Fabrication site construction safety recommended practice – Enabling activities
Acknowledgements

Safety Committee

Fabrication Site – Construction Safety Practices Task Force

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IOGP Fabrication site construction safety recommended practice

Safety performance for contracted work performed at fabrication sites continues to be a challenge in the oil and gas industry. While IOGP’s data shows that injuries and fatalities have reduced significantly over time, they are still too common. The long-term repercussions from these incidents can be felt by the injured parties as well as their families for many years to come.

Fabrication site construction contractors are expected to comply with differing, and sometimes conflicting, requirements from oil and gas companies. This leads to workforce uncertainty and change, which have the potential to result in higher risk work environments. The consistent demand for work in fabrication sites from the oil and gas industry will continue to expose sites to these risks.

A Task Force comprised of IOGP Members was established to recommend standardized minimum global safety requirements for these sites, and to help drive global improvements in contractor and subcontractor safety performance. The result was the publication of IOGP Report 577 Fabrication site construction safety recommended practice – Hazardous activities for activities carried out in fabrication sites in which the contractor’s HSE management system is followed.

In addition, IOGP Report 597 Fabrication site construction safety recommended practice – Enabling activities was published to complement and support the implementation of IOGP 577.

To assist with implementation, a Resource Library is available on the IOGP website to support successful implementation of IOGP 577 and IOGP 597 and provides optional references, example practices, and tools. The Resource Library is optional as the need for additional support varies country by country, company by company, and site by site.

With ownership and implementation by IOGP Members, EPCM companies, and fabrication contractors, the combination of IOGP 577 and IOGP 597 and the Resource Library provide a standardized set of requirements and expectations across fabrication sites resulting in cost savings, simplified processes, and most importantly: a safer work environment!

These reports have been developed for application to IOGP Members’ and contractors’ fabrication sites. The practices and activities provided may also be applicable to construction activities in general, including those at IOGP Members owned sites. Hence, IOGP encourages the applicability of reports 577 and 597 to all IOGP Member construction activities.
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope and objectives</td>
<td>6</td>
</tr>
<tr>
<td>Application of this guidance</td>
<td>7</td>
</tr>
<tr>
<td>1. Leadership</td>
<td>8</td>
</tr>
<tr>
<td>2. Staffing, Roles and Responsibilities</td>
<td>12</td>
</tr>
<tr>
<td>3. Worker Care</td>
<td>15</td>
</tr>
<tr>
<td>4. Behaviour Based Safety Program</td>
<td>19</td>
</tr>
<tr>
<td>5. Communications planning and implementation</td>
<td>22</td>
</tr>
<tr>
<td>6. Training and competencies</td>
<td>27</td>
</tr>
<tr>
<td>7. Subcontractor HSE management</td>
<td>31</td>
</tr>
<tr>
<td>8. Verification and Audit</td>
<td>34</td>
</tr>
<tr>
<td>9. Continuous improvement</td>
<td>38</td>
</tr>
<tr>
<td>Glossary</td>
<td>41</td>
</tr>
</tbody>
</table>
Fabrication site construction safety recommended practice – Enabling activities

Companion report to IOGP report 577, Fabrication site construction safety recommended practice – Hazardous activities
Scope and objectives

This report is a part of a project to address fabrication site construction safety, consisting of the following:

- IOGP 577 Fabrication site construction safety recommended practice – Hazardous activities
- IOGP 597 Fabrication site construction safety recommended practice – Enabling activities
- Fabrication site construction safety – online Resource Library

IOGP 597 recommends a set of activities that can help enable a robust safety culture at fabrication sites and is intended for use primarily by fabrication site contractor and subcontractor organizations.

The overall aim is for fabrication sites to achieve the objectives in this guidance through their own management system and to provide a tool for IOGP members to use in site assessments.

The enabling activities described in IOGP 597 have been selected based on industry practices and are not intended to be comprehensive. Fabrication site HSE management systems may already address some or all of the activities in this report, or may include additional activities not covered, therefore the enabling activities can be applied selectively based on need. The enabling activities are not detailed procedures but rather provide guidance, which is intended to help evolve the safety culture and safety performance of a site.
Application of this guidance

The IOGP Task Force believes that consistent implementation of these enabling activities will help reduce fatalities and significant injuries at fabrication sites. Support and application by operators, EPCM companies, and fabrication contractors and subcontractors is crucial for maximizing these benefits.

To achieve this, the Task Force recommend that IOGP Members, EPCMs, and fabrication site contractors consider the use of one or more of the following adoption approaches:

- incorporate relevant enabling activities as part of HSE management system
- include relevant enabling activities within contracts
- utilize relevant enabling activities during pre-execution reviews of contractor capability
- utilize relevant enabling activities for assurance actions during execution.

Users of IOGP 597 are invited to contact IOGP to provide feedback and lessons learned for consideration in future report updates [email: feedback@iogp.org]. IOGP reports are reviewed every three years but may be updated sooner if needed.
1. Leadership

Purpose: to achieve visible and felt leadership through regular and effective communication and engagement with the workforce and front-line supervisors.

Objectives:
• to provide a minimum set of expectations to both senior leadership and workforce supervisors onsite, and to set expectations for primary EPCM/client team reinforcement actions through leadership involvement, engagement and communication.

See also Section 2 – Staffing, Roles and Responsibilities for additional information

Expectations

1.1 Senior Leadership

Senior leaders (e.g. project managers, construction managers, site managers, etc.) are the key opinion leaders and influencers of the safety climate. Their personal commitment and behaviour can make a profound difference to the safe execution of work, which contributes to the improvement of safety culture.

Leadership involvement creates a culture that supports the project’s worker care activities, specifically:
• Project and site leadership define and personally support the worker care program (see also Section 3 – Worker Care)
• Detailed policies to support the workers’ right to stop work without negative consequences (sometimes known as Stop Work Authority), and to recognize through positive reinforcement those who stop work
• Involvement in safety activities is tied to annual performance appraisals

Note: These are expectations, which can be met in ways that work best in a particular culture/country.

Leadership engagement brings together senior leadership from primary EPCM/client, fabrication contractor and site HSE team to discuss and agree on HSE expectations for the project, and to define the project leadership for this effort, specifically:
• Leadership engagements are conducted early on and continue throughout the contract life cycle
• Engagement is led by contractor leadership with the active participation of the project site HSE manager
• Expectations, roles, and responsibilities are clearly defined for project leadership and for all levels of supervision at the site
• Involvement of a representative mix of key leaders associated with the project
• Effective engagements continue through all levels of supervision at the site to regularly review and monitor HSE performance against agreed expectations and the contractor HSE Plan
• A Project HSE plan is in place, explaining how expectations will be stated, understood, and met
• The joint leadership team’s ongoing visible commitment to achieving no harm to people is demonstrated through field walk engagements, coaching, and leading by example
• Set of key performance indicators is established to measure leadership engagement effectiveness (e.g. number of management walkthroughs, start of work assessments, instances of stop work)
• The leadership team ensures causes of previous accidents, highlighted non-conformities and suggested corrective/preventive actions are addressed

