improvement actions. It is at this point that the Execution phase of the LSE is complete and the OOL then moves to Closure.

### 5.3 LEADERSHIIP SITE ENGAGEMENT CLOSURE

### 5.3.1. GENERAL

The final step of the Leadership Site Engagement is Closure. Closure not only means ending the engagement at the site but also evaluating if the objectives have been met, agreeing and assigning any actions that have been generated and, if appropriate, documenting the results. Some actions may have been agreed and concluded in real time to correct unsafe behaviors or conditions.

### 5.3.2. WORKFORCE AND CONTRACTOR LEADERSHIP MEETINGS

If the optional engagement meeting with the workforce and/or Contractor Leadership occurred, the OOL may want to bring those groups back together and provide feedback on what was observed, focusing on the positive recognitions and the systemic concerns that were raised by the people engaged during the walk around. The OOL may want to commit to any actions that will be taken personally or ask for commitment from the workers or the Contractor Leadership. The OOL may communicate that the concerns will be discussed with the SL in order to determine if action needs to be taken.

### 5.3.3. SITE LEADERSHIP MEETING

The final meeting before departing the site should be with the SL. The purpose of this meeting is to provide the results of the engagement and provide a perspective on the health of the implementation of the safety and environmental management system and the site safety culture. It is recommended that any significant interventions that occurred during the engagement be communicated to the SL. The OOL may inform the SL of any systemic concerns that were raised during the engagement and any actions that were agreed by the OOL and the workforce. The OOL can discuss concerns that need to be addressed by the SL and agree on actions if appropriate. Finally, any concerns that were raised by the SL that need to be addressed by the OOL may be discussed and actioned, as appropriate. All actions generated by the engagement may be documented with accountability and due date.

### 5.3.4 COMPLETE CLOSURE

The LSE officially ends when the Closure Section of the Plan, if used, is completed and communicated to the appropriate persons. The Closure Section lists the outcomes versus the planned objectives that could include results, opportunities for improvement, recognitions, interventions, and actions.

It is recommended that any actions generated by the engagement be tracked to closure by the OOL or designees. The final completed Plan may then be used in planning the next engagement at that site.

## ANNEX 1 - GUIDELINES, EXPECTATIONS AND QUESTIONS

Guidance expectations and questions that a OOL might consider in evaluating the safety and environmental management system and safety culture.

| GUIDANGE TOPIC | EXPECTATION GUIDE | GUIDANGE QUESTIONS |
| :---: | :---: | :---: |
| EXPECTATIONS AND ACCOUNTABILITY | - Site Leadership spend time at the work site to understand what activities and tasks are underway <br> - Site Leadership use work site time to set expectations for the workforce <br> - Site Leadership use work site time to verify that activities and tasks are being performed per expectations. | - How much time is Site Leadership spending at the work site? <br> - How are expectations communicated? Provide examples where understanding was sought and clarity was given. <br> - What questions are Site Leadership asking when they are at the work site? |
| REGULATORY COMPLIANCE | - Regulatory requirements are addressed by policies, safe work practices and procedures. <br> - Regulatory requirements are clearly communicated to the workforce <br> - Reporting of possible non compliances to regulatory requirements is prompt and clear <br> - Data relating to non-compliance issues are reported to appropriate Site Leadership | - How are regulatory requirements addressed? <br> - How are regulatory requirements communicated to the workforce? <br> - How are non-compliances communicated to regulatory authorities? <br> - How are Site Leadership made aware of noncompliance issues? |
| COMMUNICATION AND ENGAGEMENT | - Site workforce understands the potential major risks and the bariers for protection <br> - Site workforce understand the rules of the work site <br> - Site workforce have a clear means of raising safety issues and concerns to positively reduce risk | - What are the major risks on this asset? <br> - How do you protect yourself against these risks? <br> - When you raise a safety concem, how is it addressed? <br> - How do you stay constantly mindful of the work that is occurring at this site and what could go wrong? |
| BEHAVIORAL BASED SAFETY | - Systems are in place to observe, identify and assess the behaviors of personnel working on the site <br> - Trends relating to behaviors are assessed and action taken to address concems | - How are behaviors of those working on the site assessed? <br> - How are trends identified? <br> - How is action taken to address behavioral concerns identified |
| STOP WORK | - The obligation is understood by all to stop work when an unsafe act or condition is identified <br> - Recognition is given when Stop Work occurs <br> - A 'no retaliation' policy is clearly demonstrated for those that legitimately stop unsafe work | - What do you do if you see an unsafe act or condition? <br> - Can you give an example of work that was stopped as a result of a safety concern that was raised by you or others? <br> - Alternatively, can you give an example of work that should have been stopped, but was not |

