



## **Appendix 8-D: Submarine Cables Installation & Burial Draft Health and Safety Plan**

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# CHPE – Upper & Lower Hudson River Submarine cables Installation & Burial Draft Health & Safety Plan



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Revision Summary			
Revision No	Revised Chapters	Revision Description	Reason for Revision
1	-	First Issue of the Document	Issued for EM&CP submittal

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## Introduction to the Document

### i. General

The present ‘Project Health & Safety Plan’ outlines the trial health & safety arrangements and controls that will be implemented by ASSO for the project titled ‘CHPE – Upper & Lower Hudson River’.

It is intended to be a dynamic document that will evolve through the development of the project and throughout the construction phase for the offshore operations. Any changes shall be approved by Employer. Persons working on or visiting the project will be made aware of its availability and contents, as appropriate. The document should be read in conjunction with the vessel’s Safety Management Manual (SMM) and MLC Manual.

### ii. Table of Abbreviations and Definitions

The following abbreviations are used throughout the present document:

Term	Explanation	Term	Explanation
AC	Alternating Current	MLC	Maritime Labour Convention
		MOC	Management of Change
ASSO	ASSO. Subsea Ltd	MSDS	Material Safety Data Sheet
CLB	Cable laying Barge	NCR	Non-conformance report
CMID	Common Marine Inspection Document	NOK	Next Of Kin
COSHH	Control of substances hazardous to health	OIM	Offshore Installation Manager
COSWP	UK Code of Safe Working Practices for Merchant Seamen	PLB	Post Lay Burial/ Personal Locator Beacon
CTV	Crew Transfer Vessel	PM	Project Manager
DP	Dynamic Positioning	PMS	Planned Maintenance System
DPR	Daily Progress Report	POB	Persons Onboard
GIS	Geographic Information System	PPE	Personal Protection Equipment
HAZCON	Hazard in Construction	QC	Quality Control
HAZID	Hazard Identification	QHSE	Quality, Health, Safety & Environment
HAZOP	Hazard and Operability Study	RAMS	Risk Assessments and Method Statements
HIRA	Hazard Identification & Risk Assessment	ROV	Remotely Operated Vehicle
HSE	Health & Safety Executive	SHE	Safety, Health, Environment
IMCA	International Marine Contractors Association	SIMOPS	Simultaneous Operations
IMO	International Maritime Organization	SMM	Safety Management Manual
ISM (Code)	International Safety Management Code	SMS	Safety Management System
ISO	International Organization for Standardization	SOLAS	Safety of Life at Sea
ISPS	International Ship and Port Facility Security Code	STCW	International Convention on Standards of Training, Certification and Watchkeeping for Seafarers
JSA	Job Safety Analysis	SWL	Safe Working Load
KPI	Key Performance Indicator	TBA	To Be Announced
LD	Law Decree	TBD	To be Decided
LSA	Life Saving Appliances	TBT	Tool Box Talk
MARPOL	International Convention for the Prevention of Pollution from Ships	UXO	Unexploded Ordnance
MBD	Marine Bridging Document	w.d.	Water Depth
MDR	Master Document Register		

Employer	CHPE LLC
Contractor	NKT Inc. (NKT)
Subcontractor	Asso.subsea Single Member SA (ASSO)

## Definitions

Term	Description
<b>Acceptable risk</b>	Risk that has been reduced to a level that can be tolerated by the organization having regard to its legal and contractual obligations and its own OH&S Policy
<b>Accident</b>	Incident which has given rise to injury, ill health or fatality
<b>ALARP</b>	‘ALARP’ is short for ‘as low as reasonably practicable’. At its core is the concept of ‘reasonably practicable’ which involves weighing a risk against the trouble, time and money needed to control it. Thus, ALARP describes the level to which workplace risks are controlled. In most situations, deciding whether the risks are ALARP involves a comparison between the control measures that are in place or proposed and the measures normally expected within relevant good practice guidance
<b>Construction site</b>	Area of the construction sites under the direct control of the Contractor
<b>Contractor</b>	Person or company contracted to provide materials or labor to perform a service or do a job.
<b>Corrective action</b>	Action to eliminate the cause of a detected non-conformity or other undesirable situation
<b>Emergency</b>	A serious, unexpected, and often dangerous situation which can result from an departure from normal operating procedures or unplanned situations and can pose a danger to people, the environment and objects. An emergency will require immediate action.
<b>Hazard</b>	Source, situation or act with the potential to cause harm, including ill health and injury; damage to property, plant, products or the environment, production losses or increased liabilities.
<b>Hazard identification</b>	Process of recognizing that a hazard exists and defining its characteristics.
<b>Ill Health</b>	Identifiable, adverse physical or mental conditions arising from and/or made worse by a work activity and/or work related situation.
<b>Incident</b>	A departure from established procedure and/or process and/or the failure of an established risk control measure which results in a Work related event in which an injury or ill health (regardless the severity), fatality, damage to property, plant, products or the environment, production losses or increased liabilities has occurred or could have occurred
<b>Job Safety Analysis</b>	An analytical process that focuses on a means to identify and control hazards inherent in job tasks before they can result in an accident. JSA shall be used to cover any work of an unusual/uncertain character.
<b>Lost Time Accident</b>	An accident which results in an employee/self-employed person being away from work or unable to perform their normal work duties. If such an accident results in the injured person being unable to perform their normal duties for more than seven consecutive (not counting the day of the accident) then it must be reported to the HSE in line with RIDDOR Regulations.
<b>Near miss</b>	An undesired event that, under slightly different circumstances, could have resulted in harm to people, damage to assets, environmental harm or unplanned operational shutdown.
<b>Prevention &amp; Protection Service</b>	A combination of people, systems, and means within or outside the company aiming to prevent or protect the company or production unit against occupational risks.
<b>Preventive action</b>	Action to eliminate the cause of a potential non conformity or other undesirable potential situation.
<b>Procedure</b>	Specified way to carry out an activity or a process.
<b>Record</b>	Document stating results achieved or providing evidence of activities performed.
<b>Risk</b>	Combination Product of the likelihood of an occurrence of a hazardous event or exposure and the severity of injury or ill health that can be caused by the event or exposure

Term	Description
<b>Risk assessment</b>	Process of evaluating the risk(s) arising from a hazard(s), taking into account the adequacy of any existing controls, and deciding whether or not the risk(s) is acceptable.
<b>Risk Control Measures</b>	These are the measures that will be taken to reduce the risks to health and safety of personnel, the environment and plant / equipment associated with an operation by reducing the probability of occurrence and mitigating the consequences. Risk reduction measures will generally be employed in line with the following order of preference: Inherent safety / Prevention / Detection / Control Measures / Mitigation Measures / Emergency Response.
<b>Subcontractor</b>	Subcontractors work on a contractual basis, and they offer a particular set of skills which they perform for Contractor.
<b>Worker</b>	Any person involved in the working activities.
<b>Workplace</b>	Any physical location or site in which work related activities are performed under the control of the organization.

### iii. List of applicable acts, codes, rules and regulations

In addition to the list mentioned in the ‘Project Execution Plan’, the following documents were also consulted in the preparation of this document:

#### International Standards

- ISO 45001:2018 Occupational Health & Safety Management Systems – Requirements;
- ISO 19011:2011 Guidelines for auditing management systems;

#### Relevant Legislation of the Hellenic Republic

- Law 3816/1958 & LD 187/1973 (Codes of Public & Private Greek Maritime Law)
- ΕΓΣΣΕ 2017 (National Collective Bargaining Agreement for 2017)
- Law 4387/2016 (Worker Compensation in case of Accident at Work)
- PD 41/2012 (adoption of Recommendation 2003/670/EC for Occupational Diseases)

#### EU Legislation

- 92/58/EEC Council Directive on the minimum requirements for the provision of safety and/or health signs at work
- 98/18/EC Council Directive on safety rules and standards for passenger ships
- 2003/88/EC Directive concerning certain aspects of the organization of working time
- 1013/2006/EC Regulation on shipments of waste
- 1907/2006/EC Regulation concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (REACH regulation)
- 2008/98/EC Directive on waste and repealing certain Directives
- 2008/106/EC Directive on the minimum level of training of seafarers (Recast)
- 2012/35/EU Directive amending Directive 2008/106/EC on the minimum level of training of seafarers
- 2014/517/EU Regulation on fluorinated greenhouse gases and repealing Regulation (EC) No 842/2006