An **HSE charter, vision, expectations, and strategy** drive a positive safety culture with site staff and subcontractors, specifically:
• A Vision for HSE is set, with the goal of creating an environment in which everyone can work safely and go home injury free
• Site leadership and HSE Manager develop an HSE Charter, and the primary EPCM/client takes a leadership role in integrating their teams to further strengthen the site’s safety culture
• HSE expectations supporting the HSE Charter are documented, including expectations to achieve no harm to people and the environment
• Ensure HSE risks are identified and that there is in place an agreement on how the risks will be eliminated, or mitigated and managed, with focus on prevention of serious incidents and fatalities
• Ownership for the ongoing development of a safety culture is identified and clear

**Leadership communication** consistently ensures that cost and schedule do not override the safety and well-being of the workforce, specifically:
• Agree how the HSE Charter will be managed and communicated to the broader project staff and front-line workforce supervisors, including expectations for leadership messages to focus on HSE
• Schedule HSE leadership team meetings to communicate to the project (e.g., have a tiered HSE steering team structure – management, construction, worker committee)
• Establish plans for leadership field engagements, with expected frequency, recommended type of engagement, and site walkthroughs
• Establish, clearly communicate, implement and verify minimum expectations for the workforce supervisors (site supervisor) as described in the next section

1.2 Workforce Supervisor

The term workforce supervisor (site supervisor/foreman/front-line leader etc.) in this document refers to the person directly responsible for a team of construction workers (typically contractors or subcontractors) on a specific job site. They are responsible for the well-being of the workers under their care and for the timely and quality delivery of the work at that particular job site.

Workforce supervisors are the most readily accessible and visible leaders to the workers on a job site. They will “set the bar” on the expected safety performance. It is expected that workforce supervisors:

• Clearly communicate the do’s and don’ts to the crew, agreeing with the crew how changes to the work scope are to be managed, including updates to the Job Hazard Analysis/Job Safety Analysis if applicable
• Clearly articulate the performance expectations to the crew and individuals by:
  - Recognising good performance and taking corrective action to address poor performance or non-compliant behaviour
  - Understanding and coaching on Life Saving Rules compliance, safe working practices and compliance with safety standards
• At the start of a new work scope, Workforce Supervisors:
  - Understand the scope of work and clearly communicate it to the crew
  - Review the Job Hazard Analysis/Job Safety Analysis with the crew. Use a repeat back process to verify crew understanding
  - Ensure that the crew sign off the applicable pre-job documents (i.e. Job Hazard Analysis/Job Safety Analysis/Tool Box Talk) and that a copy is readily available at work location
  - Ensure that all tools, equipment, and material needed to do the job safely are available onsite and in serviceable condition before any work begins
  - Ensure that the crew are trained and competent in the use of that equipment
  - Ensure that active, 2-way communication exists. Work actively to get crew input using visual indicators that the entire crew understand
  - Maintain awareness of the other work occurring in the immediate and surrounding areas and ensure possible clashes/negative interferences are prevented
- Monitor the crew whilst they are performing the work activities to ensure plans and procedures are followed
- Ensure permit expectations are met for the coming day
- Regularly inspect and monitor the worksite, tools, equipment, crew and activities to verify implementation of the site safe system of work
- Know their crew well:
  - Support the short service worker (SSW) process for those in the crew and actively participate in HSE follow up process and interviews
  - Build camaraderie through informal or formal discussions with the crew during breaks and in the morning
  - Ensure that new SSWs in the crew are enrolled in the SSW program as described in section 6.6 and have experienced mentors assigned to them
  - Receive and action feedback / suggestions from the crew and escalate to the Construction Manager as required to obtain resolution
  - Be easily and readily accessible to the crew
  - Practice, empower, encourage and constantly reinforce the use of intervention/right to stop work (sometime referred to Stop Work Authority)
  - Make it clear that anyone can intervene or stop work if they feel there is potential for someone to be harmed

If the above is done appropriately by the workforce supervisors, they are likely to be seen as supportive and genuine leaders, who are concerned for the well-being of their crew.

**Further reading:**

- IOGP 423 *HSE management guidelines for working together in a contract environment*
- IOGP 435 *A guide to selecting appropriate tools to improve HSE culture*
- IOGP 452 *Shaping safety culture through safety leadership*
- IOGP 510 *Operating Management Systems Framework*
- IOGP 511 *OMS in practice. A supplement to Report No. 510, Operating Management System Framework*
2. Staffing, Roles and Responsibilities

**Purpose:** to define HSE roles and responsibilities and to identify resources to manage construction activities safely.

**Objectives:**
- to establish HSE roles and responsibilities needed for the site construction
- to define and agree with client the HSE support-to-workforce ratios dedicated to a project
- to enable HSE resources to provide timely input to construction documents, plans and strategies.

*See also Section 1 – Leadership for additional information*

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**Expectations**

2.1 Roles dedicated to each project as minimum

The number of supervisors and HSE personnel relative to the number of workers on the site is agreed between client and contractor. Examples include ratios of supervisor-to-worker, HSE support-to-worker, and specialist resources. Numbers depend on levels of risk exposure and are specific to the project phase to ensure efficient supervision and effective project risk management.

- Below are typical project HSE roles:
  - HSE Manager from both Client (if applicable) and Contractor for duration of the project
  - HSE workforce support as referenced in ratio statement above
  - Permit to Work (PTW) coordinator for commissioning
  - HSE trainer, internal or external nurse, paramedic or professional first aid personnel, industrial hygienist

- Consider the following when defining project roles:
  - That risk exposure may change in different project phases – e.g. commissioning, work in cold climate, work in offshore conditions. This needs to be reflected in establishing safety support-to-worker ratios.
  - How HSE induction and HSE training will be managed prior to the start of, and during, construction. The contractor’s resources dedicated to HSE training are identified in the training matrix (refer to Section 6 of this document)
  - The HSE administrative resources to be provided for the duration of construction
Additional training and competency expectations are described in the Training and Competency section of this document.

2.2 HSE responsibility considerations for individual roles

- Responsibilities of Senior leadership and project leadership include:
  - Leadership accountability for HSE
  - The inclusion of worker care items in site walk reviews
  - An HSE risk management focus
  - Measurable ways of showing HSE visibility and safety leadership
  - Coaching and motivating the workforce in HSE
  - Safety Leadership Coaching
  - Establishing a means to clearly express HSE expectations, with accountability on safety behaviours and performance
  - Leading by example

- Responsibilities for Workforce supervision include:
  - Ensuring individual HSE accountabilities and responsibilities are understood and followed
  - Ensuring that job HSE expectations are clearly defined, communicated and followed
  - Involving the workforce in HSE discussions
  - Mentoring and coaching the workforce on safe practices
  - Leading by example

- Responsibilities of Project support staff include:
  - HSE involvement and support through toolbox talks or safety walks
  - Personal commitment on interventions
  - Personal involvement in HSE committees
  - Leading by example

2.3 Site HSE team

The expectations below assist in achieving consistency among contractor, subcontractor and client HSE personnel to support leadership expectations using an HSE team:

- Roles and responsibilities of site HSE team are clearly agreed at the beginning of the project
- The organization structure for project execution is established during the pre-construction phase
• Resources are identified and assigned during the pre-construction phase, and revised subsequently as the project matures, including identifying, budgeting for, and sourcing dedicated HSE trainers/facilitators

• Site HSE team consists of key project HSE representatives from site, client, contractor and subcontractors, key workforce representatives, and may include a leadership sponsor who supports but does not lead the team.

Note: Safety discipline has a support function, and safety personnel should support, educate, and encourage project and site leaders to become better safety leaders. Safety personnel should avoid taking full safety leadership roles on behalf of project and site leaders.

