Safety, Health and Environment National Authority

INDUSTRY GUIDANCE NOTE

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1. INTRODUCTION

1.1 Purpose

This Industry Guidance Note ("**IGN"**) serves as a reference on the legal requirements and processes pertaining to Combined Operation ("**CO**") activities, in accordance with the Workplace Safety and Health (Facilities) (Control of Major Accident Hazards) Regulations ("**COMAH Regulations"**).

The primary objective of this IGN is to ensure that Duty Holder(s) (**"DHs"**) adopt a consistent approach when preparing and submitting their Combined Operation Safety Case ("**COSC**") to the Safety, Health and Environment National Authority ("**SHENA**"), the designated Competent Authority under the applicable law and regulations.

A COSC is a joint Safety Case that must be submitted by the DHs of two (2) or more operated facilities engaged in a CO. Further details and interpretation regarding the term "Combined Operation" can be found in Section 5.1 of this IGN.

1.2 Scope

This IGN applies to all facilities classified under the COMAH Regulations, specifically those engaged in COs requiring the submission of Safety Cases. It aims to provide clear guidance on the interpretation and implementation of Regulation 15 of the COMAH Regulations related to COSC.

Furthermore, this IGN serves to support DHs by:

a) clarifying the circumstances under which a COSC is required;
b) defining the responsibilities of each DH involved;
c) outlining the necessary content, submission format, timelines, validity period of a COSC;
d) addressing any material changes that may arise during ongoing CO activities; and
e) ensuring that the COSC effectively demonstrates risk control measures for interface risks associated with CO activities.

2. GLOSSARY OF ABBREVIATIONS

For ease of reference, the key abbreviations used in this IGN are defined in Table 1 below.

ACRONYM	DEFINITION
ALARP	As Low As Reasonably Practicable
ASOG	Activity Specific Operating Guidelines
ERP	Emergency Response Procedure
JMAHR	Joint Major Accident Hazards Review
MAH	Major Accident Hazards
RAP	Remedial Action Plan
SCPPE	Safety Critical People, Procedure and Equipment
SCE	Safety-critical element
SIMOPS	Simultaneous Operations
SHENA	Safety, Health and Environment National Authority
SOV	Statement of Verification; additional document under ASOG
WSHA	Workplace Safety and Health Act, Chapter 277

Table 1: Glossary of Abbreviation

3. INTERPRETATIONS UNDER COMAH REGULATIONS

In order to facilitate a clear understanding of the CO work processes, key terminologies utilised throughout this IGN are defined in Table 2 below.

COMAH REGULATION 3(1): INTERPRETATION	
TERM	**INTERPRETATION AS PER COMAH REGULATIONS**
COMBINED OPERATIONS	Means two or more operated facilities, where one has the potential to affect the major accident hazards (or associated Safety Critical Equipment or safety critical people or procedures) of the other, whilst engaged in a temporary operation.
MAJOR ACCIDENT	Means — (a) an occurrence such as a loss of containment, fire, or explosion resulting from uncontrolled developments in the course of the operation of any facility, and leading to serious danger to human health, property, or the environment, immediate or delayed, inside or outside the facility, often involving one or more hazardous substances. (b) any event involving major damage to the structure of the facility or plant affixed thereto or any loss in the stability of a facility; or (c) any other event arising from a work activity on the facility involving — (i) death; or (ii) serious personal injury to three or more persons, on the facility or in neighbouring areas.
MATERIAL CHANGE	Means any change in design or operations that is significant to require a re-submission of the notification or Safety Case, and includes — (a) physical changes to the plant; (b) changes to operational parameters; (c) organisational or staff changes; or (d) change in risk profile;
HAZARDOUS SUBSTANCE	Means any substance specified in Division 2 of Part 2 of Schedule 5 to the WSHA.
SAFETY ZONE	Means any area that is declared to be a Safety Zone under the Merchant Shipping (Safety Zones) Order, 1988 (S11/1988)

Table 2: Applicable Terms

Table 3 below lists the elaborated definitions of Facilities under COMAH Regulation 3 and 10 which will be elaborated upon in Section 5.1.

FACILITY
(a) Any **onshore premises** where hazardous substances, in accordance with the quantities specified in the WSHA, are subject to the following conditions: (i) hazardous substances have been present, are currently present, are intended to be present, or may be present during any loss of control of a process; or (ii) hazardous substances are actively being used or prepared for use. (b) Any offshore **premises** whereby its primary use has included, includes or will include one of the following activities - (i) the recovery, processing, or storage of hazardous substances, or any combination of these activities; (ii) the provision of offshore accommodation for personnel working on another such facility, regardless of whether there is a direct connection to that facility. (c) Any **premises** that have undergone drilling or servicing, are *currently undergoing* drilling or servicing, or *are scheduled to undergo* drilling or servicing related to any hazardous substance. This includes the following components: (i) any well connected to the facility by pipe or cable; (ii) such part of any pipeline or other conveyance system connected to the facility as is within 500 meters of any part of an offshore facility structure or within the boundary line of onshore facility; (iii) Any apparatus or structures that are: A. situated on or affixed to the main structure of the facility; B. entirely or partially located within 500 meters of any part of the primary structure of an offshore facility and associated with a pipe connected to that facility; C. entirely or partially located within the boundary line of an onshore facility and associated with a pipe or system of pipes connected to that facility.
FIXED FACILITY
(a) A facility designed and intended to operate at a single location. This includes any mobile facility or vessel converted for use at that location, as long as they remain stationary. (b) Notwithstanding regulation 10(1)(d), the following elements are considered as part of a fixed facility: (i) equipment, structures, pipework, conveyance systems, machinery and tools. (ii) railway sidings, docks, and unloading quays serving the facility. (c) jetties, single buoy moorings, associated pipelines, warehouses, bulk storage tanks, and related structures for the operation of the facility.

MOBILE FACILITY
“Mobile facility” means a facility other than a fixed facility;

Table 3: Facilities Definition

Table 4 below lists the requirements of a COSC, which will be elaborated upon in Section 5.1.

COMAH REGULATION 15 SAFETY CASE FOR COMBINED OPERATIONS
15. (1) A duty holder for a facility which is to be involved in a combined operation shall ensure that the facility does not engage in a combined operation unless a joint Safety Case containing the particulars specified in Schedule 4 (other than those already notified to the competent authority pursuant to regulations 12 and 17(1) and Schedules 2 and 3 in respect of that combined operation) is sent to the competent authority at least 21 days (or such shorter period as the competent authority may specify) before it is due to start. (2) The requirements of sub-regulation (1) shall be satisfied if — (a) the duty holders for every facility involved in the combined operation prepare and agree to a joint Safety Case containing the particulars specified in that sub-regulation; (b) one of the duty holders involved in the combined operation submits the joint Safety Case to the competent authority at least 21 days (or such shorter period as the competent authority may specify) before the start of the combined operation; and (c) each duty holder has received a Safety Case Certificate which shall be valid for a term not exceeding one year from the competent authority. (3) Where there is a material change in any of the particulars notified pursuant to sub-regulation (1) prior to completion of the relevant combined operation, the duty holder referred to in sub-regulation (2)(b) shall, as soon as practicable, notify the competent authority of that change. (4) Sub-regulation (1) shall only require the particulars in the Safety Case to demonstrate the matters referred to in that sub-regulation to the extent that it is reasonable to expect the duty holder to address them at the time of submitting the Safety Case to the competent authority.

Table 4: Safety Case for Combined Operations

Table 5 below is an excerpt from COMAH Regulation 27. It asserts that all DHs bear the responsibility of ensuring compliance with legal requirements, and that, if found to have breached these requirements, the DH will be considered to have committed an offence.

COMAH REGULATION 27: OFFENCE
27. Any duty holder who contravenes any provision of these Regulations which imposes a duty on him is guilty of an offence.

Table 5: Offence

4. RESPONSIBILITIES OF A DUTY HOLDER

4.1 Definition of a Duty Holder

COMAH Regulation 8 defines a DH, as set out in Table 6 below.