## ANNEX 1 - (CONT)

| GUIDANGE TOPIC | EXPECTATION GUIDE | GUIDANGE QUESTIONS |
| :---: | :---: | :---: |
| PERFORMANCE MANAGEMENT AND REPORTING | - Safety performance is reviewed at an agreed frequency by site leadership <br> - Safety performance indicators and management information exists to drive safe and compliant operations and is communicated to the workforce <br> - Action is taken to address any deficiencies identified in safety performance <br> - Assurance of action closure exists for identified safety performance deficiencies | - How is safety performance reviewed by site leadership? <br> - What safety performance indicators and management information exists to drive safe and compliant operations <br> - How is safety performance information communicated at this site? <br> - How is action taken to address deficiencies in the safety performance? <br> - How is closure assured for identified actions? |
| SAFETY AND ENVIRONMENTAL MANAGEMENT SYSTEM PERFORMANCE | - Safety and environmental management system requirements are communicated to the site workforce <br> - Appropriate safety and environmental management system requirements are understood by the site workforce <br> - Safety and environmental management system performance is regularly assessed and action is taken to address deficiencies <br> - Assurance of action closure exists for identified safety performance deficiencies | - How are safety and environmental management system requirements communicated to the site workforce? <br> - How is safety and environmental management system performance assessed? <br> - How is action taken to address deficiencies identified in safety and environmental management system performance? <br> - How is closure assured for identified actions? |
| RISK ASSESSMENT AND RISK CONTROLS (E.G. JSA, HAZID, HAZOP) | - Risk assessments are conducted as appropriate for the activities and tasks being performed <br> - Safety hazards are understood and risk controls monitored to ensure safe and compliant activities and tasks <br> - Risk assessments consider the risks of the work being performed and the controls required to maintain safe and compliant activities and tasks <br> - Personal and process safety hazards and the necessary risk controls to ensure safe and compliant activities and tasks are understood by those performing work | - When are risk assessments conducted and who is involved in these assessments? <br> - What are the key hazards on the site and how are these managed? <br> - What are the hazards involved in your work and how do you control them? <br> - How do people know the personal and process safety hazards in the work they are performing? |

## ANNEX 1 - (CONT)

ACTIVITY PLANNING / SCHEDULING (E.G. WELL PROGRAM AND WORK PACKS)

MANAGEMENT OF CHANGE (MOC)

SAFE WORK
PRACTICES AND
PROCEDURES

CREW/SHIFT HANDOVER

- Activity planning addresses the highest priority risks.
- Sufficient time is given to create quality plans for work
- Activity planning includes risk assessment and preparation of work activities and tasks
- Activity planning ensures that the correct resources and materials are available
- Checks are conducted to ensure activity planning is performed effectively
- A system exists to assess and manage the impact of changes to or at a site
- Personnel understand when a change requires use of the MOC process
- Actions are completed and authorized before making changes
- Subject matter experts are involved in the risk assessment and identification of actions required for a change
- Safe work practices and procedures are identified and documented
- Safe work practices and procedures are readily available to those that need them
- Safe work practices and procedures are regularly reviewed by those involved in the work to confirm accuracy
- The process for deviating from a safe work practice and a procedure is communicated and understood
- Verification of adherence to safe work practices and procedures is regularly conducted
- A written document of key information is provided at handover
- Safety events, work status, isolation changes, work permit status and maintenance are included in handovers
- Bypasses and inhibits, abnomal operations and defective equipment are included in handovers
- Handovers are face to face in the work site, if achievable
- How are jobs planned and prioritized for scheduling?
- How much time is there nomally between identifying the work to be done and executing the work?
- When is a risk assessment of the work conducted?
- How do you know that you have the right resources and materials to do your job?
- What site controls and verification are done to ensure accurate planning of work?
- How are changes to or at a site assessed and managed?
- What changes trigger the use of the MOC process?
- How is it assured that actions are closed before changes are made?
- Who is involved in the risk assessment and identification of actions for a change?
- How are safe work practices and procedures identified and documented?
- What safe work practices and procedures are used to complete work?
- How do you know the safe work practices and procedure you are using is the most recent version?
- How are safe work practices and procedures reviewed?
- Who reviews the safe work practices and procedures and on what frequency?
- What is the process for deviating from a safe work practice and procedure?
- How is adherence to safe work practice and procedures verified?
- How is handover conducted?
- What key information is included in the handover?
- How are safety devices and systems inhibits and bypasses, abnomal operations and defective equipment handed over?
- Where do handovers take place?