Responsibilities for the site HSE team include:

• Ensure that the leadership’s HSE expectations are met
• Provide support and demonstrate the courage to challenge leadership when good safety leadership behaviours are not observed
• Review activities and approaches to embed a worker care program [see also section 3]
• Encourage and accompany leadership visits to sites to assist the effectiveness of HSE implementation, and where appropriate carry out themed and focused site tours
• Be directly involved after a high potential event is reported via visible and felt leadership, communication, stewarding, and corrective action
• Personal involvement in Life Saving Rules verification audits
• Mentor, coach, encourage and reinforce a positive safety culture through inspiring in a way that empowers all to aim for the highest personal standards in safety, dedicating time to safety education, responding to concerns and incidents in a professional way that seeks to prevent injury, and giving positive feedback when people speak up
• Identify ways to get workers involved with the team
• Agree procedures for HSE Key Performance Indicator (leading and lagging) reporting and notification to client
• Ensure that rules, practices and procedures are clear and understood by site teams
• Conduct gap assessment between contractor and client requirements where necessary
• Ensure that site HSE personnel know their roles and responsibilities
• Conduct regular meetings to discuss performance, compliance, behaviours, utilizing input from the site HSE Charter
3. Worker Care

**Purpose:** to ensure that personnel involved in site activity live and work in a safe, healthy, and ethical environment.

**Objectives:**
- to establish roles and responsibilities for defining and managing worker care
- to provide appropriate resources and infrastructure to enable worker care program
- to implement all necessary measures to reach the defined level of health risks control
- worker care program and amend it based on results and feedback.

**Expectations**

3.1 Ethical labour practices

- Enforce and apply international human rights and labour laws, employ ethical labour practices and fair employment terms/contracts, and provide an ability to raise concerns/ grievances
- Scrutinise manpower agencies prior to engagement
- Have ethical, clear, and transparent labour practices that address recruitment and demobilization, worker’s rights, the procedures and mechanisms for complaints, and disciplinary processes

3.2 A secure environment

- Appoint a security representative
- Provide an environment that is secure from external and internal threats regardless of location (e.g. petty crime, criminal intrusion, assault, workplace violence, or terrorist attacks)
- Implement Personnel on Board management and access control to verify that only legitimate personnel are onsite
3.3 A safe, healthy and hygienic environment

Medical and Emergency Response

- Medical and emergency response capabilities are based on the emergency preparedness analysis for each site
- Health facilities are provided to cater for the typical health issues that prevail in the region
- Site management ensures availability and access to medical care (i.e. medical professionals and materials) for personnel according to the number of people involved and the activity risks
- External defibrillators are readily accessible and medical personnel (e.g. first responders) are trained in their use

Quality rest and privacy

- Provide regular breaks and resting areas for hot/cold environments
- Define working hours and consider excessive time on site as occupational risk
- Adapt working time of personnel to environmental living conditions
- Working and living areas are non-smoking. Dedicated smoking areas are located near both working and residential areas
- Provide segregated male and female changing facilities, including showers and toilets in adequate quantities, and with due consideration for cultural preferences
- Give due consideration to the cultural practices, religious worship, and behavioural etiquette predominant in the region of worker groups employed

Infrastructure and quality facilities management

- Good quality infrastructure (water, power, and sanitation) is in place and well maintained
- The site is designed to manage sanitary requirements including bathrooms, toilets, housekeeping and waste management; arrangements are appropriate for the size of the workforce
- Drainage is suitable to manage the risk of vector borne diseases, such as mosquitos, which breed in stagnant water
Transport

- Workers are able to travel safely to and from the workplace with minimal time delay
- Travel distance is considered in fatigue management
- When transport is provided, it is convenient and meets client and contractor safety standards
- Any available parking lot is well grounded and easily accessible

Food and catering arrangements

- Free, good quality drinking water is available for all workers
- Clean hydration, eating, and break areas are provided and a regular cleaning schedule is set up to maintain adequate hygienic standards
- Washing facilities, soap and disposable towels are available next to the eating facilities
- Bacterial treatment and water treatment monitoring is performed on drinking water systems

Accommodation

- Where contractors or subcontractors (as defined in section 7) are providing worker accommodation in the local community, the accommodation should be inspected to prevent overcrowding, poor quality of rest, and poor sanitation
- Where camps are provided to accommodate the workforce, the guidance in IOGP 541 & 542 is followed

Occupational hygiene – Industrial exposure risks to health

- A representative is appointed to manage industrial risks to health, addressing physical, biological, chemical, ergonomic, and psychosocial hazards
- Industrial hygiene risks are identified, assessed, controlled, and communicated to workers
- Risk exposure areas (e.g. noise, radiation, chemicals) are mapped and provided with a proper display, identification and quantification
- Adequate collective protection to any hazards (e.g. dust, chemicals, radiation, insects) is provided and mitigation measures are implemented (e.g. fumigation, window nets, fatigue management policy)
• Occupational exposure limits are defined (e.g. noise, vibration, radiation, chemicals) per reference periods, worker exposure is measured and controlled
• Personal Protective Equipment matrices are established by role and/or by location
• Specific medical follow-up is provided for workers exposed to hazards
• Storing, handling, utilization, and disposal of hazardous products is controlled
• A working environment is created in which stress and conflict situations are identified, analysed and resolved

Fitness to work

• Worker health and well-being are promoted to enable workers to improve their own health
• Develop a process to ensure personnel are fit for duty before hiring and subsequently throughout employment. This includes verifying that employees are able to do the task they are hired for, and that they are free from the influences of drugs and alcohol
• Drugs and alcohol policies are in place and verified

Further reading

• IPIECA (2012) Human rights due diligence process: a practical guide to implementation for oil and gas companies
• IOGP 343 Managing health for field operations in oil and gas activities
• IOGP 378 Managing Workplace Stress
• IOGP 541 Temporary onshore accommodation – Selecting the camp type
• IOGP 384 A roadmap to health risk assessment
• IOGP 392 Managing fatigue in the workplace
• IOGP 397 A Guide to Food and Water Safety
• IOGP 398 Health aspects of work in extreme climates
• IOGP 445 Substance misuse
• IOGP 470 Fitness to work
• IOGP 481 Vector-borne disease management programmes
• IOGP 542 Temporary onshore accommodation – Design, layout, accommodation, facilities and services
• IOGP 575 Oil and gas contractor drug and alcohol testing guidelines
4. Behaviour Based Safety Program

**Purpose:** to encourage workers to make safe choices through increased awareness of safe and at-risk behaviours in the work environment.

**Objectives:**
- to ensure leadership support of the BBS program and understanding of its minimum expectations
- to establish minimum organizational requirements to support the BBS program
- to provide the workforce with general guidelines for conducting observations
- to enable timely and relevant feedback, as well as coaching and mentoring
- to establish mechanisms to assess the BBS program participation and effectiveness
- to recognize safe behaviours and address at-risk behaviours.

**Expectations**

4.1 BBS expectations for leaders

Leaders play a significant role in developing, implementing and sustaining a successful BBS program. A successful BBS program, where the workforce feels confident to openly share and communicate with leaders, will allow leaders to timely identify unsafe behaviours, make decisions, and promote actions to change conditions associated with the unsafe behaviours.

- Leaders are role models for safe behaviours and “walk the talk” (i.e., do what they say will do).
- Leaders listen to the workforce in order to understand their concerns and support actions to address them.
- Leaders reinforce and recognise safe behaviours, provide feedback to the workforce, and interact in a way that sets the tone for safe performance.