COMAH REGULATION 8: MEANING OF "DUTY HOLDER"
8. For the purposes of these Regulations, "duty holder" means — (a) the person who manages and has direct control of a facility; (b) where a facility is yet to be constructed or operated, the person who proposes to control its operation or, if that person is not known, the person who has commissioned the design and construction of the facility; or (c) the person who executes the function of organising, designing and supervising the drilling or service of a well and all operations to be carried out by means of that well.

Table 6: Meaning of Duty Holder

4.2 Responsibilities of a Duty Holder

The DH has the following responsibilities:

(a) Ensuring the timely payment of the required fees to SHENA; and

(b) Preparation and submission of the COSC in accordance with the obligations outlined in COMAH Regulation 9.

Other responsibilities of a DH, as required under COMAH Regulation 9, are as follows:

(a) implement all reasonably practicable measures to prevent major accidents and limit their consequences to the public, assets and the environment.

(b) liaise with SHENA and other relevant authorities regarding emergencies to develop both on-site and off-site emergency plans.

(c) describe in the Safety Case how the duty holder will ensure the adequacy of the design, construction, operation, maintenance, or modification of the facility, for the relevant stage or stages of its life.

(d) submit a comprehensive Safety Case for the facility in accordance with the requirements under COMAH Regulations.

(e) refrain from operating the facility without a valid Safety Case Certificate from SHENA.

(f) ensure that the information outlined in Schedule 7 of the COMAH Regulations is accessible to the public.

The submission of a COSC by a DH is a requirement under COMAH Regulation 15(2)(b). It is important to note that upon submission, all participating DHs remain responsible for their own part of the COSC. This requirement necessitates effective collaboration among all involved DHs to develop and agree upon a comprehensive and integrated COSC.

A “joint” case implies shared authorship, collective accountability, and a cohesive demonstration of risk management across all facility interfaces. In the context of CO, the key responsibilities of all associated DHs include:

(a) Clearly defined roles,

(b) A robust bridging document,

(c) An agreed-upon command and emergency response structure, and

(d) The implementation of a unified hazard identification process that addresses interface risks.

4.3 Comparison of DH Roles in Combined Operations

Table 7 below outlines a comparative analysis of the roles and responsibilities of two (2) categories of DHs:

(a) Fixed Facility DH (e.g. production platform, FPSO, Normally Unattended Installation, etc.); and

(b) Mobile Facility DH (e.g. Mobile Offshore Drilling Unit (MODU), flotel, etc; and where applicable, other vessels such as diving support vessel (DSV) or crane barge, are subject to SHENA’s assessment.

This comparison provides a non-exhaustive overview of typical duties associated with each category. It is important to recognise that the actual responsibilities may differ based on the specific circumstances of the CO, contractual arrangements, and other relevant regulatory frameworks. Additionally, with mutual agreement, the Fixed Facility DH and Mobile Facility DH may alternate their leadership and the initiation of responsibilities within their designated duty areas, as deemed appropriate.

Duty Area	Fixed Facility Duty Holder	Mobile Facility Duty Holder
Initiate/Participate in Joint CO Risk Assessment	Must lead or co-lead hazard identification and risk assessment for CO scenarios involving MAH.	Shall contribute and align risk assessments with the fixed facility.
Identify Interface Risks	Responsible for identifying risks introduced by mobile facility, including shared systems, SIMOPS, etc.	Shall identify risks introduced by its own operations that may affect the fixed facility's MAH profile.
Develop Bridging Documentation	Shall agree in the document on how interface roles, responsibilities, and controls in the management systems are exercised between the two or more Duty Holders	Shall cooperate in the development and execution of bridging documents including but not limited to combined emergency response plans, HSE Management System interface and bridging register, combined project roles and responsibilities, integrated risk management, HSSE assurance and management review, combined incident reporting and incident investigation.
Maintain MAH Controls	Shall ensure combined activities do not degrade SCEs, Emergency Shut Down (ESD), evacuation, or emergency systems.	Shall coordinate its activities so they do not interfere with the fixed facility's critical systems.
Ensure Coordination of Management Systems	Shall provide evidence (via bridging doc) of coordinated control and command during CO.	Shall operate within the agreed control structure and stop work if risk arises.
COSC Review (if needed)	Shall revise the COSC if CO introduces new MAH or changes to existing controls.	Shall also review the COSC for material changes.
Permit to Work Coordination	Shall integrate mobile facility into PTW system or define interface clearly.	Shall operate under host PTW or a coordinated system.
Emergency Response Integration	Shall integrate mobile facility into ERP, e.g. evacuation, mustering, drills.	Shall ensure compatibility with host ERP and perform joint exercises if needed.
Monitor and Supervise CO Activities	Shall ensure supervision of combined tasks and that all risks remain ALARP.	Shall ensure compliance with agreed controls and stop unsafe operations.

Table 7: Duty Holder typical duties

5. SUBMISSION PROCESS FOR COSC

The COSC is a document that includes both a declaration and supporting evidence submitted by the involved DHs to SHENA. This submission is intended to demonstrate that adequate consideration and management strategies have been implemented to address the hazards and risks associated with the CO. Furthermore, it affirms that effective co-ordination of management arrangements, including protocols for evacuation, escape, and rescue during emergencies, has been established.

The COSC shall contain detailed descriptions of the specific operations proposed, including the outcomes of the joint safety review conducted by all participating DHs. While Section 5.1 of this IGN provides examples of COs, the list is not exhaustive, and additional scenarios may be relevant.

5.1 COSC Submission Requirement

5.1.1 Obligation to Submit a COSC

COMAH Regulation 15 pertains to activity-based risk control. It is imperative that each facility participating in a defined CO possesses a valid COSC prior to the initiation of operations. The COSC should be submitted no later than twenty-one (21) working days before the commencement of the CO, unless a shorter timeframe is specified by SHENA.

The COSC is a regulatory requirement aimed at ensuring that all potential risks associated with the interaction of multiple offshore facilities or vessels are thoroughly identified, assessed, and managed. It is essential for the COSC to clearly articulate the methods by which interface risks will be controlled and to delineate the coordination of emergency response measures among the participating facilities in the event of a MAH. This approach reflects the intent of the COMAH Regulations, which stipulate that the COSC should be both operation-specific and facility-specific, thereby limiting its scope to those facilities actively engaged in one (1) or more CO during the one (1) -year validity period of the certificate.

The level of detail required in a COSC will depend on the nature of the associated hazards and risks, as well as the complexity of the systems involved and their interactions. While Regulation 15 does not explicitly prohibit the inclusion of multiple facilities within a single COSC, it does reference a facility which is to be involved in a CO. However, for offshore CO activities, a COSC shall cover **no more than twelve (12)** offshore premises, inclusive of bridge-linked platforms, each with a clearly defined work scope and specific role in the CO. Where an offshore complex covers more than twelve (12) offshore bridge-linked platforms, the DH shall consult SHENA prior to submission.

COSC submissions are required to adhere and focus on the following criteria:

(a) **Operation Specific**: Submissions must address actual and clearly defined COs avoiding speculative or blanket cases; and

(b) **Interface Focused**: Refers to the systematic identification, management, and control of safety-critical interactions between two (2) or more organisations, installations, vessels, or activities operating together or in proximity under the COMAH Regulations. For example, an interface focus has been applied to CO involving the COMAH-regulated facility and visiting vessels. Organisational, operational, and technical interfaces have been identified and managed to ensure that responsibilities are clearly defined, risks are controlled, and emergency arrangements are aligned, in accordance with COMAH regulatory requirements demonstrating effective management of real safety dependencies.

A COSC is required even in the absence of newly identified MAHs, provided that existing MAHs overlap or interact across different facilities. The COMAH Regulations require each facility to conduct a site-specific risk assessment and to clearly justify workplace safety.

As such a COSC submission that covers more than twelve (12) offshore premises would not satisfy these regulatory requirements and is therefore not allowed, as it would generalise key elements such as hazards, emergency response, and risk control measures, rather than addressing the distinct circumstances of each facility. The DHs must demonstrate effective site-specific risk management in their submissions. Hence, the limitation of twelve (12) premises per COSC submission is imposed to ensure effective management of safety and health aspects of the planned CO.