#### International Marine Contractors Association (IMCA) Guidance Documents

- Guidance on Basic Safety Training and Vessel Induction for Non-Marine Personnel Working Offshore;
- Guidelines for Lifting Operations;
- Offshore Vessel High Voltage Safety;
- IMCA International Guidelines for the Safe Operation of Dynamically Positioned Offshore Supply Vessels;
- The Training and Experience of Key DP Personnel;
- Guidance for the Management of Change in the Offshore Environment;
- Guidance on the Initial and Refresher Familiarization of Vessel Crews;
- Guidance on the Investigation and Reporting of Incidents;
- Guidance on the Transfer of Personnel to and from Offshore Vessels and Structures;

- Guidance on Occupational Health;
- Common Marine Inspection Document;
- Guidance on Simultaneous Operations;
- Mooring Practice Safety Guidance for Offshore Vessels when alongside in Ports and Harbors;
- Code of Practice for the Safe and Efficient Operation of Remotely Operated Vehicles;
- ROV Mobilization;
- High Voltage Equipment – Safety Procedures for Working on ROVs;
- The initial and periodic examination, testing and certification of ROV handling systems;
- Guidelines for installing ROV Systems on vessels or platforms;
- International Code of Practice for Offshore Diving
- Code of practice on the initial and periodic examination, testing and certification of diving plant and equipment
- Design for Surface Orientated (Air) Diving Systems

#### Relevant Legislation of the United States of America

- Occupational Safety & Health Act of 1970
  - 46 USC - - Shipping
  - 46 CFR Chapter I – Coast Guard, Department of Homeland Security
  - 33 CFR Chapter I - Coast Guard, Department of Homeland Security
  - 29 CFR Chapter XVII – Occupational Safety and Health Administration, Department of Labor
  - 17 NYCRR - Department of Transportation
- <https://www.law.cornell.edu>

#### Other regulations / guidance

- JAR OPS 3 Commercial transport of persons and objects in helicopters
- Classification and building regulations of the IACS classification companies
- Risk Management in Marine and Subsea Operations (DNV-RP-H1010)

#### **iv. Bridging of Company and Vessel Management Systems**

The present Project Health & Safety Plan is based in the integration of the management systems of ASSO with the Safety Management System (SMS) of the vessels, which is the same for all ship management companies of ASSO. Both ASSO management system and the SMS are certified to the requirements of ISO 45001:2018 by Bureau Veritas Certification under the ASSO umbrella; the vessel's SMS is also statutory certified according to the International Safety Management (ISM) Code by Bureau Veritas. The initial bridging of the two systems is effected by the 'Project Quality Plan'.

In addition, a 'Project Bridging Document' has been compiled in order to further integrate particular aspects of the ASSO project QHSE management system with those of the Employer and the subcontractors.

The ASSO documentation applicable to the project is described in the Master Document Register. The vessels' documentation applicable to the project basically comprises the vessels' Safety Management Manuals and the vessels' Security Plans. The Safety Management Manuals incorporate the following vessel-specific documents:

- MLC Manual
- Marine Operations Manual
- DP Operations Manual
- Shipboard Oil Pollution Emergency Plan
- LSA Training Manual
- Fire Fighting Training Manual
- Risk Assessment Library
- Cargo Securing Manual

- Ballast Water Management Plan
- Garbage Management Plan
- Shipboard Energy Efficiency Management Plan
- Planned Maintenance System
- Circulars & Documents to Vessel by ship manager

All relevant policies are valid and are enforced on board by the Master. The Master has the overriding authority and responsibility on board, as defined by the ISM code, with regards to vessel and personnel safety but works very closely with the on board Offshore Manager to ensure smooth execution of all project tasks.

**v. Relevant documentation**

ASSO Documents		
#	ASSO Doc. ID	Document title
1.	TBA	Project MDR
ASSO Vessel Documents		
1.	-	Safety Management Manual
2.	-	Ballast Water Management Plan
3.	-	Garbage Management Plan
4.	-	Ship Energy Efficiency Management Plan
5.	-	Shipboard Oil Pollution Emergency Plan
6.	-	VOC Booklet
7.	-	Oil Record Book
8.	-	Ship Manager Circulars
Employer-supplied Documents		

**vi. Maintenance of the document**

The Project Manager and his assistants together with the RQHSE Manager and the RQHSE Advisor shall continually review the effectiveness and compatibility of this plan, bearing in mind all personnel suggestions, and recommend appropriate changes for improvement in coordination with the Company’s Engineering Department and in line with ASSO’s commitment to employ the best possible practices throughout the duration of the project.

## Part 01 / Project QHSE Organization

### 01.1. Key responsibilities of the ASSO as a contractor for Health & Safety

ASSO and any subcontractors working under ASSO will conform to the project requirements for installation / protection Contractors as identified in the contract. Along these lines, the following general responsibilities are undertaken:

- complying with the project safety arrangements;
- ensuring that all persons under their control are familiar with, and comply with all Site Rules;
- ensuring that all persons under their control, including visitors, are adequately inducted through a formal induction process approved by main contractor into the working environment to avoid risk to themselves or other persons;
- ensuring that risk assessments are undertaken;
- prior to working, produce method statements (RAMS). RAMS shall identify hazards, safety measures that will be employed to control risk, responsibilities and method for safe working;
- ensuring adequate RAMS briefings are undertaken as part of setting to work;
- ensuring that there is adequate supervision at all times, and that such supervision is competent and with full understanding for upholding the contract safety arrangements;
- ensuring that their employees are fully competent (trained, experienced and knowledgeable) in the duties expected of them (e.g. operation of particular machinery items) and records of competence are collated within Project Files/Project Training Matrix;
- ensuring that operatives of plant and equipment shall be certificated;
- ensuring that any plant and equipment shall be adequate and maintained.;
- reporting any accident or dangerous occurrence arising out of its working activities;
- monitoring and recording the effectiveness of their safety and environmental arrangements through a series of checks / inspections / audits, and making findings available to employer in order that they can identify the effectiveness of same;
- participating in vessel and shore-based HSE Meetings;
- providing their employees with all appropriate personal protective equipment.

#### References:

Doc. ID	Doc. Title
SMM-C02	Company Policies (Vessels)

**01.2. Project QHSE Organization Chart**

The organization chart of the ASSO with respect to health & safety issues for the project is presented in the following figures.