Minimum general expectations for senior leaders and supervisors are also included in Section 1 – Leadership of this document.
4.2 Establishing the right organization to support the BBS program

A successful BBS program will require support and demonstration of commitment from management to allocate required resources to develop and deploy the program, to support the workforce’s participation in BBS-related activities, and to allocate their own time to actively participate in the program.

- Define and establish the right governance to provide oversight of the program
- Assign an experienced person to be the point of contact, who will support the program by providing subject matter expertise and identifying and implementing actions to address identified gaps and/or opportunities for improvement for the successful implementation of the program

4.3 Designing and implementing the BBS Program

When designing a BBS program use a structured approach that focuses on the following areas:

- Identify cultural and regional elements that may have an impact on the program’s design and implementation, and ensure identified elements are incorporated.
- Focus on preventing serious injuries or fatalities by identifying critical behaviours that will be in-scope for the program; critical behaviours can be identified from incidents data, near miss reporting, inspections, etc.
- Develop an observation plan, identifying:
  - the intended audience to participate in the program, including contractors and subcontractors
  - the required number of observations per week/month/rotation (if applicable), per person
  - the documents used while conducting the observations
- Implement a deployment strategy to communicate the program scope, objectives and expectations to the workforce.
- Set training needs and a training delivery plan

*Note: minimum general training and competency expectations are included in Section 6 – Training and Competencies in this document.*

- Define recommended procedures for conducting observations, how data will be collected and analysed, and how effective feedback will be provided and improvement actions conducted.
- Develop strategies and procedures to communicate results to relevant stakeholders.
4.4 Observations

The BBS program provides the opportunity to the workforce to observe employees, contractors, and subcontractors performing work tasks; identify safe and at-risk behaviours; provide constructive feedback to the observed individual; and develop plans to address at risk behaviours.

- Conduct constructive observations by:
  - considering the established safety culture at the work place
  - showing care and concern for the person being observed
  - minimally disrupting the work being conducted
  - ensuring the willingness from the workforce representatives to be observed
  - having two-way communication between the observer and the individual being observed
  - respecting the individual when providing constructive feedback and/or positive reinforcement of safe behaviours
  - enabling and allowing the observed person to ask questions or make comments about the observation outcome
- Establish procedures to keep records of observations and to track progress on agreed commitments.

4.5 Measurement

Once the BBS Program has been implemented and people participating in the program have received required training, it is important to assess the level of participation and effectiveness of the program to achieve intended results – to reinforce safe behaviours and identify and address at risk or unsafe behaviours.

- To assess the BBS program effectiveness and participation:
  - Agree and establish realistic goals
  - Put tracking mechanisms in place for the established metrics
  - Analyse and evaluate data to identify trends and to define continuous improvement strategies

Further reading

- IOGP 435 A guide to selection appropriate tools to improve HSE culture
5. Communications planning and implementation

**Purpose:** to have effective and proactive communication between client and contractor leadership and between the contractor leadership, the line supervision and the workforce, and to provide feedback to the management from the workforce.

**Objectives:**
- to provide minimum expectations for the site’s communication plan, how the workforce will be informed of the plan, and how a ongoing focus on Health, Safety, and the Environment is maintained

**Expectations**

**Communication Plan**
The goal is to develop a robust approach to communication and engagement to embed a proactive safety culture, specifically:

- Stakeholders are identified and the following elements are considered when developing a communications plan:
  - Stakeholder identification and analysis (mapping)
  - Stakeholder consultation
  - Negotiation and partnerships
  - Stakeholder involvement in project monitoring
  - Reporting to stakeholders

- An early engagement session is conducted with key stakeholders to develop and agree a communication plan. The purpose is to agree with the senior management the commitment to HSE and the best method to communicate this commitment to the workforce

**Note:** if a site already has a communication plan in place, this early engagement session is to ensure alignment between the client and contractor.

- The plan describes the following routes of communication:
  - How site leadership engages and communicates with client leadership
  - The safety practices that site leadership proactively communicates to front-line supervision and the workforce to explain safety requirements
  - How front-line supervision communicates with the workforce to ensure that everyone remains aligned with the site’s safety culture
  - A mechanism for supervision and site leadership to listen to feedback from the workforce
5.1 Leadership to Leadership

Ongoing interaction

• Hold regular, scheduled meetings that include client and contractor executives, line management and site HSE teams to discuss and proactively address site safety trends
• Identify and disseminate lessons learned from activity onsite and within the industry, upcoming milestones, risk profile changes, the effectiveness of current communication efforts, and any necessary interventions or changes

5.2 Leadership to Supervisor/Workforce

Site induction

As stated in the training section (6), sites are expected to have an induction program for new employees, contractors, and visitors to the site

• Site leadership use the site inductions as opportunities to set the tone of the safety culture and to demonstrate the “care for people” approach

Ongoing interaction

• Site management takes a proactive approach by having planned safety meetings led by line management/leadership where HSE information is shared with the workforce:
  – the frequency of these meetings is based on risk and site activity, but normally weekly or bi-weekly
  – meeting content is relevant to the current work being progressed and includes discussion of any recent incidents and the lessons learned
• Communication ensures that cost and schedule do not override safety and well-being of the workforce; Section 1 (Leadership) provides additional detail on leadership engagement with the workforce.
Project Site Stand-Down

- Have a mechanism to hold site-wide or project “Stand-Down” meetings when it is necessary to act on negative HSE-related trends or to address a significant incident
- Have a mechanism to review trends and hold proactive “Stand-Down” meetings when appropriate
- Communicate to the workforce any changes to risk assessments, method statements, work plans and procedures, as necessary to proactively address issues as they arise

Visual communication

- Use visual communications such as bulletin boards, signs, posters, electronic communication (screens) as appropriate to keep safety messages visible:
  - These are posted in specific areas where people congregate or at the entry ways to the worksite
  - They may include photos of safety personnel for the area, relevant hazard awareness photos, emergency protocols, HSE performance information, incident information and lessons
- Sites have appropriate temporary and fixed safety warning signs to raise awareness of hazards as appropriate for the site configuration.
  - These may communicate requirements for additional PPE, reinforce site safety rules, warn of specific hazards, communicate emergency exit routes and mobilization points, or establish barricades around hazards

Campaigns / Safety Initiatives

- As part of proactive management of health and safety, use campaigns or safety initiatives to promote following rules on site, such as the IOGP Life-Saving Rules, or equivalent
- Recognize seasonal issues relevant to work on site such as cold or hot weather conditions, religious activities which can affect worker performance, and incorporate these into the communication plan
- Have a mechanism in place to anticipate and react to changing trends or risk profiles. The focus should be kept fresh and relevant to current or upcoming activities or trends to have the greatest impact
- Have a mechanism in place to review industry learning from incidents
5.3 Supervision/Foreman to Workforce

Pre-Task or shift toolbox talk

- Prior to start of each shift, the Supervisor or Foreman convenes the workforce, preferably at the worksite, to discuss the task to be done, the hazards and controls associated with the task (i.e. what could go wrong, how to keep it from going wrong and what to do if it does) and who is responsible for implementing the controls to manage the risk. The pre-task risk assessment or JSA is reviewed prior to starting work. Any written work permits are discussed where applicable.
- Supervisors re-enforce the right to stop work (sometimes known as Stop Work Authority) where communications are not understood or safety is compromised. It is important to make this as much a two-way communication as possible, with those completing the task being empowered to speak up if there are issues with the work planning or controls.