Mandatory Prohibition

A facility is prohibited from participating in a CO unless a COSC has been submitted to SHENA in accordance with legal requirements. This requirement establishes a mandatory condition that must be met before operation begins. Any participation without the required submission is considered a serious regulatory breach.

COSC Requirements

The COSC must include the particulars outlined in Schedule 4 of the COMAH Regulations, which address risk specific to the CO, including hazard identification, control measures, and emergency coordination.

It is imperative to ensure that the COSC does not duplicate detailed information already provided under the following COMAH Regulations. However, the DH is required to provide only high-level summary for context or background information:

(a) For Fixed Facility Safety Case – Refer to Regulation 13 and Schedule 2

(b) For Mobile Facility Safety Case – Refer to Regulation 14 and Schedule 3

This exclusion clause is designed to uphold the principles of regulatory efficiency and proportionality by preventing the unnecessary resubmission of information that has already been subjected to comprehensive review.

5.1.2 Extent of Information in Safety Case Submission

COMAH Regulation 15(4) specifies that the obligation to submit a comprehensive COSC is subject to what is reasonably expected, taking into account the operational context and the information available at the time of submission.

The term *"reasonable to expect"* is to be interpreted objectively, based on the following criteria:

a) The nature and complexity of the CO;
b) The extent of operational details that are available; and
c) The foreseeability of MAHs at the time of submission.

Consequently, the DHs are expected to:

a) Demonstrate their preparedness; and
b) Commit to ongoing review and update as further information becomes available.

It is strongly advised that DHs engage with SHENA at the earliest opportunity, even if project parameters are still evolving, to ensure clarity of expectations and alignment with regulatory requirements.

5.1.3 Requirement for COSC

This section outlines typical scenarios in which the submission of a COSC is necessary (Figure 1). The aim is to clarify the scope and applicability of COMAH Regulation 3(1). Subsequently, the section will delineate the specific circumstances that require a COSC submission. Note that any vessel holding a valid Mobile Facility Safety Case certificate entering the 500-meter safety zone of any Fixed Facility with a valid Fixed Facility Safety Case is classified as a CO, and accordingly requires the DHs of both the Mobile Facility and the Fixed Facility to submit a COSC to SHENA.

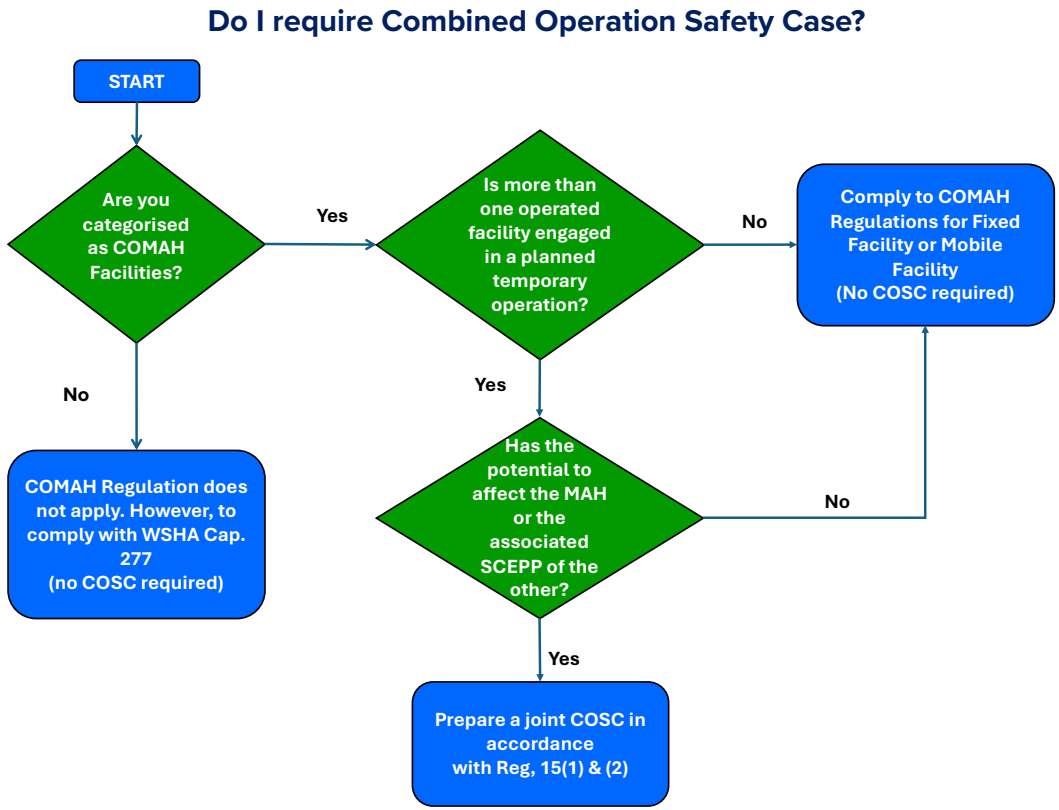

Figure 1: Requirement for COSC

5.1.3.1 Operated Facilities

Definition of "Operated"

A facility is regarded as "operated" when it actively participates in activities that may introduce, modify, or interact with hazardous substances, processes, or systems, thereby impacting the safety or integrity of other facilities. These activities require coordinated management systems, emergency response measures, or work control protocol. The term also encompasses any activities that materially influence MAH risk, such as, during full production, drilling, or processing operations.

The following examples are provided to illustrate circumstances in which a facility may be classified as "operated" due to its active involvement in a CO scenario, even if it is not in full production or drilling mode. This list is intended for illustrative purposes, and is not exhaustive:

a) Mobile Offshore Drilling Unit (MODU)
b) Diving Support Vessel (DSV)
c) Flotel / Accommodation Vessel
d) Floating Production Storage and Offloading Unit (FPSO)
e) Well Test Package on a MODU
f) Subsea Installation Vessel
g) Drillship
h) Floating Storage Unit (FSU)
i) Offshore Platform or Normally Unmanned Installations (NUIs)
j) Onshore Refineries

Each vessel that qualifies as a "mobile facility" under the COMAH Regulations shall be treated as a distinct facility for the purposes of COSC. However, the illustrative list above does not automatically, or immediately, categorise activities as a CO. If in doubt, the DH should contact SHENA at psd@shena.gov.bn as early as possible for further advise on the categorisation of Mobile Facilities and CO.

Definition of "Facilities"

According to Regulation 10(1), a facility is defined broadly defined to include the following:

a) Onshore sites that handle hazardous substances in accordance with relevant COMAH thresholds, whether these substances are present, utilised, or potentially released;
b) Offshore sites engaged in activities related to:
    (i) Recovery, processing, or storage of hazardous substances;
    (ii) Providing accommodation, such as flotels, that supports these offshore operations.
c) Sites responsible for drilling or servicing wells that involve hazardous substances.

This definition encompasses:

(a) Wells and sections of pipelines that are situated within 500 metres of the facility;

(b) Equipment or structures that are physically present on or near the facility and that are directly associated with hazardous substances.

5.1.3.2 Potential to Affect MAH

The term “Affecting MAH” means that the CO has the potential to introduce, modify, exacerbate, or interact with hazards thereby leading to a MAH. Additionally, it encompasses the possibility of the CO interfering with existing control measures for managing MAH.

This consideration is particularly important in the context of interactions between different installations or vessels, as well as the emergence of new interface hazards that could compromise existing safety protocols or introduce additional MAH risks that have not been accounted for in current safety assessments.