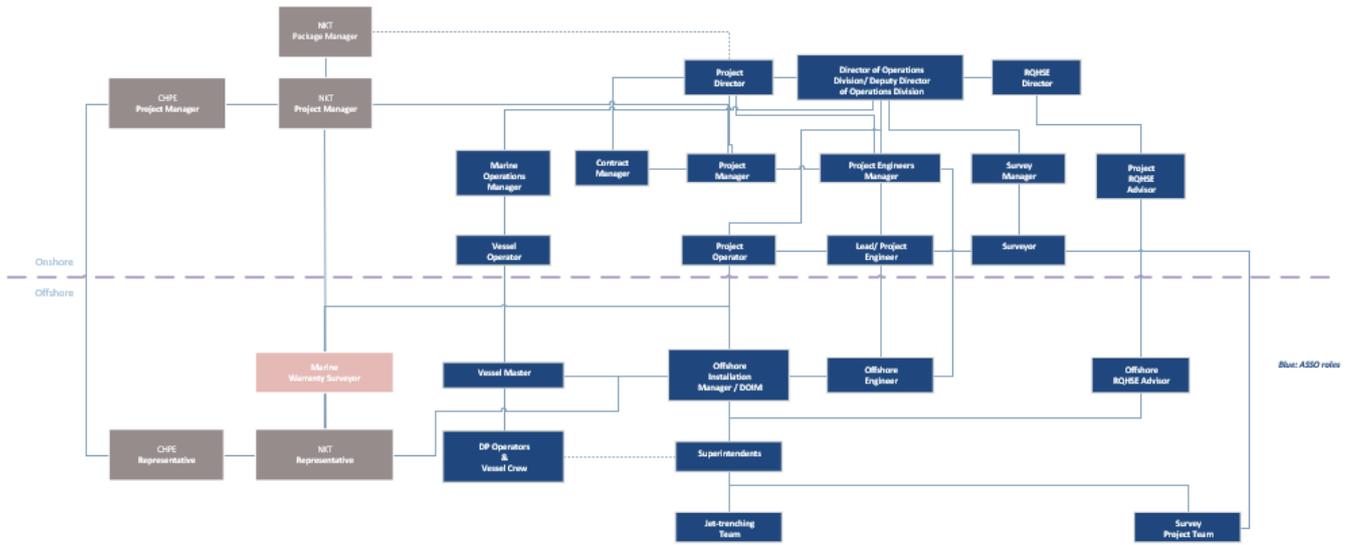


Figure 3 – Project Organization Chart

### 01.3. Roles & responsibilities with regards to Project Health & Safety Management

Responsibilities \ Position	Project Manager	Offshore Manager	RQHSE Manager/ Advisor	Offshore Engineer	Superintendents	Vessel Master	Vessel Chief Officer (Safety Officer)	Technicians / Crew
Point of contact for the company for all project-related H&S issues	X							
Definition and enforcement of the Project H&S Policy and the application of the Project H&S Plan during all project phases	X							
Enforcement of the Project H&S Policy and the application of the Project H&S Plan onboard		X						
Enforcement of Safety & Environmental Protection Policy, Drugs & Alcohol Policy and PPE Policy onboard						X		
Establishment of Project QHSE Management System	X		X					
Establishment of Project H&S Objectives & Targets	X		X					
Maintenance of the Project H&S Plan	X		X					
Preparation of Project H&S Plan			X					
Approval of all H&S Management documentation	X							
Ensures that adequate resources are available for the application of the Project H&S Plan	X							
Ensuring employees are properly qualified and trained to perform their duties	X		X					
Personnel training on QHSE issues	X		X			X		
Project Induction for all personnel	X		X					
Consultation with personnel on H&S issues								
Revision of vessel Safety Management System			X					
Arrangement for HAZOP meeting	X							
Participation in HAZOP meeting	X	X	X	X	X	X		
Arrangement for kick-off and subsequent safety meetings		X						
Participation in kick-off and subsequent safety meetings		X		X	X	X	X	X
Ensure safe travel arrangements for all mobilized personnel	X		X					
Monitoring application of vessel safety management system				X				

Position / Responsibilities	Project Manager	Offshore Manager	RQHSE Manager / Advisor	Offshore Engineer	Superintendents	Vessel Master	Vessel Chief Officer (Safety Officer)	Technicians / Crew
Monitoring work hours schedule (technicians)		X		X				
Execution of frequent work site inspections		X		X		X	X	
Participation in worksite pre-operational meetings and toolbox talks		X		X	X	X	X	X
Request stop of execution of the work if any serious violation of H&S requirements is spotted	X	X	X	X	X	X	X	X
Performance of internal audits of Project QHSE Management System			X	X				
Monitors performance indicators			X	X				
Monitors H&S compliance and performance of subcontractors	X	X	X	X	X			
Vessel familiarization of all personnel onboard						X	X	
Management briefing on project H&S issues			X					
Reporting NCRs / H&S incidents		X				X		
Maintaining a clean work site					X		X	X
Following guidelines regarding H&S management during the project					X		X	X
Monitoring compliance with H&S requirements on a shift basis					X			
Ensuring vessel certification remains valid			X			X		
Monitoring PMS application				X		X	X	
Ensuring scheduled drills are performed and documented				X		X	X	
Ensuring proper document control and record-keeping				X				
Ensuring employees understand their individual responsibilities with respect to H&S issues	X		X					
Monitor application of Project H&S Plan		X		X				
Ensuring management of change procedure followed	X	X	X					
Proposing changes to practices to enhance project performance	X	X	X	X	X	X	X	X
Organizing toolbox talks and other relevant meetings		X		X		X	X	

Position Responsibilities	Project Manager	Offshore Manager	QHSE Manager / Advisor	Offshore Engineer	Superintendents	Vessel Master	Vessel Chief Officer (Safety Officer)	Technicians / Crew
Attend toolbox talks and other relevant meetings								X
Ensuring standards are maintained throughout project duration		X	X	X				
Ensuring NCRs and H&S incidents are properly reported, recorded, investigated and corrective / preventive actions are applied	X	X	X	X				
Monitoring performance of QHSE-related personnel onboard		X	X					

## 01.4. Competency, Training and Awareness

### 01.4.1. Competence

In general, and according to ASSO policy, all ASSO vessels’ crew and technical personnel working onboard ASSO vessels during the project will hold valid ‘Basic Safety Training’ certificates according to the requirements of the IMO STCW convention together with valid medical cards in accordance with flag state MLC requirements.

In compliance with company policy, ASSO will ensure that all subcontractor’s personnel shall possess the necessary competencies to carry out the particular duties and tasks.

A training / competence matrix has been prepared identifying minimum requirements for each function within the organization.

To this end, ASSO have established procedures to ensure the following:

- determination of the necessary competence needed by personnel for performing work crucial to achieve conformance of the company’s services to requirements;
- provision of suitable training, which should take into account differing levels of responsibility, ability, language skills, literacy and risk, to achieve the necessary competence;
- evaluation of the impact of such training;
- personnel awareness of the relevance and importance of their roles and activities in achieving conformity to QHSE policies, procedures and requirements, how they contribute to the achievement of the QHSE objectives and targets, and the potential consequences of departure from specified procedures;
- identification of training needs associated with the company’s environmental aspects;
- personnel awareness of the occupational health & safety consequences, actual or potential, of their work activities, their behavior and the occupational health & safety benefits of improved personal performance;
- maintenance of appropriate records of education, training, skills and experience.

### 01.4.2. Project SHE induction

As instructed by employer, a Project SHE Induction will be organized together with a HAZOP study onboard the vessel to all project participants.

The relevant meetings will be documented and all the inductees will sign the relevant forms.

### 01.4.3. Vessel familiarization

All personnel shall attend vessel familiarization induction including relevant marine crew, employer representative and personnel taking part in any aspect of the operations shall receive formal training in order to gain familiarity with the vessel onboard which they will operate. Such training will be conducted by members of the vessels’ crews following relevant procedures of the vessels’ SMM. Vessel familiarizations are documented using the relevant SMM Form.

The on-board Offshore Engineer shall oversee the whole procedure and make sure that it covers the following areas:

- Permit to Work System;
- Location of lifejackets, life rafts and rescue boat;
- Vessel’s general arrangement;
- Operation of the life jackets and thermal suits;
- Alarm signals;
- Explanation of the safety card on each cabin;
- Emergency procedures;
- Requirements for protective gear;
- Introduction to hazardous areas;
- Introduction to restricted areas;
- Reminder of the alcohol and drugs regulations.

Following this meeting, a guided tour of the vessel will be held where all the topics mentioned will be indicated. During the tour, non-safety aspects of the vessel will also be shown (i.e. lodging, vessel organization, etc.).

### 01.4.4. Training on-the-job

The onboard Offshore Engineer, in coordination with each vessel’s Safety Officer, will conduct various training sessions impacting health, safety or safe work systems, and environment specific to job requirements throughout the Project. The SMM’s ‘Onboard Training Plan’, applicable to the vessel crew, will be used for guidance on the subjects that should be covered. Onboard training is recorded using the relevant SMM Form (training record for each crew member and supernumerary).

### 01.4.5. Employer’s training requirements wrt. location and activity

The requirements for training set by the Employer for all personnel with respect to work location and activity performed shall be adhered to.

References:

Doc. ID	Doc. Title
TB	Competence Matrix - Crew
TBD	Competence Matrix - Technicians
SMM-C06	Personnel Management Manual
SMM-M06.01C	MLC Manual

## Part 02 / Management Arrangements

### 02.1. Management System

ASSO will implement throughout the duration of the operations a project-specific QHSE management system based on the requirements of International Standards ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 and the International Safety Management (ISM) code of the International Maritime Organization. The 'Health & Safety Policy' for the project is presented in **Annex 1** of this document.

The Project QHSE Management System, in line with Employer's HSE Management System, comprises the following interlinked elements:

- Leadership, Commitment and Accountability;
- Policy and Strategic Objectives;
- Organization, Responsibilities, Resources, Competencies;
- Hazards and Effects management;
- Environmental Aspects and Effects management;
- Planning and procedures;
- Implementation;
- Monitoring;
- Audit;
- Corrective action;
- Management review.

### 02.2. Project Health & Safety Goals

#### 02.2.1. Objectives

In relation to the Offshore Works specifically the primary objectives are to:

- Prevent Personal injury;
- Prevent harm to the environment;
- Prevent property damage;
- Promote the health, safety and well-being of all persons in the workplace and others affected by our activities.

#### 02.2.2. Targets

The following specific targets have been set for the project to achieve during project execution:

- No injuries;
- No ill health;
- No damage (machines, tools, etc.);
- Transparent reporting of near-misses and safety observations;
- No person shall be allowed to work or to visit an offshore location without the training and certification mandated at that location;
- No breaches of security either on a vessel or at work site;
- Effective 'lessons learnt' sessions are held and recorded in detail;
- No environmental incidents;
- Correct disposal of all waste.

## 02.3. Monitoring Health & Safety Performance

### 02.3.1. General approach

ASSO will regularly monitor its subcontractors and its own health & safety performance including injury, illness and incident statistics. Specific monitoring arrangements to be employed on the offshore works are detailed in the sections below.