Ongoing interaction

- As described in Section 1 (Leadership), the supervisor/foreman ensures ongoing interaction as part of self-verification, checking that the communications issued have been understood and are being acted upon.
- The communications plan describes the expectations for field time and coaching/mentoring to reinforce messaging to ensure proper execution of work and recognition/control of hazards by the workforce.
- It is important that front-line leaders spend sufficient time in the field to demonstrate commitment to work.

5.4 Listening to the Workforce

The communication plan describes how the site proactively engages the workforce to create a collaborative culture of safety and learning.

Ongoing interaction

- Ongoing interaction meetings allocate time for employees to give feedback or voice concerns to leadership. This includes site stand downs, planned safety meetings, task risk assessments, tool box talks, leadership walk-arounds, etc.
Workforce engagement

- Sites have a mechanism to formally engage the workforce by establishing a line of communication either directly, and/or through the representatives of the workforce, contractors, subcontractors, and leadership to address workforce safety concerns. This can also be used to align the workforce on communications from site leadership.

Safety suggestions

- Sites have a mechanism to formally accept and appropriately action safety suggestions or concerns

5.5 Workforce Language Assessment

- The site conducts an assessment of the workforce to understand and to plan for communicating to the workforce in a language that they understand well. The assessment is kept evergreen as the workforce changes.
- As part of assessing effective communication, supervisors assure themselves that their crew have the means of communicating between each other, through translators, if necessary. This includes crews working in adjacent areas.
- Use pictures and multiple languages in safety communications, where applicable, to mitigate communication barriers.
6. Training and competencies

**Purpose:** to ensure fabrication site personnel have the necessary qualifications and competencies for their job.

**Objectives:**
- to confirm that workers have the required skills and qualifications, and to provide extra training as needed
- to provide all unescorted personnel with a comprehensive site induction
- to verify competency of workers in critical positions
- to support short-service workers until they are established in the site workforce
- to train personnel to respond to emergency situations

**Expectations**

6.1 Training Plan
- The training plan includes subcontractors as defined in Section 7 – Subcontractor HSE management
- The training plan includes site induction, training needs assessment, task-based training, safety leadership training, the short-service worker program, Behavior Based Safety, and the necessary resources to deliver each component

6.2 Fabrication site induction
- The fabrication site induction is delivered in a language clearly understood by the trainees
- Induction is mandatory before unescorted access to the site is allowed
- The induction covers as a minimum:
  - Welcome to the site for new workers
  - The principle that cost and schedule never override the safety and well-being of the workforce
  - Site layout (e.g. work location, muster points, evacuation routes)
  - Standard personal protective equipment (PPE) requirements
  - Extra PPE for specific areas / tasks
  - Emergency response procedures (i.e. alarms, drills, muster, evacuation)
  - “No harm” culture and the incident/near miss reporting expectations
  - Expectations for behaviour-based safety participation
- Expectations for urgent hazard reporting
- Expectations for all workers to exercise stop work authority to prevent an incident
- Known HSE hazards and control measures – e.g. Life Saving Rules
- Expectations for Life-Saving Rules compliance, and consequence management
- Training matrix requirements and competency verification system
- Site security, access control, search requirements
- Drug and alcohol policy
- Test of workers’ understanding of the induction key points

*Note: an abbreviated induction may be provided for visitors who are not working at the site, and who will be under escort at all times while at the site.*

### 6.3 Assessment of training needs

- Training needs are assessed to match workers to the defined requirements of their position, forming an essential part of the training and competence program.
- The training needs assessment is risk based, with extra focus and rigor around critical positions.
- Worker positions are classified as one of the following:
  - safety critical positions and requisite competencies identified and assessed by the site or required by principal contractor or client
  - position with safety leadership responsibilities
  - trade or support position not included above
- Document experience and qualifications for existing and new personnel, including short service workers.
- Personnel are assessed against the task-based and safety leadership training matrices for their position and the need for further training or competency assessment is determined.
- When training gaps are identified, their significance is determined. Gap closure may be required before starting work at the site, or may occur within a defined time after starting work, depending on the potential consequence associated with the gap.
  - Competencies for critical positions are assessed before work begins (e.g. drivers, radiographers, crane operators, etc.)
  - Mitigations (e.g. supervisor present at all times) are implemented if work is to begin before training gaps can be closed.
- Criteria for review of training needs are established (e.g. new position, elapsed time, new technology, changes at the site).
6.4 Task-based training matrix

- Have a training and qualifications matrix that defines training, qualification, and competency verification requirements for each position. These requirements include, as applicable:
  - Qualifications (external or provided by site)
  - Training required by regulation
  - Competency assessment (theory and practice) for critical positions
  - Specific safety responsibilities (refer to safety leadership training matrix)

6.5 Safety training matrix

- Have a safety training matrix defining training requirements for each position or type of position. These requirements include as applicable:
  - Importance of leading by personal example regarding safety values and safety programs applicable at the site
  - How to facilitate a toolbox talk
  - Work management system, including JSA, work permits, SIMOPS
  - Hazard identification, near miss, incident reporting process
  - Behaviour Based Safety and Worker Care programs, including observations, safety interventions and leading difficult conversations
  - Safe work practice knowledge for areas of responsibility
  - Incident investigation
  - Management walkthroughs
  - HSE-related consequence management.

6.6 Short service workers [SSW]

Fabrication sites may use SSW to provide flexibility with workforce numbers and skills, or SSW may be expected to work long term at the site but only started recently. Incident records indicate that SSW are more likely to be injured at work and extra efforts are justified to prevent SSW incidents. SSW worker programs typically address the following:

- Defined criteria for promoting SSW to regular worker status after training gaps are closed and required time on site is achieved
- Defined criteria for separating short service worker from site if performance does not meet expectations
- Means of identifying SSW, e.g. through colour of hard hat or coveralls, or hardhat stickers
• Until training gaps are closed and/or minimum time on site is achieved, limit SSW to specific tasks (e.g. operating certain types of equipment) or specific work environments (e.g. must be supervised at all times)
• Assign a designated SSW mentor and define competencies, roles and responsibilities for the mentor
• The maximum number or ratio of SSW in a work group is limited, with smaller proportion of SSW for higher risk work
• Have mitigation plans for when the defined SSW maximum number or ratio is not met
• Track the number of SSW in the workforce on a monthly basis and report to management
• Maintain records of SSW entry, promotion to regular worker or separation from site

6.7 Facilities and program structure

• Have qualified trainers, appropriate facilities, and management systems, to sustain the training program, including:
  – Required criteria for trainers (e.g. certifications, experience)
  – Criteria for refresher training of trainers
  – Description of training facilities (classroom and "hands on" facilities)
  – Description of training process and method of assessing what was learned
  – Suggestion process for workers to propose additional training
  – System to maintain records of training, qualifications, competency assessments, refresher training
  – Emergency response drills and exercises (medical, security, etc.)

Further reading

• IOGP 292 HSE Competency Management Guidelines for the Geophysical Industry
• Cogent and UKPIA, Guidelines for Competency Management Systems for Downstream and Petroleum Sites, Cogent, UK, 2011
7. Subcontractor HSE management

**Purpose:** to have systems and processes for subcontractor HSE management. Generally, contractor HSE requirements apply to the on-site subcontractors with exception for material-only suppliers and offsite subcontractors.