When two (2) or more operated facilities are operating together, “affecting MAH” can occur through several mechanisms as per the following examples:

a) The introduction of new hazards by the CO, such as equipment, processes, activities, that have not been evaluated in any Safety Case;
b) Interference or degradation of existing MAH controls (i.e. safety-critical systems) on either installation due to mechanical, structural, process, or procedural interactions;
c) Interactions of MAH between a Mobile Facility and a Fixed Facility may create escalation routes that would not exist if each Facility and its system operated independently;
d) If Facilities share critical services, such as emergency response arrangements, utilities, ESD zones, or firewater systems, an incident in one (1) location can disrupt those shared services and, in turn, weaken MAH controls within the vicinity of Mobile Facility or Fixed Facility;
e) Risks associated with structural or physical interface (e.g., dynamic loads, collisions, connections, bridging, mooring) that may compromise structural integrity and lead to major accident;
f) SIMOPS where overlapping hazards may occur, such as lifting operations conducted alongside ongoing production or diving activities near active hydrocarbons; and
g) Interference with access, escape, or rescue operations, where joint operations may obstruct or impair evacuation routes or the ability to execute rescues during a MAH event.

Consequently, “affecting MAH” extends beyond minor or routine tasks; it specifically pertains to risks within the MAH domain, including those related to fire, explosion, loss of containment, structural failure, and well-control incidents.

5.1.3.3 Interface Risks

Interface Risk refers to additional or emergent risks that arise from the interactions, connections, or overlaps between two (2) or more systems, installations, organisations, or activities, especially during CO. These risks do not exist when each party operates independently. Often concealed, interface risks can allow a minor failure in one (1) system to escalate into a major accident. Effective mitigations of these risks are vital, as no single party bears complete responsibility for the hazard. Consequently, it is imperative to establish clear bridging documentation, conduct joint risk assessments, and issue COSC.

Examples of interface risks are presented in Table 8 below. This list is not exhaustive, and additional risks may be identified based on specific operational circumstances.

Interface Risks Example	Risks Description
Firewater tie-in between two (2) installations	Overloading of one installation's pump capacity reduces effectiveness during MAH.
Electrical cable from vessel to platform	Incompatibility or overload could cause arc flash or loss of power to safety-critical systems.
Hydraulic or chemical injection lines run across installations	Leakage, pressure incompatibility, or valve misalignment could cause release.
Jack-up rig adjacent to platform	Punch-through risk; dynamic loading; collision during cantilever movement.
Walk-to-work vessel for personnel transfer using gangway to platform	Failure of gangway could ultimately result in injury and impact evacuation routes.
Heavy lift over live process area	Dropped object can damage hydrocarbon pipework, triggering MAH.
Piping connection for bulk fluid transfer (e.g., methanol)	Over-pressurisation or the use of incompatible materials can lead to loss of containment.
SIMOPS during flaring and hot work	Hot-work ignition risk increases due to flammable releases from an adjacent process.
Two (2) different operators sharing command during SIMOPS	Confusion in permit-to-work, shift handover, or emergency response roles.
Diver team from vessel not covered by platform's ERP	Delay in emergency coordination, lack of rescue capability.
Different work planning tools or incompatible PTW systems	Inconsistent isolation, leading to accidental energisation or exposure.
Evacuation routes blocked by temporary equipment	Personnel unable to escape during fire or explosion.
Conflicting mustering points during combined operation	Confusion and delayed response during fire or gas release.
One (1) installation relies on another's helideck or rescue craft	Unavailable in emergency, increasing the potential for harm.
MODU or flotel moored near platform	Station-keeping failure could result in a collision with process deck.
Dynamic positioning system failure	Drift-off into live hydrocarbon riser or crane zone.
Diving vessel near venting gas	Divers are exposed to flammable atmosphere; plume can be ignition source.

Table 8: Examples of Interface Risks

5.1.3.4 Engaged in Temporary Operation

The term “engaged” within this context, refers to any facility that is either functionally or physically connected to another site during a CO. This encompasses both onshore or offshore facilities, as well as a Mobile Facility such as Mobile Offshore Drilling Unit (MODU), and flotel. Please refer to Table 9 for examples.

For regulatory purposes, the term “engaged” should be interpreted broadly to include any facility that possesses safety-critical interfaces. This interpretation extends beyond those directly involved in the combined activity and includes any participation or operation in which risks may intersect (see Section 5.1.3.3). This may also include activities within the 500-meter zone where such activities could impair MAH controls at other facilities.

A facility may be considered engaged in a temporary operation where its normal operations intersect with the temporary activity, where existing MAH control measures are altered, degraded, shared, or dependent on coordination with another DH, or where concurrent activities introduce new or increased MAH risks. This includes short-term activities within the 500-metre zone where such activities could reasonably impair, undermine, or compromise MAH control measures at another facility, regardless of whether the facility is directly participating in the temporary operation. In this case, the DHs are expected to assess engagement based on the potential for risk interaction and impact on MAH controls, rather than organisational boundaries, contractual arrangements, or the temporary nature of the activity.

Examples of how a facility is “Engaged”	Description
Physical involvement	The facility’s equipment or systems are used or impacted (e.g. control systems, top-side infrastructure, subsea tie-in)
Operational interaction	Work activities are planned and executed in coordination between facilities (e.g. SIMOPS, shared lifts, well intervention)
Personnel involvement	Staff or contractors from one facility are working on or with another (e.g. flotel accommodation, shared PTW systems)
Emergency preparedness linkage	Emergency plans and systems are linked (e.g. shared evacuation routes, firewater coverage, medevac)
Impact on MAH or safety systems	One facility’s operation could impair the MAH controls of the other (e.g. flammable inventory, ignition risk, pressure containment)
Operating within Safety Zone of a Fixed Facility	Engagement within the 500-meter zone could impair the MAH controls of the other (e.g. flammable inventory, ignition risk, pressure containment, or vessels performing activities such as lifting or diving within the vicinity of a fixed facility that has live hydrocarbon processing systems.)

Table 9: Examples of How a Facility May Be ‘Engaged’

5.1.4 Typical scenarios to submit COSC

Table 10 outlines common scenarios in which a COSC may be required. This list is not exhaustive, and the DHs should confirm with SHENA for clarification if there are any uncertainties pertaining to the requirement for submission.

COSC Activity	What MAH / Controls are Affected / Introduced	How it "affects MAH"
Completion Well Intervention	Structural loads, pressure control failure, interference with risers, loss of well containment	Can impose additional structural loads and involve high-pressure systems, increasing the risk of loss of containment or well-control failure.
Diving	Diver safety, entanglement, equipment failure, exposure to hydrocarbons	Diving near live subsea systems can result in diver injury or fatality if control barriers fail or diver is exposed to hydrocarbons.
Engineering & Maintenance	System breach, structural failure, loss of containment	Maintenance work may breach system integrity, remove barriers, or involve lifting, increasing risk of fire/explosion if hydrocarbons are present.
Pipeline Replacement Project	Line rupture, fire/explosion, incompatible connections, isolation failure	Replacement may introduce leaks or rupture risks if not properly isolated; also involves lifting and tie-ins, which can interfere with existing systems.
Abandonment	Well control failure, structural collapse, residual pressure release	Plugging and abandonment activities may result in uncontrolled flow or failure of well barriers if not properly executed.
Drilling	Kick, blowout, loss of containment, interference with risers or structure	Drilling imposes pressure-related risks and dynamic loads on structures; kicks or blowouts may occur without proper control systems.
Engineering & Maintenance of Helideck Reinstatement	Dropped objects, lifting failure, structural damage	Involves lifting near the platform; dropped objects can damage critical systems or structures.