## ANNEX 1 - (CONT)

| GUIDANGE TOPIC | EXPECTATION GUIDE | CUIDANGE QUESTIONS |
| :---: | :---: | :---: |
| ABNORMAL OPERATIONS | - A register of abnormal operations may be maintained <br> - Communication of the status of abnomal operations may be included in handovers <br> - Abnomal operations may be risk assessed <br> - Mitigations for abnormal operations may be identified <br> - The number of abnomal operations may be monitored, and the cumulative effect assessed | - How are abnormal operations recorded? <br> - How are abnormal operations passed between shifts? <br> - How are abnormal operations risk assessed? <br> - How are mitigating actions identified and managed for abnormal operations? <br> - How is the cumulative effect of multiple abnormal operations monitored and risk assessed? |
| OPERATING DISCIPLINE | - Accurate records of shift operations are created and handed over across shifts <br> - Safe operating limits are understood by those operating the site <br> - MOC for deviations from safe operating limits are recorded and assessed for their impact on safe and compliant operations | - What records of shift operations are handed across shifts? <br> - What are the safe operating limits of the site or equipment you are using? <br> - How are the safe operating limits managed? <br> - How are deviations from safe operating limits recorded and assessed for their impact on the site? |
| SAFE WORK MANAGEMENT (CONTROL OF WORK, PERMIT TO WORK) | - A safe work management system is in place with defined roles and responsibilities <br> - A safe work management system identifies personal and process safety hazards before work commences <br> - A safe work management system identifies adequate risk controls before work commences <br> - A safe work management system verifies that all hazards are identified and risk controls are in place and robust before work commences | - What are the defined roles identified for the safe system of work? <br> - How are hazards identified before work commences? <br> - How are risk controls identified before work commences? <br> - What checks are in place to ensure all hazards and risk controls have been identified before work commences? |
| SAFE ISOLATION AND REINSTATEMENT OF PLANT <br> - ISOLATION OF HAZARDOUS ENERGY | - A system to identify all necessary isolation points is in place <br> - A system to verify energy isolation is achieved e.g. LOTO <br> - A system to confirm safe removal of all isolation points is in place | - How are energy isolation points identified for work? <br> - How is hazardous energy controlled? (e.g. DBB, Spool Removal, Valve Isolation etc. <br> - How is zero state of energy isolation verified? <br> - How is the removal of isolations managed? <br> - How do you verify it is safe for reinstatement? |

## ANNEX 1 - (CONT)

BYPASSING AND INHIBITING SAFETY DEVICES AND SYSTEMS

SIMULTANEOUS OPERATIONS (SIMOPS))

HAZARD COMMUNICATIONS

CONTRACTOR MANAGEMENT

- Safety devices and systems inhibits and bypasses may be recorded in a register
- Safety devices and systems inhibits and bypasses may be communicated during handover until removal
- Mitigating measures can be identified and monitored while safety devices and systems inhibits and bypasses are live
- Safety devices and systems inhibits and bypasses are approved by an appropriate level of the organization
- Safety devices and systems inhibits and bypasses may form a part of the management information and could be reviewed regularly by site leadership
- Systems exist to identify simultaneous operations
- Site leadership demonstrate preference to eliminate simultaneous operations before managing or controlling them
- Simultaneous operations are risk assessed and risk controls are identified and implemented
- Simultaneous operations are included in handovers
- The workforce has knowledge of the products and materials they are handling at the site
- Current safety data sheets and labelling exists for all products and materials on a site
- Safety data sheets contain key information on the properties of products and materials and the risk controls required in handling them
- Operator personnel are assigned to the oversight of Contractor activities and tasks
- A system of contractor HSSE performance review is established
- Contractor knowledge and skills are verified , monitored and action is taken on deficiencies
- Contractor equipment is verified to be fit-for-purpose for work being performed
- Contractors are working to agreed SEMS interface agreements, as applicable
- How are safety devices and systems inhibits and bypasses recorded?
- How are safety devices and systems inhibits and bypasses communicated during handovers?
- How are mitigating actions identified and monitored while safety devices and systems inhibits and bypasses are live?
- Who approves safety devices and systems inhibits and bypasses?
- How is Site Leadership informed of the number and type of safety devices and systems inhibits and bypasses on a site?
- What system exists to identify simultaneous operations?
- How is elimination of SIMOPS situations demonstrated at the site?
- How are SIMOPS risk assessed and controlled?
- Explain how you manage SIMOPS during handovers
- How is the workforce made aware of the products and materials they are handling?
- Where do you obtain a safety data sheet?
- How do you verify the proper labelling of products and materials on the site?
- How are safety data sheets and labels maintained?
- What information is available on the safety data sheets?
- How are contractor activities overseen?
- How is HSSE performance reviewed for contractors?
- How are knowledge and skills of contractors verified and monitored?
- What action is taken to address deficiencies in contractor's knowledge and skills?
- What checks are performed to assure that contractor's equipment is fit-for-purpose for the job?
- What interface agreements exist to detail the agreed safety management systems to be followed by the workforce?