### 02.3.2. Operational Readiness Check

Prior to the commencement of execution works, an operational readiness check will be completed by the ASSO QHSE department to ensure that all project operational and health & safety documents, equipment, other controls and requirements are in place.

### 02.3.3. Vessel inspections / audits

The ASSO RQHSE department shall carry out a health & safety audit on the vessels' spreads prior to departure. The department will also carry out audits during the offshore operational period of the project, if feasible. All audits and inspections shall be planned by the Project RQHSE Manager and the Project RQHSE Advisor. All corrective actions will be recorded and responded to accordingly as described in the Project Quality Plan.

The vessels shall be submitted to an inspection based on the Common Marine Inspection Document (CMID) prior to departure. The inspection will be planned and undertaken in liaison with the Employer and will be carried out by a competent inspector. As a 'living' document, the CMID may be kept and updated onboard a vessel, thus reducing the time involved in a follow up audit. The CMID is regularly reviewed and updated in the light of regulatory and technical developments. Monitoring, measurement and evaluation of compliance shall be reviewed as part of the management review process.

### 02.3.4. Audits / inspections (by ASSO)

The following audits / inspections will be carried onboard by the Vessel Safety Officer together with the onboard Offshore Engineer:

- Weekly health & safety inspection;
- Inspection of accommodation and galley condition every 15 days;
- Unannounced health & safety inspections (walkthroughs) during different shifts by the QHSE Advisor on the request of the Project RQHSE Manager.

Following completion of each audit, a report will be prepared, which shall be made available to the onboard Employer representative. This will identify any corrective measures that need to be undertaken. The findings will also be raised in the daily meeting and also summarized in the weekly HSE meeting. This will contain details on who is responsible for implementing each action and the associated timescales.

### 02.3.5. Reporting and KPIs

According to Employer requirements, the following set of KPIs will be recorded in the daily progress report (DPR) issued from the vessel and also communicated and documented in the weekly SHE meeting:

- Fatal incidents;
- Serious injuries;
- High Potential Incidents (HPIs);
- Lost Time Incidents (LTIs);
- Occupational illnesses;
- Medical treatment incidents;
- First aid incidents;
- Near misses;

- Environmental incidents;
- Property damage;
- Commuting;
- Man-hours worked;
- Hazards reported (SOC card);
- Hazards resolved (SOC card closed);
- Number of Safety Observation Tours (SOT);
- Number of Risk Assessments;
- Number of Safety Job Analysis (SJA);
- Number of Site Safety Meetings;
- Number of Toolbox Talks;
- Number of Site Safety Inductions;
- Number of hours site HSE training delivered;
- Number of audits performed;
- Page completion of audit actions;
- Number of emergency drills.

References:

Doc. ID	Doc. Title
SMM-M06.01C	MLC Manual
SMM-M10.01	PMS Deck Department
SMM-C12	Verification, Review and Evaluation

## 02.4. Project Golden Rules

### 02.4.1. General

In this section, the Golden Rules normally followed by ASSO are presented. A copy of the Golden Rules will be displayed on all vessel notice boards. The Golden Rules focus on critical areas of the business where safe behaviors by managers, employees, subcontractors and agency staff are essential to safeguard ourselves and the public. They cover the behaviors that will prevent the most serious injuries.

### 02.4.2. Introduction

*In support of the End User and Contractor’s commitment to Safety, Health and Environment, we have developed some Golden Rules which need to be followed by everyone working on the project to avoid serious injury or loss of life.*

*Our Golden Rules set out the essential safe behaviors that will keep us all safe and will be followed by everyone working on the project both onshore and marine operations. We must all know the Golden Rules and follow them at all times. The set of Golden Rules ensures we work safely, do the right thing and assist us in our goal of ‘Zero Harm to any persons who are affected by the works’.*

*The Golden Rules are set out in a booklet to identify what each rule means when carrying out work activities and what we need to do to meet them. This is to ensure everyone is clear where and when they apply.*

*We take this very seriously as the consequence of following the Golden Rules are that we all stay safe. The consequences of not following our Golden Rules could result in serious injury and could jeopardize an individual’s future on the project.*

*It is important that each person remembers that there are other hazards that they may encounter when at work on site or on a vessel and individuals should be vigilant for those hazards and the risks they may pose to their safety and the safety of others.*

*We all need to make sure we understand the controls and apply them, using our knowledge and judgement to do the right thing to ensure our own safety and the safety of those around us.*

#### **02.4.3. Vision and Commitment**

*Our vision is to create a Just Culture based on leadership and trust with a world class performance built on shared best practice, learning and continual improvement. We will:*

- *be a visible role model at all times including when times are rough;*
- *set clear expectations and consequences;*
- *listen and act on feedback;*
- *encourage learning and sharing;*
- *personally devote time for safety;*
- *reward positive safety behavior;*
- *make resources available for safe working;*
- *stop and challenge unsafe behavior and environments.*

#### **02.4.4. Working Safely Together**

*It is the behavior of our team that makes the difference and our efforts that deliver our performance. We operate a 'Just Culture' that can protect everyone and the environment by encouraging people to manage the anticipated hazards and to reduce the risks to all of us, work responsibly and do not walk by unsafe situations.*

*We ensure that:*

- *We always plan our work with regard to others to ensure that what we do does not affect their safety.*
- *We will be open to intervention and encourage our activities to be challenged if they do not appear safe.*
- *We look out for one another and do not walk by unsafe situations without ensuring action is taken to make safe.*
- *A member of the workforce from each subcontractor will take part in the weekly health & safety meetings.*
- *Our Health and Safety performance will be displayed for all to see.*

#### **02.4.5. Responsibility of the employees**

*Each employee is obliged to work safely and shall:*

- *take care of their own health and safety during work*
- *take care of the safety of other colleagues and if necessary point out irregularities*
- *understand, follow and correctly apply work instructions*
- *refuse work for which they are not qualified or trained*
- *test work equipment and PPE before use, only use it for the intended application and immediately notify the construction site manager of any defects*
- *submit proposals for improvement with regard to the execution of the works and occupational safety to the construction site manager.*

*Each employee who observes an unsafe situation that can directly lead to personal injury, an environmental incident or substantial material damage is entitled to halt the works immediately.*

#### 02.4.6. *Fitness for Work*

*It is important that everyone working on the project understands the many hazards that we encounter may affect our health and wellbeing. Whilst at work we all have a duty of care to others and must ensure we are fit and able to work without risk of injury to ourselves or others.*

*We ensure that:*

- We will not report for work whilst under the influence of alcohol or drugs.*
- Our sites shall be alcohol and non-prescribed drug free.*
- Everyone is fit for work and must report any condition that could affect the safety of themselves and others to their supervisor or line manager.*
- Everyone working on sites or vessels on this project both onshore and offshore has undertaken and passed a drug and alcohol test carried out in the last 24 months.*
- We participate in testing where it is required to establish fitness for work.*
- Activities that are hazardous to health will be assessed, resulting in an assessment prepared with the appropriate controls applied and PPE worn.*

#### 02.4.7. *Safety Documentation*

*We always ensure we have the correct permit in place before starting any work. No works will commence without the appropriate and clear permits in place. We will not breach or tolerate breaches to any safety processes or procedures.*

*All work undertaken will be carried out by people who are suitably trained, experienced, competent and authorized. All members of the working parties shall be fully briefed. Permits shall be issued where appropriate.*

*We ensure that:*

- We comply with the requirements of all safety rules and procedures.*
- All those involved fully understand the documentation issued to control the work activity.*
- People involved are experienced, trained & competent to receive the relevant permit.*
- All safety documentation and permits are to be in place before starting work.*
- Prior to commencement of work we carry out site specific risk assessment and ensure all hazards have been identified and recorded.*
- Safe systems of work are reviewed with the workforce to ensure they are suitable and sufficient prior to work commencing.*
- We stop work immediately if the conditions change and advise the supervisor or manager.*

#### 02.4.8. *Work Area Control*

*We will always ensure the work area is managed, controlled, safe, secure and signed accordingly. Defined work areas may require fencing and signage; safe access and egress will be established and maintained at all times.*

*We ensure that:*

- We will never deliberately remove warning notices, barriers or other forms of safety protection.*
- We keep to the designated pedestrian routes to work locations.*
- Working areas must be defined and controlled at all times.*
- Excavations and openings must be guarded, secure and maintained.*
- Signing, lighting and guarding (SLG) on all public highways will be maintained and will comply with applicable legislation.*

#### 02.4.9. Safety Protection Systems and Devices

We always ensure that required safety protection systems are in place and operational. Safety systems and protection devices are designated to protect people from injury whilst using or operating equipment and we will never defeat a safety device or interlock unless authorized to do so in writing.