COSC Activity	What MAH / Controls are Affected / Introduced	How it "affects MAH"
Beam Pump Repair	Electrical failure, ignition source introduction, hydrocarbon exposure	Repairs can introduce ignition sources or expose hydrocarbons; electrical faults can trigger fire/explosion.
Drilling & Abandonment	Kick, blowout, structural loads, pressure control failure	Combines risks of both drilling and abandonment—requires strict barrier management to prevent hydrocarbon release.
Jetty Rejuvenation	Lifting failure, structural damage, fire hazards	Crane/lifting operations near jetty may impact process piping or introduce ignition sources.
Well Intervention	Pressure control failure, chemical exposure, riser interference	Involves re-entry into live wells; failure of control systems can result in blowouts or exposure to pressurized hydrocarbons.
Installation, Drilling & Tie In	Combined stress loads, incompatible system connections, hydrocarbon leaks	Ties into live systems can result in leaks or integrity failures; multiple activities increase overall risk.
Well Completion	Barrier failure, blowout, gas release	Completion removes barriers temporarily; improper control may lead to blowout.
Abandonment, Drilling & Recompletion	Pressure control failure, structural loads, simultaneous operations risk	Complex combination of operations increases MAH exposure, especially regarding pressure containment and mechanical interference.
SURF Installation	Subsea system failure, connection leak, ROV collision	Subsea equipment installation risks leakage, connection failure, or damage by remotely operated vehicles (ROVs).
ESP Changeout	Electrical hazards, well integrity failure, gas release	Involves handling electrical submersible pumps in live wells; failure may breach containment barriers.
Floating & Subsea Hose Changeout	Hose rupture, incompatible fluids, leak bypassing isolation	Fluid transfer operations risk leaks that bypass existing safety systems, potentially causing hydrocarbon release or fire.
Drilling & Pipelaying	Well control failure, structural loads, interference with subsea systems	Simultaneous pipe laying and drilling increases operational complexity and MAH exposure.

Table 10: Examples of typical scenarios to submit COSC

5.1.5 Typical Scenarios not to submit COSC

Table 11 outlines typical scenarios where submitting a COSC may not be required. This list is not exhaustive, and if in doubt, the DH should contact SHENA at psd@shena.gov.bn as early as possible for further advise on the categorisation of Mobile Facilities and CO.

Operation	Description	Examples
Operations within one installation or premise	If the work is entirely within a single installation's boundary, using only equipment covered in its safety case.	Performing maintenance activity as per platform routine maintenance schedule using equipment already described in the installation's safety case, with no support from another Mobile Facility.
Where a vessel or work unit does not meet the definition of a mobile facility as specified in COMAH Regulations 3	Support vessels (e.g., supply boats, standby vessels, anchor handling tugs) are typical examples of vessels or work units that do not meet the Mobile Facility definition.	A supply vessel (PSV) delivering cargo or bunkering
Operations Outside of Safety Boundary of a Premise	Pigging, inspection or maintenance of subsea pipelines away from installations, or activities that do not impact the safety of any installation. If the diving or lifting activity is performed at a safe distance from the installation and doesn't interfere with its critical safety systems or major accident hazards.	Subsea ROV inspecting a pipeline tie-in 5 km away from the platform. A supply vessel that is not qualified for a Mobile Facility Safety Case lifting materials outside 500-meter safety zones of an offshore Fixed Facility

Table 11: Typical Scenarios not to submit COSC

5.2 Combined Operation Safety Case Document

COMAH Regulation 15 establishes a critical requirement for COs. No physical CO activities may commence without the following pre-requisites:

(a) Preparation of a comprehensive COSC;
(b) Engagement with SHENA prior to submission; and
(c) Obtaining receipt of a COSC Certificate, which shall remain valid for a term not exceeding one (1) year.

These stipulations create:

(a) A gatekeeping mechanism for SHENA.
(b) An ongoing duty to disclose any material changes prior to approval.
(c) A safeguard to align regulatory expectations with the practical of operational activities.

It is imperative that each DH possesses a valid COSC Certificate before engaging in CO activities.

5.3 Scenarios Requiring Material Change

In accordance with COMAH Regulation 15(3), it is required that any material change be duly notified to SHENA. This duty is applicable throughout the duration of the CO. A “material change” is defined by the following conditions:

(a) Physical modifications to the plant.
(b) Adjustments to operational parameters.
(c) Organisational or staffing changes.
(d) Modifications in the risk profile.

DHs who have submitted a COSC under COMAH Regulation 15(2)(b) hold the exclusive statutory duty to notify SHENA of the changes. It is imperative that this notification occurs as soon as practicable, reflecting a legal duty to diligently monitor, assess, and report any changes in a prompt manner.

The following are examples of scenarios that may require a Material change for COSC [**NB:** It is essential to confirm the significance of each change with SHENA]:

(a) Addition of a Mobile Facility Vessel: Introduces new major accident hazards, interfaces, and operational differences that affect risk controls and emergency response.
(b) Replacement of a Mobile Facility Vessel: Different vessel design or systems may invalidate existing controls and require updated safety-critical procedures.
(c) Introduction of additional as well as any replacement of platforms or premises: Increases cumulative risk through shared utilities and hazards, requiring reassessment and combined safety case.
(d) Modification of the organisation within the CO: Changes roles or responsibilities, potentially impacting supervision, hazard management, and emergency response.

(e) Expansion of work activities or scope of work within the CO: Adds new processes or substances, altering the risk profile and necessitating updated hazard controls and risk assessment; or

(f) Any changes affecting the CO activities due to a Stop Work Order: Operational change affects hazard profile and safety-critical systems, requiring shutdown, isolation, or decommissioning plans.

Definition of "significance of each material change" will be further detailed in a dedicated IGN for Material Change. However, stakeholders involved are highly encouraged to confirm the significance of each change with SHENA.

5.4 Submission and Examination Processes

This section outlines the processes and guidance governing the examination of the COSC. SHENA will initiate the examination upon receipt of a complete submission from the DH, which must include all requisite documentation and information, along with the payment of the appropriate fees as stipulated by the COMAH Regulations.

The examination processes comprise five (5) steps, as outlined below:

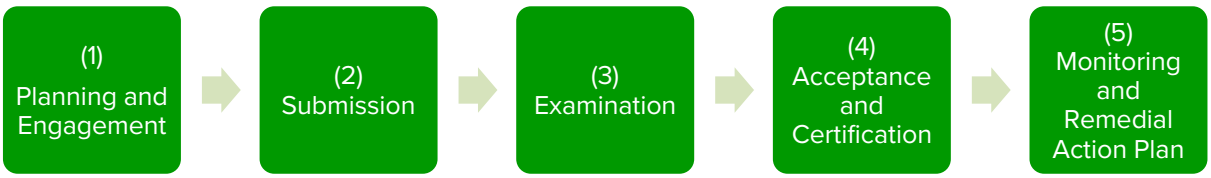

Figure 2: COSC Examination Process

5.4.1 Step 1: Planning and Engagement

- A DH planning to conduct any CO activity under COMAH Regulation 15 is required to apply for a Safety Case Examination by first initiating communication with SHENA.

- The DH responsible for submitting the COSC is advised to initiate communication with SHENA by either emailing to finance@shena.gov.bn to request a Finance Reference Number (FRN) or by completing the form available on the SHENA website at the following link: https://shena.gov.bn/safety-case/combined-operations-safety-case. This initial communication will serve to inform SHENA of the request. Subsequently, a meeting may be scheduled to promote a detailed discussion of the request, address any queries, and gather the necessary information essential for the COSC. Engaging early on in this process is vital in ensuring that expectations are clearly defined as preparation for the COSC progresses.

- Instances that necessitate submission are specified in Section 5.1.3Requirement for COSC. Should it be determined that the facility requires a COSC, the DH is required to complete a formal application by registering on SHENA's website.

- Upon successful registration, a FRN will be issued. This FRN will be used as a reference for all related invoices and submission documents. Invoices will be issued to the DH, who is responsible for settling the fees as required. Where a COSC involves two (2) or more DHs, each DH will be invoiced separately for the fees. Where a DH has two (2) or more facilities involved in a CO, the DH is required to pay for each facility. Please refer to Table 12 below.

- For any material change to the COSC, the prescribed fee shall be borne by the main DH, typically the Fixed Facility DH. Where the material change involves the addition of vessels, the Mobile Facility DH shall pay the additional fees. Please refer to Table 12 below.

- Following the completion of payment, a receipt associated with the FRN will be issued to the DH. For payment to be deemed completed, the DH shall provide supporting documents such as remittance advice, payment slip, etc., to SHENA and that the payment has been sighted in SHENA's account.

- Below are the various types of COSC submissions:

  i. <u>New Submission</u>

     The DH may initiate communication with SHENA through an engagement session to declare their intent and present relevant details regarding the proposed CO activities. Following this engagement, SHENA will assess whether the activities require COSC submission for examination.

  ii. <u>New Examination (Due to Unacceptability)</u>

     It is important to note that there is a limit of three (3) examination rounds (first submission, second submission, and third submission). If the COSC is not accepted after the third submission, the DH must initiate a new COSC submission and make the appropriate payment to enable SHENA to conduct a new examination.