**Objective:**
- to ensure contractor HSE management system is place for safe selection, mobilization and follow up of the subcontractors
- to identify criteria for the HSE qualification of subcontractor
- to provide active and continuous oversight, including routine monitoring of subcontractor HSE performance
- to establish contractor’s HSE responsibility for the subcontractor scope of work
- to ensure the subcontractor HSE performance is in compliance with the contractor and project HSE plan
- to integrate subcontractor’s scope into the contract

**Expectations**

7.1 Contractor HSE Plan

- The Contractor HSE Plan:
  - identifies and explains in detail the subcontractor HSE management and principle enterprise responsibility
  - includes management of security, health and ethical interfaces with subcontractors
- For project proposals, contractors submit a subcontracting plan, including:
  - Lists of products and services that will be subcontracted
  - Selection criteria to be used to select subcontractors
  - Plans to ensure HSE performance from subcontractors
  - Evidence that the contractor has verified that the subcontractor meets relevant HSE requirements; this step is completed prior to authorizing work to commence
- Relationship and interfaces are constantly managed with subcontractors in order to facilitate continuous HSE improvement. Responsibilities of contractors and subcontractors are clearly identified and delineated.
- Accountability for HSE management is clearly defined between the contractor and their subcontractors for the duration of the contract
• Contracts require subcontractors to comply with the same HSE requirements as the main contractor, relevant to the work performed. Any differences or deviations in the requirements should be identified in the bridging document.

• Effective means to communicate HSE issues between contractor and subcontractors are addressed in the Contractor HSE Plan and Communication Plan.

7.2 Prequalification

• Contractor has a process for identification, evaluation, and selection of subcontractors.

• Criteria for subcontractor HSE qualification and selection process are part of the Contractor HSE management system.

• Contractor assesses the ability of potential subcontractors to meet contract requirements, and only awards the subcontract if satisfied that the subcontractor will meet these requirements.

• Contractor shares with the client the subcontractor HSE qualification results and, if requested by the client, any agreed action plan.

• Bidder companies are pre-qualified and selected based on their ability to manage the risks associated with the activity to be contracted.

• Pre-mobilisation, mobilisation, and demobilisation reviews for subcontractors are organised by Contractor.

7.3 Risk management

• Contractor provides to subcontractor in a format and level that is readily understood by subcontractor the following, as a minimum:
  - Site-specific HSE hazards as relevant to subcontractor’s scope of work
  - HSE standards as relevant to subcontractor’s scope of work
  - Contractor HSE plan

• Contractor partners with subcontractor to provide a safe work environment for the site/project. Contractor revises the risks and the mitigation measures together with the subcontractors during a hazard identification session.

• Contractor maintains an overview of subcontractors, showing activities to be performed and risk level relevant to the work. Contractor provides this overview to the client upon request.
7.4 HSE Training and Competence

- Contractor maintains ultimate responsibility for subcontractor competency assessment, subcontractor HSE training, and equipment/tools provided by subcontractor; level of HSE training is reviewed and agreed
- Contractor verifies that all subcontractor personnel engaged in the work have been informed about the Life Saving Rules and the consequences of not following these
- Contractor ensures subcontractor’s personnel are trained and encouraged to intervene on unsafe behaviours and situations and report on deviations from procedures, plans, and expectations

7.5 HSE supervision and monitoring

- Products and equipment supplied by the subcontractor undergo an acceptance and control procedure by a competent person.
- Contractor has a system to verify that tools / equipment that the subcontractor will use are suitable for the job and safe to use
- The level of on-site HSE supervision by subcontractors is contractually stipulated and corresponds to the risk levels identified and the site HSE requirements
- Subcontractor is integrated to the contractor’s HSE inspection and HSE audit process for the contracted scope
- Subcontractor’s HSE performance standards and reward and recognition scheme are agreed upon and clearly stated in contract documentation
- Contractor evaluates subcontractor’s HSE performance from mobilization to demobilization
- Appropriate corrective actions are taken immediately when non-compliance is detected
- At the end of contract, the subcontractor’s overall HSE performance is assessed and their suitability for consideration for future contracts is determined

Further reading

- IOGP 423 HSE management guidelines for working together in a contract environment
- IOGP 423-01 Contractor HSE capability assessment and scoring system – Supplement to Report 423
- IOGP 423-02 Contractor HSE capability assessment and scoring system – Supplement to Report 423
8. Verification and Audit

**Purpose:** to ensure that risk controls and barriers are effectively implemented to minimize incidents and drive performance improvement.

**Objectives:**
- to verify that site activities are conducted in accordance to contractual obligations, site and regulatory requirements
- to determine if risk controls and barriers are effectively implemented
- to develop risk-based action improvement plans and steward to completion

Scope includes field verification, major milestone audits and management walkthroughs

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**Expectations**

8.1 Verification and audit plan

The verification and audit plan includes all forms of major milestone audits, verifications, and management walkthroughs.

- The verification and audit plan:
  - Is the responsibility of a senior manager in the contracting company, who is accountable for the execution of the plan
  - Defines the activities, equipment, and exposures to be checked, the frequency of checks, the tools to be used, and the skillsets required to conduct the review
  - Includes base business activities (e.g. worker accommodation, medical facilities, infectious disease prevention, and food safety) and work activities, which change with each project phase (refer to IOGP-577 recommended practice)
  - Is risk based, with more frequent engagement with respect to high potential consequence activities and exposures (e.g. working at height, lifting and hoisting, confined space entry, energy isolation, malaria)
  - Defines the frequency of HSE verifications and audits, subject activity or exposure, verification tools, and required skillsets are defined in the verification plan
  - Includes subcontractor activities and exposures
- Any additional verification and audit activities are agreed by contractor with client and added to the verification plan.
• Extra verifications and audits are carried out in response to high potential consequence events
• The level of verification and audit feedback to principal contractor and client is clarified, and considers items such as plan execution schedule, verification and audit results, and possible corrective actions

8.2 Verifications

Verifications are systematic checks of sites by the contractor to confirm that specified requirements have been met.

• Verification scope includes all the enabling activities described in this document and all the hazardous activities in the corresponding section of IOGP-577 recommended practice.

• Verification is typically done by fabrication site personnel such as managers, supervisors, safety advisors, and medics. Other personnel may be needed for specific topics. Principal contractor and client personnel may also participate.

• Verification may be done:
  – within a work team or activity (e.g. the scaffolding supervisor or manager verifying that a scaffolding team under their leadership is complying with the recommended practice)
  – across work teams or activities to provide an independent perspective, such as:
    - a safety advisor verifying that working at height expectations are met, or a hygiene inspection by a medic
    - a scaffolding supervisor or manager verifying that another scaffold team [not one of theirs] is complying with the recommended practice.
  – across sites, when a supervisor or manager from another location does the verification of actual work practices against the recommended practice

• Verification is typically based on a checklist, which clearly defines expected risk controls and supports a conclusion that expectations are either met or a gap exists. The resource library includes sample checklists for each recommended practice in this document.

• All potential high consequence issues identified during verification are documented even if they are resolved during the verification.

• Results of verifications are documented at a level suitable to enable follow-up, resolution, and feedback to workers.
8.3 Major Milestone Audits

Major milestone audits are formal required inspections before the project moves to the next phase (e.g. start of construction execution).