We ensure that:

- Lifting equipment function correctly and protection devices are not overridden.
- Machine guards must remain in place at all times and are correctly used.
- Alarms are tested and the relevant procedure followed if activated.
- If equipment is damaged or not functioning correctly, do not use the equipment, isolate / quarantine it and report it immediately.
- Employees are trained and competent in the use of work equipment.
- Height restrictors are fitted to plant and equipment when working under OHL, conductors or other services.
- Beacons and audible alarms will be fitted to vehicles and mobile plant, they shall be operable and used.

#### 02.4.10. Lifting Operations

We always ensure that lifting operations are properly planned, supervised and carried out safely. Experience has shown that lifting operations can be a hazardous work activity if not correctly planned and carried out. Lifting operations have the potential for death and serious injury to all those on site and marine operations and at times to members of the public.

We ensure that:

- Before starting work all lifting operations are properly assessed to ensure correct plant and equipment is available for the task.
- All personnel involved in lifting operations are competent and hold a valid CPCS card or similar certificates of competence.
- All lifting equipment and accessories are accompanied with a valid certificate or thorough test and inspection.
- All lifting accessories will be easily identified with color coded, colored tag identifying SWL, test date and renewal test date and serial number.
- All those who are not involved in the lifting operation are excluded from the area.
- We will never stand under a live load.
- Tags Lines will be used where appropriate Loads are under full and proper control at all times.
- Slinger signalers will be clearly identified and shall be responsible for the lift and attaching and removing lift accessories from the object being moved.

#### 02.4.11. Working at Height

We always use the required safety equipment to protect against a fall from any height. This Golden Rule is designed to protect us against injury following a fall. It applies to the risk from falling from height to ground level and the risk of a fall into an excavation, pit or tank below ground.

We ensure that:

- We will always obtain a Permit To Work for working aloft or at height.
- We eliminate the need to work at height where possible.
- We ensure all work at height is planned.
- We use platforms with guards or handrails.
- Where it is not possible to use platforms then use collective safeguards to arrest fall such as nets and airbags.
- We always ensure equipment put in place to prevent a fall remains in place.
- We will always use appropriate PPE.

#### 02.4.12. Vehicle Operations

We always ensure we operate vehicles safely and we have the correct authorization. To prevent injury to employees, subcontractors, visitors and the public we will always ensure that the risks involved in the movement of vehicles and mobile plant around the site and access onto site are planned and controlled.

We ensure that:

- All vehicles and plant movements must be planned and controlled.
- Offsite, we operate vehicles with respect to our neighbors and observe any local restrictions.
- We segregate vehicles and pedestrians and keep to designated routes.
- Only trained and competent people WHO are authorized and hold appropriate licenses shall operate vehicles, mobile plant and carry out the roll of vehicle marshal/banksman.
- Before starting work, we undertake all necessary safety checks.
- Plant and vehicle safety zones will be established for each item of plant.

### 02.5. Project Communication

#### 02.5.1. Introduction

ASSO recognize that good communication between all parties, employees and management is one of the important tools for ensuring safety and environmental protection. ASSO has established and maintains timely, accurate, appropriated and meaningful internal and external communication. Communications between the various parties around each work site shall be regular and frequent. Each team leader shall inform the other regarding any planned or actual changes in operational circumstances. The Offshore Manager shall ensure Communications Systems (Radios, Channels etc.) are tested daily.

The onboard employer representatives and will be advised of all project safety-related meetings and will attend, if available.

During an emergency, use of communication systems shall be reduced to that which is absolutely necessary in order to ensure that the personnel dealing with the emergency receive direct and unobstructed communications. Communications received should be clear; where doubt exists the sender shall be asked to repeat the message.

#### 02.5.2. Health & Safety Meetings

During the start-up phase of the Works, ASSO shall organize a kick-off meeting with employer project team. HSE shall be on the agenda of this meeting.

Daily meetings will be held on board the vessel about the ongoing activities. No.1 topic in the agenda will be safety matters. Those in attendance shall include the Offshore Manager, vessel Master, and employer onboard Representatives, onboard Offshore Engineer(s) as well as other installation personnel as required. Employer and ASSO may convene safety meetings as required, for example in relation to investigation of accidents.

These meetings will be minuted and distributed to all interested parties by the Vessel Master and the Offshore Engineer.

A lessons learnt meeting at the end of the project.

#### 02.5.3. Co-ordination of Site Activities

Employer will have overall responsibility for the co-ordination of work activities. ASSO will be responsible for its own and its subcontractors work within the work areas as defined by contract. The control and coordination of all project-related marine transfer, transport and traffic (including vessel and personnel) into, out of and within the offshore sites, is carried out by the OIM where required or the Vessel Captain and other vessels involved in work on the site.

#### 02.5.4. Exchange of Health & Safety Information

ASSO will hold daily talks and exchange information with Employer. All meetings will be identified within the daily report. Operational issues must also be discussed daily, where these impact on the health & safety of their employees or others.

#### 02.5.5. Toolbox Talks

Toolbox talks or briefings will be held before commencement of the day's activities, prior to shift change and again just prior to non-routine activities including Management of Change or as an additional control measure by a procedure.

Toolbox meetings will be held to address health, safety and environmental issues and identify correct application of methods, in compliance with procedures and requirements. If required, toolbox talks will be supported by specific environmental method statements, which identify the sensitive receptors and provide advice on any specific procedures that need to be followed and the mitigation measures that should be implemented.

Toolbox meetings will be recorded in a brief note in a standard form addressing highlights of the meeting and list of attendees. Pre-work HSE familiarization / safety briefings (tool box talks) between the Team Leads and work party will take place daily, at shift changes or as required before the commencement of a particular task.

Toolbox talks will include:

- Overview of activity.
- Equipment and consumables to be used and re-iteration of safe method of use.
- Review of risk assessment and risk mitigation measures.
- Emergency response to any HSE incident.
- Shift Toolbox Talks are also registered.
- Working efficiently.

#### 02.5.6. Notice Boards-Events

ASSO believes safety is everyone's business. That's why every person working under ASSO Health & Safety Policy makes safety awareness their number one priority. Every member of every ASSO team is tasked with taking personal ownership of his or her own safety and the safety of others. Our goal is to keep our people and the environments in which they work, safe and healthy. To that end, we put policies and procedures in place to make sure that adherence to proper safety practices is a 24/7 commitment on everyone's part.

Understanding the importance of capturing, communicating, and maintaining lessons learned, ASSO utilizes IMCA safety flashes posted on vessels' notice boards. Further to the above, during execution of Project, ASSO shall keep copies of the following information on noticeboards:

- Copies of the health and Safety, environment and quality policies;
- A copy of the site rules and emergency procedures; and
- The HSE health and safety Law poster ISBN: 9780717663392

#### 02.5.7. Consultation with the Workforce

The Offshore Manager and the Offshore Engineer shall be the primary points of contact for discussing and taking views on health & safety issues from all persons working onboard. In addition, both persons will participate in the vessel's Safety Committee Meeting (prescribed by the SMM).

**References:**

Doc. ID	Doc. Title
SMM-C07E	Health & Safety Instructions
SMM-M06.01C	MLC Manual
SMM-C07B	Risk Management & Communication
SMM-C07D	Management of Change
SMM-C03	Company & Vessel Organization, Responsibility and Authority

**02.6. Accident investigation and reporting**

All accidents, incidents and near misses will be reported by ASSO within the required timeframe and investigated.

ASSO has relevant internal procedures to log and investigate all accidents, incidents and near-misses. According to these, in the event of any accident, the personnel involved should immediately notify a senior member of the ASSO team (normally the Offshore Shift Superintendent). From the personnel onboard, the Offshore Manager, the Vessel Master, the Offshore Engineer and the onboard Employer Representative shall then be informed; the onshore Project Manager and Project RQHSE Manager shall then be notified. The Offshore Engineer should record details of the accident on the form ‘Initial Incident Report’ in cooperation with the Offshore Manager and the Vessel Master. The following classification shall apply:

<b>Class 1: Accident</b>	<ul style="list-style-type: none"> <li>• Death</li> <li>• Serious injury &gt; 15 Lost Work Days or permanent total disability</li> <li>• Direct asset loss of more than EUR50,000</li> <li>• Environmental impact of oil or chemical spillage of more than 30 barrels or 4800 lt</li> <li>• Major fire</li> </ul>
<b>Class 2: Accident</b>	<ul style="list-style-type: none"> <li>• Personnel injury resulting to less than 15 Lost Work Days and /or permanent partial disability</li> <li>• Direct asset loss of less than EUR50,000</li> <li>• Environmental impact of oil or chemical spillage of less than 30 barrels or 4800 lt</li> <li>• Serious fire</li> </ul>
<b>Class 3: Accident</b>	<ul style="list-style-type: none"> <li>• All other injuries, first aid cases, medical treatment cases</li> <li>• Minimal asset loss</li> <li>• Minimal environmental impact</li> <li>• Not serious fire incident</li> </ul>
<b>Class 4: Near miss</b>	<ul style="list-style-type: none"> <li>• Any actual or potential dangerous occurrence that could have resulted or may result to injury, asset loss and/or environmental impact</li> </ul>

The project’s HSE management registers the safety and environment-related events, assesses them, determines appropriate preventive measures for the project phase in coordination with the affected contractors and communicates these to all companies involved.