In cases where COSC activities end earlier than planned, formal notification is not required

Table 12 below outlines the fees associated with the submission of COSC.

COMAH Regulation 28(1)	SHENA will charge fees as specified in COMAH Regulation Schedule 8 for the issuance of Safety Case Certificates, notifications, inspections, and investigations on facilities.
COMAH Regulation 28(2)	It is important to note that these fees are non-refundable and must be paid by the DH.

COMAH Regulation Schedule 8 Para 3(f)	For COSC, a fee of $25,000 per facility is required at the time of the initial submission of the Safety Case document.
Material Change to COSC	The DH of Fixed Facility to bear the cost of Material Change i.e. $10,000 per Material Change
Adding of Mobile Facility to Existing COSC	The DH of Mobile Facility to bear the cost of adding the Mobile Facility to the COSC i.e. $25,000 per Mobile Facility

Table 12: Associated Fees for COSC Submissions

5.4.2 Step 2: Submission and Payment

- Upon receipt of full payment from all DHs specified on the invoice, SHENA will email the receipt to the respective DH.
- The COSC may be submitted in a digital format via email. Alternatively, submissions may be made through a shared link, SharePoint, or a physical medium, such as a USB drive or CD.
- SHENA will conduct a thorough review of the submission and its appendices to ensure that all required elements are complete. This review will take a minimum of twenty-one (21) working days, which includes the time allocated for the DH to provide feedback on the initial submission. Subsequently, an acknowledgement email will be sent to the DH to confirm receipt of the COSC. Should any deficiencies be identified during the review, SHENA will communicate with the DH via email to request the necessary corrections.
- The submission must include the completed COMAH examination matrix, which is available on the SHENA website.
- The DH is required to submit the COSC no less than **twenty-one (21) working days** prior to the commencement of the CO. Review will only commence once SHENA has received documents and has sighted full payment. This timeframe is essential to allow SHENA sufficient time to review the COSC, seek clarifications, and address any issues that may arise. While the twenty-one (21) working days is the minimum required under COMAH Regulation 15(1), it is advisable for the DH to submit the COSC well in advance. This proactive approach allows sufficient time to adequately response to any concerns raised by SHENA before the scheduled start of operation.

It is important to note that the “shorter period” referenced in COMAH Regulation 15(2)(b) (see Table 4) is a discretionary exception that can only be applied by SHENA in exceptional or urgent circumstances, such as emergency operations. The DHs should not perceive this provision as a standard or guaranteed submission practice.

5.4.3 Step 3: Examination

SHENA uses a traffic light approach in its examination process, as shown in Table 13 below, to indicate the result of the submission's examination.

COLOR	DEFINITION	ACTION REQUIRED	EXAMPLES (including but not limited to)
RED	Information is missing	▪ Submission is not accepted due to not meeting the COMAH Regulations requirements. ▪ DH to make amendments to the submission based on the comments provided (particularly the red comment items) and submit the submission's iteration to PSD.	Missing combined HAC (Hazardous Area Classification) drawings. Missing Mobile Facility Site Specific Survey.
AMBER	Information is minimal, or an incorrect reference	▪ COSC is accepted as it has met the COMAH Regulations requirements. ▪ However, the DH is responsible for ensuring that all RAP actions and amber comments are closed. DH must ensure the closure of all RAP actions by the specified target date and keep SHENA informed of the progress. The DH is required to maintain documentation evidencing the closure of RAP actions, as SHENA reserves the right to request for this evidence at a later date. ▪ The DH is required to submit final submission to SHENA prior to issuance of certificate.	Items that received an Amber rating on the Assessment Matrix are generally related to administrative issues. Common factors contributing to an Amber rating include inconsistent references, appendices with outdated revision, outdated laws and regulations, and typographical errors. Attached SDS is not valid for the past five (5) years. SDS provided does not match the hazardous substances listed in the main documentation.
GREEN	Information is suitable and correctly referenced	▪ COSC is accepted as it meets the requirements of the COMAH Regulations. ▪ The DH is required to submit final submission as a clean copy to SHENA prior to issuance of certificate.	As per Section 6 meeting the requirements for submission requirement for the COSC.

Table 13: Traffic Light System with Definitions for Examination Results

- In the event that the submission examination does not meet the required standards, SHENA will formally notify the DH via email regarding the identified non-compliance or failure to adhere to the COMAH Regulations. SHENA will provide guidance to the DH for resubmitting the COSC, emphasising the need for the necessary iterations and improvements.

- It is important to note that a **maximum of three (3) iteration submissions is permitted.** Any submission beyond this limit will necessitate the completion of a new FRN and will be treated as a new submission (Repeat Step 1).

- Should the submission be deemed acceptable, SHENA will issue an acceptance email to the DH, accompanied by the COSC certificate, which will include a statement affirming compliance with the COMAH Regulations.

- Throughout the examination process, SHENA will utilise Microsoft Excel to record the comments and results of the examination. These comments will subsequently be shared with the DH, who is expected to use this as a reference for making any necessary amendments to their COSC in soft copy. **All changes made during the iteration process are to be highlighted in yellow in the following COSC submission**.

- Clarification meetings are considered optional; however, SHENA may choose to conduct them to enhance understanding of the COSC content. These meetings may be held via online platforms, in person, or through email correspondence with the DH.

5.4.4 Step 4: Acceptance and Certification

- Upon completion of the examination and acceptance of the submission, SHENA will deliver an Acceptance Email to the DH. This email will include the COMAH Examination Matrices, which will contain any relevant comments as well as a statement confirming compliance with the COMAH Regulations. Additionally, it will grant permission to proceed with the planned activity as outlined in the submission.

- In the case of the COSC, an Acceptance Email will be delivered upon approval. The issuance date of the Safety Certificate will be aligned with the email acceptance. However, it is important to note that the certificate will only be issued upon receipt (and upon completion of final review) of a clean copy of the COSC. Failure to obtain the certificate prior to commencement of any CO work renders the operations unlawful.

In accordance with the COMAH Regulations specify the validity of a COSC Certificate shall **not exceed one (1) year**. This timeframe ensures that DHs remain committed to conducting CO activities in accordance with their accepted COSC and project timeline. Should unforeseen circumstances result in delays that extend beyond the validity period, the DHs may formally request a new submission from SHENA as necessary.

5.4.5 Step 5: Monitoring and Remedial Action Plan (RAP)

- Following the acceptance of the COSC, any outstanding comments or actions that the DH is required to address will be documented in the RAP. Should a RAP be established, as specified and acknowledged in the accepted COSC, it is the responsibility of the DH to successfully complete all necessary actions to address and close these RAP items.

- Upon completion of these actions, the DH is expected to promptly inform SHENA, providing any requisite supporting documentation. Additionally, the DHs to submit a close-out report and an accompanying formal letter to conclude the process. A meeting may be scheduled to discuss the submitted evidence and to verify the closure of the RAP items.

- During the ongoing CO activities, the DH may provide periodic updates on the status and progress of the RAP open action items through engagement sessions with SHENA, including quarterly meetings.

6. SUBMISSION REQUIREMENTS FOR THE COSC

It is imperative that all COSC, including material changes to a COSC, shall undergo a formal acceptance process as it is important to recognise that such acceptance entails a thorough evaluation of the DH's methodology for identifying and properly addressing health and safety requirements. The particulars necessary for inclusion in the submission of a COSC, or material change to a COSC, is described under COMAH Regulations Schedule 4, as set out in Table 14 below.