- Contractor participates in audits, provides the required documentation and evidence, and takes corrective action as needed.
- Include major milestone audits in the verification and audit plan. They typically engage the senior personnel from the site, principal contractor and client. Milestone audits may include:
  - Construction readiness review
  - Pre-construction safety review
  - Pre-loadout review
- Major milestone audits are led by the principal contractor or client. Independent auditors may be engaged to provide specific skills and audit tools.
- Document the audit scope. It may include regulatory compliance, site requirements and contractual requirements, including health and safety plans.
- Hold a formal entry meeting to introduce the audit scope and audit team and a formal exit meeting to communicate the findings.
- Document the results of audits to enable follow-up, resolution, and feedback to workers.

8.4 Management Walkthroughs

Management walkthroughs provide wide opportunities for workforce engagement including listening to workers, sharing key messages, observing work teams and interaction between activities.

- Engage senior personnel from the site and the principal contractor, (occasionally with staff from the client) for management walkthroughs.
- If conducted at a subcontractor location, subcontractor management is also engaged.
- Conduct management walkthroughs at a range of work activities/locations/times/days/shifts to provide access to a wide range of workers and range of activities and risk exposures.
- Management, and/or the people walking with them, can recognize critical risk controls so they can either reinforce safe behaviour, or intervene.
- Document all potential high consequence issues identified during a walk-through, even if they are resolved during the walk-through.
- Document results of walkthroughs at a level suitable to enable follow-up, resolution, and feedback to workers.
Further reading:

- IOGP 245 Guidelines for HSE Auditing
- IOGP 423 HSE management guidelines for working together in a contract environment
9. Continuous improvement

**Purpose:** to detect opportunities and warning signals about fabrication site risks and risk controls and to adapt accordingly to prevent serious injuries.

**Objectives:**
- to identify sources of learning opportunities and weak signals
- to identify high potential consequence events

**Expectations**

9.1 Sources of learning opportunities and weak signals

Some risk exposures are common to all fabrication sites (e.g. working at height) and some risk exposures only occur in specific locations (e.g. frostbite or malaria).

- Know the risks that are present at the location
- Implement checking and reporting systems to review the effectiveness of risk controls and collect incident data.
- Consider multiple sources of information, including from subcontractors, for example:
  - Behaviour Based Safety observations (e.g. working at height without fall protection, working under a suspended load, walking in a forklift blind spot)
  - Verification activities (e.g. checking on IOGP Report 577 compliance, or workers following site Life-Saving Rules)
  - Hazard reports (e.g. open pits, missing handrails)
  - Incident and near miss reports
  - Major milestone audits
  - Ad-hoc observations (e.g. management walk-arounds)
  - Site and industry sharing of learning from incidents

9.2 Defining potential consequence

Injuries are events with an actual consequence (i.e. lagging indicator), but for every injury there are many unsafe behaviours, near misses, workplace hazard reports, and failures to follow procedures.

- Have a systematic way of identifying the potential consequence of leading and lagging indicators, such that high potential consequence events are brought to management attention. This can be achieved by:
- Defining potential consequences based on the type of injury
- Flagging ‘High potential consequence’ from a wide range of leading and lagging indicators such as:
  - Behavioural Based Safety observations
  - Hazard reports
  - Verification results
  - Audit results
  - Worker care survey observations
  - Management walkthrough
  - Incident report
  - Near miss report
  - Competency verification results
  - Site inductions
  - Worker feedback

9.3 Responding to high potential consequence events

- Have a process to recognize high potential consequence events and promptly bring them to management for action. Desirable features of the corrective action management system specific to high potential consequence events include:
  - Have higher urgency of notification and a higher level of management notified
  - Monitor the number or rate of high potential consequence events (note: care should be exercised to prevent under-reporting)
  - Require a more rigorous level of investigation
  - Have a higher level of management responsible for determining proper corrective action to be taken, if any. This decision is documented
  - Have corrective action set at two levels
    - a “quick fix” to prevent an incident in the short term, and
    - a longer term corrective action to provide a sustained improvement
  - Address corrective action at a higher priority and quicker when compared with lower potential consequence events
  - Involve senior management, who are responsible for more rigorous and transparent follow up of corrective actions, at a higher level than when compared with lower potential consequence events
  - Have management define key performance indicators
Principal contractor or client may require periodic feedback regarding high potential consequence events, signals, and corrective action taken

### 9.4 Learning from high potential consequence events

- Have a process for learning from high potential consequence events. Desirable features of the lessons learned process specific to high potential consequence events are:
  - Relevant lessons are summarized from the investigation in a clear and concise format
  - In order to maximize learning, the lessons learned summaries are shared and utilized across the organization