The results of the investigation will be documented on the form ‘Analytical Incident Report & Incident Investigation’ (for internal use) and will be made available to the Project Manager, Offshore Manager, Vessel Master and the Employer’s representative(s).

Emergency duty numbers as listed in the Emergency Response Plan shall be utilized. For ease of reference an Emergency Notification Flowchart for the vessel should be prominently displayed on its bridge and within the site office for onshore activities.

All incidents shall be reported via the Employer’s reporting process and forms; initial incident notification shall be sent to Employer within 24 hours and the full incident investigation report shall be dispatched within one week.

All incident metrics will be collected regularly and submitted to Employer in the monthly report, which will include all HSSE statistics (i.e. the list of KPIs included in paragraph 03.3.5) for ASSO personnel.

References:

Doc. ID	Doc. Title
SMM-C09C	Incident Reporting & Investigation

### 02.6.1. HSE Reports

ASSO shall submit a monthly report to the Employer HSSE manager containing the below KPI information both for ASSO and subcontractors personnel:

Proactive Indicators:

- Number of safety audits/inspections etc. undertaken, completion of actions arising shall be monitored by Employer and review;
- Number of behavioral audits undertaken (e.g. walk and talk);
- Number of safety drills – MOB-Evacuation or musters undertaken in the month;
- Number of toolbox talks delivered in month;
- Number of safety meetings in the month;
- Percentage of incident investigations completed and closed out within one month of occurrence;
- Percentage of hazard spotting, unsafe act, near miss reports, closed out in month;
- Minimize environmental impacts i.e. travel plan and re-cycle to reduce waste.

Reactive Indicators:

HSE accident, incident, near miss and quality non-conformance data

- TRIF – below 3.6 (per 1 million hours worked)
- LTI FR – 0.

Any other indicators suggested by Employer and SSE shall be taken into account.

### 02.7. Emergency and Fire Procedures

Emergencies onboard the vessel will be handled according to the vessels’ ‘Emergency Preparedness Manual’, part of the certified SMM. The said manuals cover in detail the following emergency cases:

- Main engine failure;
- Steering gear failure;
- Loss of electrical power;
- Machinery space casualty;
- Collision at sea;
- Grounding / stranding;
- Dangerous structural failure;
- Heavy weather damage;
- Accommodation / Engine Room / Galley Fire;
- Deck Hold Fire;
- Flooding;
- Explosion;
- Man Overboard;
- Search & Rescue (SAR);
- Rescue from enclosed space;
- Serious injury or illness;
- Death of ship personnel;
- Abandon Ship.

A separate vessel emergency response plan (SOPEP), also part of the SMM, deals with emergencies arising from spillages (especially of fuel oil) and prescribes each country’s contact points for notifying and requesting assistance in such cases.

For emergency preparedness, the vessels’ SMM prescribes a number of drills, covering all abovementioned emergency situations, which should be performed in defined time intervals.

All relevant detection, communication, firefighting and other emergency arrangements onboard the vessels follow strictly the applicable flag state legislation and classification society rules and regulations and are properly tested and certified.

The notification chart included in the ‘Project Bridging Document’ shall define the contact points and lines of communication between the vessels and the onboard ASSO team, the Employer and the authorities.

References:

Doc. ID	Doc. Title
SMM-C08	Emergency Preparedness Manual
SMM-C07	Instructions for Key Shipboard Operations

## 02.8. General Project Arrangements

### 02.8.1. General Information

Copies of the following information will be displayed on noticeboards and/or be readily available on the vessel, according to employer requirements:

- Copies of the ‘Health & Safety’, ‘Environment Protection’ and ‘Quality’ policies;
- A copy of the current company insurance;
- A copy of the vessel rules and emergency procedures;
- The project’s Golden Rules; and
- A copy of Project Emergency Notification Chart (displayed on the Bridge).

### 02.8.2. Working Hours

Working hours will be decided upon in accordance with international convention, any license restrictions and in accordance with standard contracted working hours. The working hours will not exceed the requirement of EU Working Time Directive and the Maritime Labor Convention (MLC, 2006).

Working time shall be organized guaranteeing safety and health protection of employees and sufficient rest and recovery periods shall be available to them. The requirements of The Working Time Regulations (1998) and The Working Time Regulations - Extension Offshore (regulation on working time during offshore activities) shall be strictly observed for all employees. ASSO shall notify the responsible authorities of night, Sunday and holiday work in such a time in advance that an approval is available prior to the start of works.

The arrangements foreseen for the project execution are detailed in the table below:

Personnel	Shift Pattern	Notes
Project Operation	12 hours on, 12 hours off	Shifts apply during their time on board vessel with rest days provided at end of this period. Vessel crew As per vessel watch rotation.
Vessel Crew	As per vessel watch rotation	Shifts apply during their time on board vessel with rest days provided at end of this period in accordance with Maritime Law.

ASSO will ensure, in accordance with employer requirements, that all personnel adhere to the requirements of the working time regulations in so far as documenting crew rotation (shift rotation will incorporate watch periods consistent with MLC, 2006 and rest periods following rotation), sign-on /sign-off for all personnel and signatures to toolbox talks for back deck operations. Any deviations will be managed with additional rest periods however personnel in exceptional circumstances will be required to opt out of the standard hours worked but must not exceed working periods of 18 hours without additional rest periods. Working time will be monitored to ensure personnel average the required hours over the term of rotation.

### 02.8.3. Exchange of Design Information

ASSO shall provide to the employer all design information requested and participate in design review meetings organized by the employer.

### 02.8.4. Selection and Control of Subcontractors

Any subcontractors employed by ASSO shall be selected following the criteria set by employer and in agreement with main contractor. Monitoring and control of subcontractors shall be performed according to Employer procedures.

### 02.8.5. Procurement of Materials and Equipment

Correct specifications, requisitions, and inspections of materials and supplied equipment shall be part of ASSO procurement processes to ensure that safety is not compromised. Procurement of critical materials and equipment shall take into account safety and environmental requirements. This can be done by:

- Preparing specifications for all safety critical purchases incorporating safety requirements.
- Identifying specific safety requirements related to the intended application and defining testing, certification or verification, and inspection requirements.
- Selecting suppliers based on their capability to meet specified requirements.
- Selectively inspecting critical materials and equipment at suppliers' premises to verify compliance with specifications.

### 02.8.6. Security

The vessels participating in the project are certified according to the International Ship & Port Facilities Security (ISPS) code. The control and coordination of all project-related marine transfer, transport and traffic (including both vessels and personnel) into, out of and within the offshore sites, is carried out by the Vessel Master and other vessels involved in work on the site.

The vessel Master will provide surveillance and warning cover to any vessel entering the area designated as the worksite.

### 02.8.7. Welfare Facilities

For ASSO work vessels, welfare facilities will be provided in accordance with the Maritime Labour Convention, 2006 including:

- Clean water (tested to EU standards every six months);
- Sleeping accommodation;
- Changing and drying facilities;
- Mess facilities to facilitate meals and beaks;
- Washing facilities; and
- Toilet facilities (both male and female).
- Facilities will be provided commensurate with numbers of personnel onboard.

Inspection of vessel welfare facilities will form part of employer HSSE requirements to ensure vessel compliance and suitability in regard to welfare provision.

### 02.8.8. Personal Protective Equipment

Personal Protective Equipment (PPE) protects employees from the risks of injury by creating a barrier against workplace hazards. PPE must be used when the eyes, face, hands, extremities, or other parts of the body are exposed to workplace hazards that cannot be controlled by other means.