## ANNEX 1 - (CONT)

| GUIDANGE TOPIC | EXPECTATION GUIDE | GUIDANGE QUESTIONS |
| :---: | :---: | :---: |
| KNOWLEDGE AND SKILLS | - A system is in place to identify, deliver and verify the knowledge and skills of the workforce <br> - Deficiencies in knowledge and skills of the workforce are identified and action taken as required | - How are the knowledge and skills of the workforce verified? <br> - What action is taken to address any deficiencies in identified knowledge and skills? |
| PROCUREMENT | - Procurement of materials and services is done in accordance with an approved standard <br> - Appropriate expertise is involved in specifying procurement requirements <br> - Quality assurance and control exists for procured materials and services <br> - Accurate inventory control and management is conducted for critical spares and materials | - How are standards used in the procurement of materials and services? <br> - Who is involved in specifying procurement requirements and standards? <br> - How are materials and services checked for quality? <br> - How is material inventory managed to ensure quality is maintained for critical spares and materials? |
| MATERIAL MANAGEMENT | - Materials are of the correct specification <br> - Materials are correctly stored to prevent deterioration | - How are materials checked to assure they meet specifications? <br> - What checks exist to ensure stored materials are not deteriorating? |
| CRITICAL EQUIPMENT (CE) | - A register of CE is maintained for the site <br> - A maintenance, inspection, and testing strategy exists for CE | - How is CE identified for the site? <br> - What is the strategy for the maintaining, inspecting, and testing CE? |
| MAINTENANCE OF CRITICAL EQUIPMENT (CE) | - A scheduled maintenance program exists for CE <br> - Unplanned maintenance is minimized <br> - CE repair is prioritized <br> - Problems with CE are escalated as necessary to subject matter experts <br> Overdue maintenance is monitored and addressed | - What program exists for the maintenance of CE? <br> - How is unplanned maintenance minimized? <br> - How is CE prioritized for repair? <br> - Who is involved in helping resolve problems with CE? <br> - How is overdue maintenance of CE monitored and addressed? |
| INSPECTION AND TESTING | - An inspection and testing program exists for CE <br> - Problems with CE identified through inspections and testing are addressed appropriately based on risk <br> - Overdue inspections and tests are monitored and addressed | - What is the inspection and testing program for CE? <br> - How are identified inspection and testing problems with CE handled? <br> - How are overdue inspections and tests monitored? |
| CORROSION MONITORING | - A program of corrosion management exists for CE <br> - A regime of chemical inhibiting exists for CE <br> - Corrosion management is monitored, and action is taken on overdue activities | - What is the program for corrosion management of CE? <br> - What is the program for chemical inhibiting for CE? <br> - How are overdue activities for corrosion management addressed? |