PARTICULARS REQUIREMENT UNDER SCHEDULE 4	EXPLANATORY	Examples of List of Documents to be submitted (Including but not limited to)
DUTY HOLDER		
1. The name and address in Brunei Darussalam of each DH involved in preparing the Safety Case and a confirmation that every duty holder has agreed to the contents of the Safety Case.	Each DH participating in the CO must: ▪ be legally registered in Brunei Darussalam and clearly identified in the COSC, including their full name, company address, and contact details. ▪ ensure that the COSC contains a written confirmation that all DHs have consented its contents.	SHENA expects a detailed written information containing the following particulars: ▪ the name of the DHs concerned. ▪ the name of the company / companies concerned along with their authorised signatures either wet or digital. **Note**: In the event that the DH is unavailable due to absence or leave, a Letter of Appointment or Authorisation will be required to authorise another individual to submit the COSC on behalf of the DH during their absence.

PARTICULARS REQUIREMENT UNDER SCHEDULE 4	EXPLANATORY	Examples of List of Documents to be submitted (Including but not limited to)
DESCRIPTION OF FACILITIES		
2. Summary description of the facilities involved in the CO.	DHs must provide: ▪ a comprehensive summary of all facilities involved in the CO, including details regarding their type, function, and operational boundaries. This description serves to define the scope and physical interface of the CO, thereby enabling SHENA to effectively identify all operational areas of interaction. ▪ layout diagrams or schematics that illustrate which facility is designated as the host and which is the visiting facility, along with the respective roles of each in managing operations.	▪ Fixed Facility Site Specific Survey or any similar documents detailing the conditions observed on each of the locations where the COs are planned to take place, including the site survey of all the facilities involved. Such documents often include a detailed inventory of Safety Critical Equipment for both Mobile Facility and Fixed Facility. ▪ DHs are required to provide evidence that the Mobile Facility possesses a valid Safety Case and is adequately prepared to carry out the planned operations at the Fixed Facility.

PARTICULARS REQUIREMENT UNDER SCHEDULE 4	EXPLANATORY	Examples of List of Documents to be submitted (Including but not limited to)
3. Particulars of any plant installed solely for the purpose of permitting the facilities to engage in the combined operation.	DH must provide detailed descriptions of any plant, equipment, or systems that are installed exclusively to facilitate the CO. This may include element such as gangways, flexible risers, or temporary control systems. It is essential to ensure that these temporary or bridging systems, are subject to thorough design verification, maintenance, and operational control. DHs must demonstrate that the equipment conforms to relevant standards (e.g. API, ASME) and specify the DH responsible for its safe operation and inspection throughout the duration of the CO activity.	▪ Detailed Combined Hazardous Area Classification (**HAC**) drawings. ▪ Facility schematics showing the interfacing of hazardous clouds when a Mobile Facility interfaces with a Fixed Facility. ▪ Fixed Facility Site-Specific Survey (**FFSSS**) and any related documents should detail the conditions observed at each location designated for the planned combined operations, including the site survey of the Mobile Facility. These documents are expected to include a thorough inventory of **SCE** for both Mobile and Fixed Facilities. To address the potential risks associated with Dynamic Positioning (**DP**) failures for offshore Mobile Facilities, it is imperative to conduct a seabed debris survey and anchor pattern study. This survey and study must be authorized by the relevant Technical Authority (**TA**) and are aligned with the standards required for all official technical documentation requiring such approval).

PARTICULARS REQUIREMENT UNDER SCHEDULE 4	EXPLANATORY	Examples of List of Documents to be submitted (Including but not limited to)
		▪ ASOG and ASOG SOV for must be provided. ▪ DHs to include the description of equipment that enables CO activities to take place such as Motion Compensated Gangway (MCG) and Heave Compensated Gangway (HCG), including industry systems commonly known as 'Ampelmann'. The DHs shall also describe any third-party equipment such as Radioactive materials and evidence of SHENA-approved licence to use such materials, explosives, gas detectors and H2S equipment, and well intervention equipment and diving related apparatus.

PARTICULARS REQUIREMENT UNDER SCHEDULE 4	EXPLANATORY	Examples of List of Documents to be submitted (Including but not limited to)
INVENTORIES AND PROPERTIES OF HAZARDOUS SUBSTANCES		
4. Particulars of hazardous substances introduced to any facilities as a result of the CO.	The COSC must provide comprehensive details regarding any hazardous substances introduced directly due to the CO. DHs are required to demonstrate that they have identified and evaluated the implications of these new or modified inventories on the overall risk profile of each facility. This assessment aims to ensure compliance with COMAH thresholds and to maintain the cumulative effects of these substances within established safe design limits. To support this, the COSC should include updated inventory lists and valid Safety Data Sheets. These standardised documents provide detailed information regarding chemical substances or products, including their associated hazards, safe handling practices, and emergency preparedness measures. It is vital that these SDS are current and not older than five years. Furthermore, thorough assessments of hazard properties should also be included to ensure a thorough understanding of potential risks.	▪ Updated inventory of hazardous substances with current SDS, including valid information on any radioactive material. ▪ In the event that radioactive materials are to be used, the DH is required to provide a copy of the SHENA-approved Radiation Licence as part of the appendix in the COSC submission. For CO activities involving well drilling or well services, the DHs are required to submit SDS along with relevant documentation for any potential Hazardous Substances that will be used during the CO. This includes the types of mud and kill fluid, explosives for perforation or tubing cutting, and any radioactive materials that will be used for well reading and measurement purposes.

PARTICULARS REQUIREMENT UNDER SCHEDULE 4	EXPLANATORY	Examples of List of Documents to be submitted (Including but not limited to)
MAJOR ACCIDENT HAZARDS ASSESSMENT		
5. A summary of the joint major accident hazard shall include – (a) a demonstration that any limit for the safe operation or use of plant which are contained in the specifications for the design of the facilities or their plant will not exceed will not be exceeded while the facilities are engaged in the combined operation. (b) a description of any activities during the CO which may involve hazards with the potential to cause major accidents; and (c) the likely impact of the identified major hazards, including detailed drawings of over-pressure, thermal impact and hazardous area classification zones for the facilities involved and on the neighbouring community.	DHs are required to conduct a JMAHR to identify and assess potential hazards associated with the CO. The COSC must demonstrate compliance with design and operational limits, ensuring that all potential major accident scenarios are thoroughly identified. This assessment must also address hazards arising from SIMOPS or shared systems. The submission should consist of detailed risk assessments, overpressure and thermal impact contours, and hazardous area classification maps, and a consideration of potential effects on nearby facilities and the surrounding community.	▪ Conduct a Major Accident Hazard Risk Assessment (**MAHRA**), Hazard Identification (**HAZID**), and Bowtie studies relevant to the CO. The Bowtie studies should include a comprehensive list of personnel who attended the HAZID or Bowtie session, serving as evidence of workforce consultation. ▪ Prepare an approved lifting plan for any heavy lifting activities. This may include samples of a Lifting Permit and a Pre-Lift Drops Checklist. ▪ Establish a valid Manual of Permitted Operation (**MOPO**) framework that addresses well operations, construction, and marine activities. This documentation should include any authorised references regarding **SIMOP**. ▪ Conduct a Pipeline Risk Assessment (**PRA**), where applicable. The DH must ensure the information remains accurate and up to date.

PARTICULARS REQUIREMENT UNDER SCHEDULE 4	EXPLANATORY	Examples of List of Documents to be submitted (Including but not limited to)
		▪ Follow the ASOG and ASOG SOV. Any outstanding action items or findings stated on the SOV, particularly those of a critical nature, such as DP failures, must be addressed in the Safety Case submission. In instances where an action item cannot be rectified within the designated timeframe, the DH is required to provide a written statement under the relevant section of the COSC explaining the circumstances surrounding the action item. Additionally, the DH is responsible for including these items in the updated RAP list. An email cover for the SOV should also be submitted in place of a signed SOV. ▪ Transparent account of lessons learned from past and current incidents, particularly emphasising mitigations implemented as a result of the lessons learned from each incident, and how these are effectively communicated to the workforce involved in the CO activities to prevent repeat occurrence.