PPE is to be selected through the Risk Assessment and shall be adhered to. ASSO will follow the relevant regulations concerning PPE and their instructions, in order to ensure the following:

- all new employees, before starting their activities, shall be provided with all the protective equipment needed in connection with the risks they can be exposed to in the course of their duties;
- special PPE will be given to the technicians in case of particular activities to be carried out;
- upon issue of the PPE, each technician shall be informed and trained on the correct way to use and conserve them. Each technician will sign for receipt of the PPE;
- a detailed list of PPE to be given as a standard supply to new technicians shall be kept;
- records of all the PPE given to each single technician, including any replacement, shall be kept;
- the PPE will be replaced periodically or whenever they are damaged in a way to be not useful for safety purposes;
- checks shall be carried out on the existence, use and condition of the personal protections assigned to each technician;
- any technician found on the vessel without proper and appropriate PPE will be prohibited from working and dismissed from the worksite. If any item of PPE is misused, misappropriated or lost, the technician shall be severely reprimanded.

The below table indicates the minimum specifications of PPE that ASSO and its subcontractors will use during Project.

Item	Standard / Specification
Safety Helmet	EN 397 – Industrial safety helmets.
Climbing Helmet (Fitted with head torch).	EN 12492 / 1405 – Mountaineering helmets.
Safety Footwear (with ankle support).	EN 345 / EN-ISO 20345.
Life Jacket / PLB.	EN ISO 12402-2 (275N life jacket in line with SOLAS Regulations). PLB to be integral / attached to life jacket. Note: Vessel crews require 150N life jacket permitted (no transfer from vessel)
Personal Strobe	SOLAS approved
Immersion Suit	EN 15027 - SOLAS/MED approved.
Climbing Harness	EN 361 / 358 - Protection against falls.
Fall Arrest Lanyards.	EN 354 / 355 - Protection against falls.
Safety Belt and Lanyard.	EN 361 / 358 - Protection against falls.
Karabiners	EN 362 standard Twin or triple lock
Safety glasses	EN 166 – Personal eye protection.
Gloves	EN 388 / 420 – General requirements and protection against mechanical risks.
Hi-visibility clothing	EN 471
Fire Retardant Overalls	EN ISO 11612:2008 Protection against heat & flame EN ISO 11611:2007 Protection for use in welding IEC 61482-2 Protective Clothing against the Thermal Hazards of an Electric Arc
Anti-static Overalls (confined space areas)	EN 1149-5:2008 protection against the danger caused by static electricity

Further, in the table below the PPE requirements are presented:

Location / Activity	PPE requirement
Working on Vessels (No Transfer)	<ul style="list-style-type: none"> <li>• High visibility vest or clothing</li> <li>• Hard hat or climbing helmet</li> <li>• Lifejacket (where required)</li> <li>• Non-slip safety boots</li> <li>• Safety glasses, gloves, ear defenders etc. to be determined via. task specific risk assessment</li> </ul>

Location / Activity	PPE requirement
Vessel to Vessel Transfers (Capital Vessel to CTV)	<p>Individual risk assessments will be carried out for each vessel’s transfer requirements. The PPE requirements will result from the observations recorded, refer to the individual vessel to vessel transfer assessment for specific details</p> <p>Minimum requirements require the following;</p> <ul style="list-style-type: none"> <li>• Hard hat or climbing helmet</li> <li>• Non-slip safety boots (ankle support)</li> <li>• 275 N lifejacket complete with integrated / attached PLB</li> <li>• Approved immersion suit (when sea temperature is below 12°C or during hours of darkness)</li> <li>• Personal flashing strobe light (transfers during hours of darkness)</li> </ul>

All visiting guests working or visiting on construction site shall use appropriate personal protective equipment and shall be informed about potential risks on site.

The general requirements of ASSO for the use of PPE are given in the following table and the accompanying PPE matrix:

Work Activity	Protective equipment provided
Any process or activity involving a reasonably foreseeable risk to the head from falling objects	Head protection
When working in areas where circumstances involve a reasonably foreseeable risk to the head from bruising or abrasion	Head protection
When working in small fast craft	Personal floatation device (Lifejacket)
When entering or working in a space or working with machinery or equipment where the noise level exceeds 85dB(A)	Ear protection
Welding and gas cutting Electric arc welding (in addition to above)	Eye and face protection Safety footwear
Any work activity in which there is a reasonably foreseeable risk of injury to the eye from particles, fragments or injurious substances	Eye protection
Any work activity involving working in an atmosphere which is likely to be hazardous	Respirator
Any process or activity involving working in an area where there is a foreseeable risk of injury from substances which are corrosive or likely to be absorbed through the skin	Protective clothing Hand protection
Any process or activity involving a reasonably foreseeable risk of injury to the hands unless the use of hand protection would increase the risk	Hand protection
Any process or activity involving particular risk of injury to the feet	Foot protection
Work at height or in any other area where there is a reasonably foreseeable risk of falling a distance of more than 2 meters	Safety belt harness and associated lanyard
Any work carried out from an over side position or in an exposed position where there is a reasonably foreseeable risk of falling or being washed overboard or any work carried out in or from a ship’s boat.	Personal floatation device (Lifejacket)
Any work activity where it is necessary to carry out repair or maintenance work on or near exposed live electrical equipment, and there is a reasonably foreseeable risk of injury	Hand protection Protective sleeves Insulating mat Safety footwear
Any work activity involving a reasonably foreseeable risk of injury from vehicle movement eg. during ro-ro operations	High visibility clothing
Any work process involving exposure to heat	Protective clothing
Any work process involving exposure to cool or cold conditions	Protective clothing
Work in the engine rooms or any area where there is a risk of fire	Non – flammable clothing

Operation	Personal Protective Equipment												
	Body					Eyes		Hands	Ears	Respiratory		Head	Feet
	Coverall	Personal Protective Clothing	Work Vest	Safety Harness	Chemical apron	Safety Glasses	Face shield	Gloves	Ear Protection	Respirator	Mask	Hardhat	Safety Shoes
Anchor Handling	X		X			X		X				X	X
Approaching Installation	X		X			X		X				X	X
Ascending & Descending stairway	X												X
'Back deck' & deck project operations	X					X		X				X	X
Bunkering	X		X			X		X				X	X
Mob/Demob Operations	X		X			X		X				X	X
Change Engine Oil	X					X		X	X			X	X
Chipping	X					X	X	X	X		X	X	X
Cutting	X					X	X	X	X			X	X
Welding / Hot work	X					X	X	X				X	X
Deploying Mooring Buoy	X		X			X		X				X	X
Enclosed Space Entry	X					X		X		X		X	X
Engine Room Maintenance	X					X	X	X	X			X	X
Handling of Chemical	X		X		X	X		X		X		X	X
Launching & Recovering Rescue Boat	X		X			X		X				X	X
Lifting Cargo	X		X			X		X				X	X
Mooring	X		X			X		X				X	X
Painting	X		X			X		X				X	X
Personnel Transfer	X		X			X		X				X	X
Using Power Tools	X						X	X	X			X	X
Refilling Battery Water	X				X		X	X				X	X
Tank Cleaning	X					X		X		X		X	X
Towing	X		X			X		X				X	X
Using cutting disc	X						X	X	X		X	X	X
Using grinder	X						X	X	X		X	X	X
Watch keeping in engine room	X					X		X	X			X	X
Winch operations	X					X			X			X	X
Working at heights	X			X		X		X				X	X
Use of electricity	X					X		X				X	X
Handling of food		X						X					
Manual Handling	X					X		X				X	X
Spooling of wire	X		X			X		X				X	X

### 02.8.9. First Aid

ASSO will provide and manage all first aid provision and supplies on vessels. The names, location and contact details of the all-first aiders will be posted prominently in operational and communal areas on vessel. First aid kits, containing routine medical supplies, will be placed on vessel. Their position will be clearly identified by means of appropriate signs. Defibrillators will also be available on the vessel. All accidents will be formally recorded in a dedicated accident's log book, in addition to reporting as an incident.

Likewise, ASSO requires subcontractors to provide adequate and appropriate equipment, facilities and personnel to ensure their employees receive immediate attention if they are injured or taken ill at work. First-aiders to be appointed at each sub-contractor’s worksite.

**02.8.10. Personnel**

Proper manning levels

ASSO will ensure that adequate number of qualified personnel will be employed on the project throughout its duration. All vessels mobilized for the project execution will be manned with an adequate number of STCW-certified seamen and licensed DP operators (if applicable) for the work in hand. The number and specialisms of personnel working onboard shall be daily communicated to the Employer using the vessel’s official crew list form.