## ANNEX 1 - (CONT)

## GUIDANGE TOPIG

## EXPECTATION GUIDE

## GUIDANCE QUESTIONS

- Regular field rounds are conducted to verify safe and compliant activities and tasks
- Field rounds include monitoring of CE and checks for leaks, isolations, and status of activities and tasks
- Field rounds may include verification of conformance to safe work practices and procedures
- Site trips and alarms observed in the control room are recorded and reported in shift logs
- A system exists to verify that all work activities and tasks have been completed and a PSR has occurred prior to re-start of critical systems and equipment
- Formal approval to restart exists and is documented for critical systems and equipment
- The workforce is informed of critical systems and equipment start-ups
- Emergency preparedness and response procedures are communicated and readily accessible to those working on or visiting the site
- Emergency response drills are regularly conducted to test personnel and equipment and cover all emergency scenarios
- Onsite emergency response equipment is a part of a regular maintenance, inspection and testing program
- All HSE incidents and events are reported and recorded
- Investigations are conducted for incidents and events according to actual and potential severity
- Incidents and event trends and systemic causes are regularly evaluated, and learnings are developed and shared
- Measurement and reporting of incident and event information and learnings are provided to Site Leadership
- How are field rounds conducted to verity safe and compliant activities and tasks?
- What is included in the field rounds?
- What checks of safe work practices and procedures are performed during the field round?
- How are site trips and alarms recorded and reported?
- How is it verified that all work activities and tasks have been completed prior to the restart of critical systems or equipment?
- Who approves the start-up of critical systems and equipment?
- How do you notify the workforce of the start-up of critical systems and equipment?
- How are emergency preparedness and response procedures communicated and made available to all on the site?
- How frequently are emergency scenarios drilled to test personnel, equipment, and procedures?
- What scenarios are covered by the emergency response drills?
- How is emergency response equipment maintained, inspected, and tested?
- How are incidents and events reported?
- What types of incidents and events are investigated?
- Who reviews causes of incidents and events to identify trends?
- How is the workforce made aware of incident and event information and learmings?


## ANNEX 1 - (CONT)

| GUIDANCE TOPIC | EXPECTATION GUIDE | CUIDANGE QUESTIONS |
| :---: | :---: | :---: |
| ORGANIZATIONAL LEARNING | - Leamings can drive changes in SEMS and resulting site activities and tasks <br> - A system of sharing leamings is in place <br> - Actions generated from leamings are tracked to closure | - How are leamings shared? <br> - What changes have occurred at this site as a result of leamings? <br> - How are actions from leaming tracked to closure? Provide examples. |
| AUDIT / VERIFICATION | - A system of site verification of the implementation of the SEMS exists <br> - A system of activity and task verification exists with evidence of action taken on deficiencies <br> - The workforce is informed of audit/verification results as appropriate | - How is the implementation of the SEMS verified? <br> - How are activities and tasks verified to be in conformance with the requirements of the SEMS? <br> - How are the audit/verification results communicated to the workforce and addressed |
| RECORDS AND DOCUMENTATION | - Records of site performance are maintained and reviewed for accuracy <br> - Site safety information including process safety information is accurate and available to the workforce and stakeholders as appropriate (design parameters, operating limits, P\&IDs, alarm and trip settings) | - What checks are performed on accuracy of site performance records? <br> - How is site safety information accessed? How do you know the information is accurate? |

## ANNEX 2 - EXAMPLE OF A LEADERSHIIP SITE ENGAGEMENT PLAN

## Purpose of all Leadership Site Engagements

The purpose of a Leadership Site Engagement is to demonstrate visible commitment to safe operations, assess the health of the site safety and environmental management system and assess site safety culture.

## Execution Section

1. Structure
a. Site Name(s): $\qquad$
b. Participant(s) (name, job title and company):
$\qquad$

- $\qquad$
- $\qquad$
c. Date(s): $\qquad$

2. Objectives

Examples of objectives include reinforcing commitment to safe operations, assessing a specific safety and environmental management system element, assessing barriers for a specific hazard, recognizing people, communicating or evaluating progress on safety and environmental goals and objectives, communicating new regulatory requirements and/or new company requirements.

## List of objectives:

$\qquad$
-
$\qquad$
3. People to engage

Site Leadership Meeting
-
$\qquad$
-
Contractor Leadership Meeting (optional)
-
-
-
Workforce - entire or cross-section town hall (optional)
-
.
$\qquad$
. $\qquad$

- $\qquad$


## ANNEX 2 - (CONT)

Others
-
-
-
4. Activities to observe e.g. lifting, energy isolation, emergency drills:
-
-
-
5. Barriers to inspect
-
-
-

## Closure Section

1. Capture results vs. plan (narrative)
2. Opportunities for improvement

- 
- $\qquad$
- 

3. Recognitions (individuals, teams, practices)
$\qquad$

- 
- 

4. Interventions

- 
- 
- 

5. Actions (content, responsible person, due date)

- 
- 
- 


## ANNEX 3 - LEADERSHIP SITE ENGAGEMENT EXAMPLE PREPARATION

Sarah is an OOL with an Operator accountable for wells operations and is planning her monthly LSE. She is the direct supervisor of several offshore facilities and wants to coordinate this LSE with an OOL of a drilling rig contractor for one of her MODUs.