PARTICULARS REQUIREMENT UNDER SCHEDULE 4	EXPLANATORY	Examples of List of Documents to be submitted (Including but not limited to)
		▪ Other relevant documents to be submitted include, but are not limited to, Major Accident Hazard Risk Assessment (MAHRA), Hazardous Area Classification (HAC) drawings, debris survey, lifting plan, ▪ CO activities involving Engineering and Maintenance (E&M) such as helideck lifting, DHs are required to provide the finalised lifting plan that has authorisation signatures of the relevant Technical Authorities (TAs). The lifting plan should be supported by the task-appropriate risk assessment, emergency responses, and other information relevant to the helideck lifting operation such as the temporary storage location for the lifted helideck. A similar approach can be applied where the CO activity related to the construction phase of an offshore platform.

PARTICULARS REQUIREMENT UNDER SCHEDULE 4	EXPLANATORY	Examples of List of Documents to be submitted (Including but not limited to)
SAFETY CRITICAL PEOPLE, PROCEDURES, AND SAFETY CRITICAL EQUIPMENT		
6. A description of any additional risk control measures that is introduced as a result of a major accident hazard review which may include, but not limited to, any safety critical people, procedures, or Safety Critical Equipment.	Following the JMAHR, DHs are required to identify and articulate any new or modified risk control measures that have been explicitly implemented to effectively manage these risks. Such measures may include but limited to additional **SCEs**, modifications to existing procedures, or arrangements SHENA expects that DHs will provide evidence that these newly implemented measures have been verified prior to the commencement of operations, thereby ensuring that all associated risks are maintained at a level that is ALARP.	▪ Any additional certifications for Safety-Critical People, Procedures and Equipment (**SCPPE**), including but not limited to updated training matrices. ▪ Latest valid Bridging Document with the signatures of DHs. ▪ Where the CO involves diving activities, the DH shall provide the following: (a) diving-related risk assessments and associated documents, including but not limited to, diving emergency response arrangements. (b) evidence of additional SCPPE specific to the operation, for example, decompression chamber. (c) E&M job often increases the number of POB under CO activities. As such, it is imperative for DHs to provide a complete inventory of additional life

PARTICULARS REQUIREMENT UNDER SCHEDULE 4	EXPLANATORY	Examples of List of Documents to be submitted (Including but not limited to)
		rafts, personal floatation devices (PFD) to be brought onto the Fixed Facility, and information related to emergency mustering due to such influx of POB. (d) Updated document that details the seabed debris survey and anchor pattern; signed and authorised by the relevant TAs.

PARTICULARS REQUIREMENT UNDER SCHEDULE 4	EXPLANATORY	Examples of List of Documents to be submitted (Including but not limited to)
EMERGENCY RESPONSE PLAN		
7. A description of changes and additional arrangements, if any, that is to be made in the existing emergency response plans as a result of the CO.	DHs must review and, where necessary, revise their existing ERPs to incorporate the requirements of the CO. The COSC should provide a comprehensive overview of how the plans from each facility have been integrated, ensuring a cohesive command and communication structure during emergencies. The primary objective is to eliminate any ambiguity concerning roles, responsibilities, and resource deployment. Submission should include detailed information on joint emergency drills, coordination arrangements for search and rescue (SAR) operations, and established procedures for evacuation and communication among facilities.	▪ Any recently documented Local Emergency Response Plan (**LERP**), or its equivalent, is required to be submitted as a supplement to both the Bridging Document and the main COSC. ▪ The Bridging Document should provide a detailed overview of all the relevant information concerning the **ERP** that will be implemented during the CO activities.

PARTICULARS REQUIREMENT UNDER SCHEDULE 4	EXPLANATORY	Examples of List of Documents to be submitted (Including but not limited to)
SAFETY AND HEALTH MANAGEMENT SYSTEM		
8. A description of how the safety and health management systems for the facilities involved in the CO so as to reduce the risks from a major accident to comply with any relevant written laws.	The Safety and Health Management Systems (**SHMS**) of the participating facilities must be meticulously coordinated to prevent conflicts in operational control and to mitigate risks associated with major accidents. The COSC must demonstrate how key SMS elements, such as Permit to Work (**PTW**), control of isolation, Management of Change (**MOC**), and simultaneous operations, are harmonised. A bridging or interface document should be prepared to identify the lead DH responsible for system coordination. This document must also feature an interface matrix that illustrates how the various systems align.	▪ A comprehensive MOC process that includes a series of mitigations and risk assessments. This process should clearly outline how MOCs are communicated to the workforce, including their practical application on-site. ▪ A detailed list of **RAPs** should be provided, outlining the individual responsible for each action item and the proposed timeline for completion or closure. ▪ The submitted Bridging Document should highlight the management of the interface of the SHMS among different DHs. It is essential to address how gaps between these varying SHMS are resolved to ensure consistent application throughout the duration of CO, while maintaining compliance with all relevant legal requirements.

PARTICULARS REQUIREMENT UNDER SCHEDULE 4	EXPLANATORY	Examples of List of Documents to be submitted (Including but not limited to)
9. A description of the roles and responsibilities of each DH engaged in the CO.	The COSC is required to provide a comprehensive and detailed outline of the roles and responsibilities of each DH involved in the CO. This framework is essential for ensuring transparency in both legal and operational accountability while minimising ambiguity in the supervision and control of work activities. SHENA anticipates the inclusion of an organisational chart that clearly delineates the command hierarchy, decision-making authority, and reporting lines. This chart should identify the lead DH responsible for overall coordination as well as the specific roles related to marine operations, safety management, and logistics.	(iii) Latest valid bridging document, and the **LERP**, or its equivalent, should include the signatures of all DHs along with an organogram detailing the roles and responsibilities of each DH during any emergency situation.

PARTICULARS REQUIREMENT UNDER SCHEDULE 4	EXPLANATORY	Examples of List of Documents to be submitted (Including but not limited to)
10. A description of the CO and a program of work, which shall include the dates on which the CO is expected to start and complete.	DHs are required to provide a detailed description of the CO, which should include the following key elements: ▪ A comprehensive the work programme outlining the specific tasks and responsibilities. ▪ A clearly defined schedule indicating the expected start and completion dates. ▪ A time-bound clarity of scope and activities to ensure that SHENA can verify the ongoing validity of the COSC throughout the operational period. ▪ A tabulated or Gantt-style timeline that presents key milestones, operational phases, interface periods, and designated points for contingencies or handovers. In the event that unforeseen circumstances lead to delays exceeding the validity period, the DHs may formally submit a new request to SHENA as deemed necessary.	(iv) Current timeline for the planned CO activities. This may be provided as a supplementary document to the main COSC in a form of attachment or an appendix.

PARTICULARS REQUIREMENT UNDER SCHEDULE 4	EXPLANATORY	Examples of List of Documents to be submitted (Including but not limited to)
WORKPLACE CONSULTATION PROCESS		
11. The COSC shall reflect that all the DHs have ensured that the development of the document is through effective consultation with the workforce and participation of the workplace safety and health officer of each of the facilities involved.	The DHs are legally required to demonstrate that the COSC was developed through effective consultation with the workforce, including the participation of the Safety and Health Officers from each relevant facility. This process must be transparent, inclusive, and thoroughly documented. SHENA expects to receive supporting evidence, such as, records of consultations, and tracking of feedback. The COSC should articulate how workforce input has shaped hazard identification, risk assessment, and the formulation of control measures or mitigation strategies, ensuring that the document accurately reflects the operational realities. This ensures collective accountability and shared responsibility for effectively managing major accident risks during operations. SHENA requires documented evidence of coordination meetings, joint declarations, or co-signature pages that reflect the consensus among the DHs.	(v) A formal declaration, accompanied by a signature, confirming that all previously mentioned documents, as well as any other relevant attachments, have been developed in consultation with the SHENA-registered WSH personnel. This reiterates the importance of having a Workplace Safety and Health Officer, as stated in Particular 11 of this Schedule. (vi) The DHs also to include the attendance list of HAZID and risk assessment as part of the submission.

Table 14: Guidance for Duty Holders

7. REFERENCE

- Workplace Safety and Health Act, Chapter 277
- Radiation Protection Act, Chapter 228
- Workplace Safety and Health (Facilities) (Control of Major Accident Hazards) Regulations
- Guidance on Safe Diving Operations, 2021/IGN/10
- Merchant Shipping (Safety Zones) Order, 1988 (S11/1988)

END