**Further reading:**

- IOGP 552 *Components of Organizational Learning*
# Glossary

*Includes terms used in IOGP 577*

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>competent</td>
<td>The combination of skills, experience and knowledge of a manager or member of the workforce that has been confirmed through assessment. Competence is assessed for an individual in a post that has a clearly defined profile setting out the job requirements. Competence is regularly re-assessed with a frequency determined by the criticality of the role.</td>
<td>IOGP Report 510, <em>Operating Management System Framework</em> [June 2014]</td>
</tr>
<tr>
<td>confined space</td>
<td>Confined spaces are enclosed or partially enclosed spaces that are not designed or constructed for continuous human occupancy, have limited or restricted means for entry or exit, and where there is risk of injury or illness from hazardous substances or conditions. Confined spaces include, but are not limited to, underground vaults, tanks, storage bins, manholes, pits, silos, process vessels, pipes and tubulars.</td>
<td>Definition consistent with use in IOGP Report 459, <em>Life-Saving Rules v2</em> [April 2013]</td>
</tr>
<tr>
<td>EPCM (Engineering, Procurement, Construction Management)</td>
<td>EPCM is a services-only contract, under which the contractor performs engineering, procurement and construction management services.</td>
<td><a href="http://www.wikipedia.org">www.wikipedia.org</a> (accessed October 2016)</td>
</tr>
<tr>
<td>exclusion zone</td>
<td>Barricaded No-go areas where it has been identified a risk for workers to be in the area due to potential harm from items such as dropped objects or lifted materials.</td>
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<tr>
<td>fabrication yard</td>
<td>Designated area/site where industrial construction work is performed.</td>
<td></td>
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<tr>
<td>fabrication contractor</td>
<td>Person/Company that provides construction based services.</td>
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<tr>
<td>Front Line supervisors</td>
<td>Individuals who directly supervise and coordinate the activities of construction/craft workers.</td>
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<tr>
<td>hazard</td>
<td>An object, physical effect or condition with the potential to harm people, the environment or property.</td>
<td>IOGP Report 510, <em>Operating Management System Framework</em> [June 2014]</td>
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<tr>
<td>Term</td>
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<tr>
<td>hazardous atmosphere</td>
<td>An atmosphere is hazardous when: • it has too much or too little oxygen (atmospheric oxygen content is 20.9%), or • it contains flammable, combustible or explosive agents, or • it contains contaminants [for example, noxious substances, fumes, dusts, mists] that could pose an immediate or long term threat to life, and/or interfere with a person’s ability to escape unaided from a confined space.</td>
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<tr>
<td>hot work</td>
<td>Any work that creates an ignition source performed in an area which has potential for hydrocarbons or flammable materials. Hot work includes welding, burning, gas cutting, grinding and brazing.</td>
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<tr>
<td>HSE</td>
<td>Health Safety Security and Environment</td>
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<tr>
<td>HSE Charter</td>
<td>HSE Charter – a statement of commitment, which defines HSE objectives, expectations and responsibilities.</td>
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<tr>
<td>HSE Plan</td>
<td>An HSE plan defines what should be in place during the life cycle of the contract and the steps required to be taken, by whom and by when in order to meet client and contractor requirements.</td>
<td>IOGP 423-02</td>
</tr>
<tr>
<td>Job Safety Assessment (JSA)</td>
<td>A formalized procedure whereby persons involved in a task get together before work starts to assess the work, identify associated hazards and recommend safe job practices and precautionary measures.</td>
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</tr>
<tr>
<td>Leadership engagement</td>
<td>A meeting of senior leaders from primary EPCM/client, fabrication contractor and site HSE team to discuss and agree on HSE expectations and visible and felt leadership actions to support for the project.</td>
<td>In document</td>
</tr>
<tr>
<td>non-routine lift</td>
<td>A lift that is not classified as a Routine Lift. Non-Routine Lifts are sub-divided into Simple and Complex Lifts to reflect increasing Risk.</td>
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<tr>
<td>Term</td>
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<tr>
<td>Non-routine simple lift</td>
<td>A lift using equipment specifically installed by a competent operator, with known and evaluated weight, a center of gravity below the lifting point and the use of a certified lifting point directly above the load, ample headroom and a single lifting appliance, and that is unlikely to be affected by changing environmental conditions.</td>
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<tr>
<td>non-routine complex lift</td>
<td>A lift that continues a lifting operation but with different equipment; uses two or more lifting appliances within difficult or restricted areas or near active or energized hydrocarbon-containing equipment; is near overhead electrical power lines; uses a mobile crane on uneven ground; continues a lifting operation with shift changeover or lifting of personnel; lowers a load into or out of a Confined Space; or lifts a load the weight of which is over 90% (‘heavy lift’) of the rated capacity of the lifting appliance.</td>
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</tbody>
</table>
| Permit to Work system | A Permit to Work system is a formal written system used to control certain types of work which are identified as potentially hazardous. It is also a means of communication between site/installation management, plant supervisors and operators and those who carry out the work. Essential features of Permit to Work system are:  
  • clear identification of who can authorize particular jobs (and any limits on their authority) and how is responsible for specifying the necessary precautions  
  • training and instruction in the issue and use of permits  
  • monitoring and auditing to ensure that the system works as intended. | Based on text in IOGP report 189 – Guidelines on permit to work (P.T.W.) systems                  |
<p>| Permit to Work Term  | Term refers to the signed document, certificate or form used as part of a Permit to Work system for control of work.                                                                                          | Based on text in IOGP report 189 – Guidelines on permit to work (P.T.W.) systems                  |</p>
<table>
<thead>
<tr>
<th>Term</th>
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</thead>
<tbody>
<tr>
<td>Person in Charge of the Lift</td>
<td>The project manager, superintendent or area Supervisor who has overall responsibility for any lift by a crane. The Person in Charge of the Lift plans the lift operation with any personnel to whom responsibility has been delegated, and monitors the development of safety features for lift operations and the lifting operation.</td>
<td></td>
</tr>
<tr>
<td>qualified</td>
<td>‘Qualified’ means one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated their ability to solve or resolve problems relating to the subject matter, the work, or the project.</td>
<td></td>
</tr>
<tr>
<td>Repeat back process</td>
<td>A process in which you ask the workforce or a member of the workforce to respond back with what they heard to verify they understand what was said.</td>
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</tr>
<tr>
<td>risk</td>
<td>The product of the chance that a specific adverse event will occur and the severity of the consequences of the event.</td>
<td>IOGP Report 510, Operating Management System Framework [June 2014]</td>
</tr>
<tr>
<td>risk assessment</td>
<td>A process that provides a consistent and comparable evaluation of the relative level of different risks introduced by company activities.</td>
<td>IOGP Report 510, Operating Management System Framework [June 2014]</td>
</tr>
<tr>
<td>routine lift</td>
<td>A lift that is undertaken within the normal operating parameters of the crane and in which lifting is over non-sensitive areas, in suitable familiar environmental conditions, with competent crane operators and loads of known and evaluated weight, shape and center of gravity, using standard rigging arrangements.</td>
<td></td>
</tr>
<tr>
<td>safe practice</td>
<td>A way to perform a task that minimizes risk.</td>
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<tr>
<td>Site Management</td>
<td>Site owner/operator management team responsible for the worksite. Responsible for Site Safety and HSE performance at the fabrication yards.</td>
<td></td>
</tr>
<tr>
<td>(shift) handover</td>
<td>Mutually agreed transfer in operational care, custody and control from one responsible party to another responsible party, typically from one Shift Team to the subsequent Shift Team.</td>
<td></td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
<td>Reference</td>
</tr>
<tr>
<td>----------------------------</td>
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</tr>
<tr>
<td>short service workers</td>
<td>Definition of short service worker to be agreed between client and fabrication yard contractor</td>
<td></td>
</tr>
<tr>
<td>Simultaneous Operations [SIMOPS]</td>
<td>Two or more work scopes during pre-commissioning/commissioning at site occurring simultaneously in a same or adjacent area which can interfere with one another</td>
<td></td>
</tr>
<tr>
<td>Stand-Down</td>
<td>A formal shut down of work to focus on correcting an unsafe situation or incident.</td>
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<tr>
<td>Stop Work authority</td>
<td>Formal approval from site leadership which allows any worker to intervene on an unsafe situation or stop a person who is about to put themselves in harm’s way.</td>
<td></td>
</tr>
<tr>
<td>Subject Matter Expert [SME]</td>
<td>A Subject Matter Expert [SME] has Proficiency at Skill level and is accredited by a relevant independent authority. The term SME is a functional description of the role rather than a job title. An SME is a person with assigned responsibility as an expert for specifying how HSE risks will be managed which could include development and approval of Procedures and other SME deliverables.</td>
<td></td>
</tr>
<tr>
<td>subcontractors</td>
<td>Persons, company of business that signs a contract to perform part or all of the obligation of another’s contract</td>
<td></td>
</tr>
<tr>
<td>toolbox talk (TBT)</td>
<td>A toolbox talk is a term referring to operational safety. A TBT might be held with team due to embark on a high safety risk task, emphasizing the safety aspects of the job, or it might be held regularly as a series of topical safety meetings.</td>
<td></td>
</tr>
<tr>
<td>watchman</td>
<td>Attendant during confined space work</td>
<td></td>
</tr>
<tr>
<td>workforce</td>
<td>The people engaged in or available for work in the fabrication yard</td>
<td></td>
</tr>
<tr>
<td>Workforce supervisor</td>
<td>refers to the person directly responsible for a team of construction workers (typically contractors or subcontractors) on a specific job site</td>
<td>In document</td>
</tr>
</tbody>
</table>
This report is a part of a project to address fabrication site construction safety, consisting of the following:

- IOGP 577 Fabrication site construction safety recommended practice – Hazardous activities
- IOGP 597 Fabrication site construction safety Recommended practice – Enabling activities
- Fabrication site construction safety – online Resource Library

IOGP 597 recommends a set of activities that can help enable a robust safety culture at fabrication sites and is intended for use primarily by fabrication site contractor and subcontractor organizations.