She has selected Rig A which is scheduled to be drilling ahead in a hydrocarbon interval at the time of the LSE and plans to spend 24 hours at the site including an overnight stay. Rick is the rig contractor OOL accountable for Rig A and its Site Leadership. Sarah and Rick meet to determine the objectives of the LSE. They reviewed what activities are scheduled on the planned dates of the LSE, recent incidents, and the site's safety performance indicators. They next reviewed the major hazards and potential events associated with the scheduled activities and agreed to target well control and lifting barriers. Well control barriers were selected to evaluate the readiness of the rig team to respond to a well kick. Lifting barriers were selected because recent incidents on Rig A, as well as across the industry, have increased in frequency and both wanted to evaluate operating procedures and personnel skills and knowledge.

The objectives of the LSE were then set:

1. Evaluate the barriers that prevent a well kick from escalating into a loss of well control, specifically targeting activation of the BOP.
2. Evaluate the lifting barriers that prevent loss of a suspended load, specifically targeting operating procedures and personnel skills and knowledge.
3. Evaluate commitment to stop work.

Sarah and Rick were familiar with the BOP performance requirements including activation, but both were not as competent in lifting. Lifting specialists were consulted to confirm the performance requirements for lifting procedures and knowledge and skills and it was decided that the specialist would participate in the LSE. They reviewed a list of potential open-ended questions to structure the engagement on critical equipment, inspection and testing, maintenance, safe systems of work, operating procedures, safe work practices, shift handover, operating discipline, knowledge and skills, and emergency response. Sarah and Rick then established the list of personnel they wanted to engage and the activities to observe to meet the objectives:

## Personnel

- Operator and Contractor Site Leadership accountable for Rig A
- Driller
- Drilling crew
- Mud Logger
- Mud Engineer
- Maintenance Team Leader
- Crane Operator
- Riggers


## Operations

- Drilling
- Lifting

Sarah and Rick agreed that following the site orientation, they would first meet with the Site Leadership to review the LSE plan and make adjustments based on any changes to current activities. They would then conduct the site walk around focused on the drilling tasks and the lifting operations, covering both day and night crews.

The final step was to document the LSE plan and communicate it to the Rig A Site Leadership and to the Lifting Specialist.

## ANNEX 3 - (CONT)

## Execution

Sarah and Rick arrived at Rig A at 11 am. They completed the site orientation, noting that a lift was scheduled to offload casing and that drilling operations were continuing at a depth within 2000' of the targeted hydrocarbon zone.

Sarah, Rick and the Lifting Specialist then met with the Site Leadership and reviewed the LSE Plan. No changes were required and Sarah and Rick began evaluating the Site Leadership's knowledge and understanding of the performance requirements and their accountabilities regarding well control and lifting.

Over the next 10 hours, Sarah and Rick conducted the site walk around, observing both drilling and lifting activities and engaging the personnel during both the day and night shifts. They observed a shift handover. They reviewed records and documentation covering inspections and testing, work permits, JSAs, operating procedures, training, and emergency response drills. They also listened to the concerns of the workforce and inquired as to the commitment and confidence to stop work perceived to be unsafe.

## Closure

At the end of the walk around, they documented key results, opportunities for improvement, positive recognitions of good work and interventions. Any actions that were generated from the results, opportunities, recognitions, and interventions were assigned with a due date.

## Results

- At the time of this LSE, personnel engaged who were involved in the drilling operations that had a role in managing and executing barriers that prevent a well kick from escalating into a loss of well control understood the hazards and their accountabilities for the barriers and had the required knowledge and skills.
- At the time of this LSE, personnel engaged in the lift operations that had a role in managing and executing barriers that prevent a loss of control of a suspended load understood the hazards and their accountabilities for the barriers and had the required knowledge and skills.
- All personnel engaged were cognizant of the stop work policy. Several examples were provided that demonstrated their commitment and confidence to act.


## Recognitions

- The Maintenance Leader was recognized for completing $100 \%$ of the planned maintenance on Rig A critical equipment during the previous quarter and for identifying a part that did not meet specifications during routine maintenance of the BOP.


## Interventions

- In one instance, a sling that was still in service but had exceeded its inspection date was identified and taken out of service.


## Actions

- Conduct investigation on why sling was not removed prior to inspection date expiration - Rig Contractor Site Leadership within 30 days.

Sarah and Rick then communicated the outcomes of the LSE to the Site Leadership and requested concurrence with the action. The LSE was now complete except for final documentation and follow up on action closure to be completed onshore.


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