Personnel selection

ASSO ensures that personnel, either technical or vessel’s crew, participating in the project are properly trained, qualified, experienced and able to perform the prescribed scope of work. ASSO project management team, the support vessel’s crew, the engineers and the technicians will hold the prescribed qualifications and have amassed years of experience in similar successful operations worldwide. Operation of any piece of machinery by a person without the appropriate qualification and /or experience will be strictly forbidden. New members of the ASSO team are always assigned a mentor that guides their on-the-job training and are not allowed to perform any task without appropriate supervision. All ASSO personnel shall have valid basic safety training certificates (acc. To STCW) and medical cards (acc. to IMO MLC) depending on roles and responsibilities, which includes drug and alcohol testing following ASSO requirements. In addition, unannounced drug and alcohol tests may be conducted before the start of project execution activities.

Personnel training

The project management team continuously assesses the training needs of personnel participating in the project and develops a plan for their continuous training (project training plan). The Project RQHSE Manager is tasked to oversee its application.

Supervision

Based on the project organization chart, provision of adequate supervisors for each task and work shift will be provided to ensure smooth and safe performance.

Behavior-based program

ASSO will use the on-board observation card programme to record all near misses etc., the safety observation cards will form part of the KPIs and will recorded on the DPR and weekly HSE meeting minutes. They will be discussed at the daily and weekly meetings, all observations will be tracked for closure and feedback will be provided to others. Near misses also to be formally reported through the Incident Reporting process in line with project requirements.

References:

Doc. ID	Doc. Title
SMM-C02	Company Policies
SMM-C07E	Health & Safety Instructions
SMM-M06.01C	MLC Manual
SMM-C06	Personnel Management Manual
SSP	Ship Security Plan (Vessel)

## Part 03 / Risk Management Process

### 03.1. Legal Compliance

ASSO vessel participating in the project shall at all times comply, as a minimum, with Flag State’s requirements for offshore activities, as presented in par. 0.3. From a health and safety perspective the main legislative requirements applicable in Greece shall be adhered to (also in par.0.3). It should be noted that certain requirements within these acts may not always apply to foreign-flagged vessels. In addition, compliance with applicable local maritime legislation shall be achieved.

### 03.2. General Approach

Given the complexity of a project which involves multiple relationships, complex contractual and project design/development phases that a structured approach to risk management from concept stages, through design, planning and construction is essential. This process must facilitate:

- Concept / design development.
- Changes to the Project Team’s policies, activities and practices.
- Compliance with contractual requirements.
- Development and approval of various risk assessments and associated method statements commencing from an initial overall risk assessment and risk register through to detailed activity based assessments.

As such the approach to managing safety and risk for the project is defined within the overall consortium Project Safety, Health and Environment Plan and is broadly based on reducing the likelihood and consequence of project risks to health and safety of personnel, to the environment and to plant and equipment from concept through design, planning, construction activities and project realization.

### 03.3. Concept Risk Management

A ‘Preliminary Project HIRA’ is produced during the initial concept and planning phases of the project and draws on the information provided in the Offer submitted to the Employer at the tender phase. This master document identifies hazards and control measures for each stage of the project from concept design to completion of operational activities. It is based on an initial assessment of risk, accumulated project experience from similar operations, lessons learned and the ASSO’s fleet ‘Risk Assessment Library’.

The ‘Preliminary HIRA’ is used as an input to later stages of the risk management process and is further developed to ensure controls will be enforced that mitigate hazards to a level as low as reasonably practicable (ALARP).

### 03.4. Design Risk Management

#### 03.4.1. Hazard Identification

Hazard Identification is undertaken in the early stages of the project and the identified hazards and control measures are included in the revised ‘Preliminary Project HIRA’. The risks and mitigations identified are used in preparation of the Project Technical Documents; i.e. Project Execution Plan, Method Statements, Operating Procedures and Task Plans.

#### 03.4.2. Design Review Process

The following process is followed: ASSO plans, procedures etc. are submitted to the Employer. The Employer’s Installation Department reviews them, discusses them with ASSO senior project team and sends formal comments. ASSO deliver then documentation amended as per Employer’s requirements. The Employer’s Installation Department approves the documentation and the documentation is then submitted to the customer by the Controller that manages the Project Documentation and the project Master Document Register.

## 03.5. Planning Risk Management

### 03.5.1. Hazard Identification and Risk Assessment (HAZID-HAZCON/HIRA)

The overall HAZID/HIRA process involves the continuous evaluation of risks and mitigations by utilizing the information provided in the 'Preliminary Project HIRA' and the feedback from the review by the Employer of ASSO and sub-contractors plans, method statements, procedures etc. The process is aimed at reviewing individual activities within a work scheme to provide a comprehensive overview of the potential risks (operational, safety, equipment, property and environment) along with the identified controls and mitigations for individual aspects of the work.

The process is captured in the official 'Project HIRA' document and concludes with a formal review meeting held prior to mobilization. This meeting will be attended by the Employer's Project Manager and appropriate representatives from the Employer's Installation Team and ASSO.

### 03.5.2. Hazard and Operability Study (HAZOP)

The HAZOP is a formal meeting held at the mobilization phase with key operational personnel including the Vessel Master, Offshore Manager, Offshore Shift Superintendents, Project Engineers/QHSE Engineers and Employer representatives as appropriate to the scope of works. The meeting is scheduled as soon as practicable dependent on personnel availability prior to mobilization. The purpose of the meeting is to undertake a systematic examination of the planned operations and the relevant risks to:

- Identify deviations that may present risk (operational or safety) to personnel, assets or the environment.
- Review roles and responsibilities.

## 03.6. Construction Management

### 03.6.1. Job Safety Analysis (JSA)

A Job Safety Analysis (JSA) ensures timely SHE evaluation such that work is accomplished safely without accidents. The JSA process is used to cover any work of an unusual/ uncertain character. Usage of JSA shall be considered by operational personnel in connection with, for example:

- Procedures: Non-conformance with/deviation from established practice, deficient procedures with regard to SHE assessment.
- MOC procedure: as an on-site assessment of the risks following a managed change.
- Situations: tight spaces, tanks, difficult access/escape, by the sea, high elevation/several levels.
- Materials: hazardous substances (health or pollution danger).
- Systems: High pressure, fire/explosion danger, high voltage electricity.
- Equipment and tools: Cranes, vehicles, winches, rotating machinery.
- Operations: Lifting, handling, winch operations, simultaneous activities.

Each JSA is prepared at the respective worksite. The JSA is posted at the worksite and communicated at Toolbox talks or meetings.

In the case of ASSO, a JSA is additionally conducted onboard prior to the execution of each task (as defined in the scope of works and outlined in a 'Task Plan') by the Offshore Engineer together with Vessel Master, Offshore Manager and Offshore Shift Superintendents, and complements the 'Project HIRA'. Any additional measures and controls set for the hazards identified in the JSA are added in the Task Plan and are discussed in the pre-operational TBT.

### 03.6.2. Workplace assessments (WPA)

ASSO shall prepare and revise WPAs for all relevant work processes. All employees shall be involved in preparing or revising the WPAs. The WPAs shall be available on site and be presented to the Employer representative upon request.

### 03.6.3. Risk Assessments and Method Statements

ASSO as contractor involved in the project will develop its own risk assessment and method statement for each activity ASSO will be responsible for. ASSO will then submit the RAMS to the Project Manager a minimum of six weeks prior to the proposed commencement date to allow the Employer to review, and if necessary, request that any omissions or improvements are addressed. The Employer reviews ASSO RAMS and ensures the Group complies with requirements.

ASSO is responsible for implementing all the controls and mitigations identified and for monitoring their effectiveness.

### 03.6.4. Project Execution Plan

ASSO will utilize the information derived from the HIRA, HAZID and HAZOP assessments to develop a 'Project Execution Plan' (PEP), equivalent to Employer's Installation Manual for the project activities the Group is involved. The process of developing the PEP commences following the development of the 'Project HIRA' and the early draft is produced and utilized for the HAZID activities. Updates to the draft plan continue throughout the design review and HIRA/HAZOP processes resulting in several iterations. The final version of the PEP will be produced following completion of all the risk review process activities and will contain the detailed technical aspects for the project activities, including but not limited to:

- Details of the cable;
- Cable protection equipment details;
- Cable protection arrangements;
- Local demobilization.

The final version of the PEP will be approved by the Employer before commencement of project operations. The PEP will be prepared and maintained by ASSO project team. A copy of the PEP and associated documentation (as outlined in the MDR) will be available on-board the vessel.

### 03.6.5. Method Statements, Operating Procedures and Task Plans

A Method Statement, complemented by a compact Task Plan, is a formal written instruction on how the main activities or tasks will be undertaken. The Method Statement / Task Plan will pay particular attention to the health, safety and welfare implications in carrying out such an activity drawing on the information / controls contained in the risk assessment.

The extent and detail of a Method Statement will depend upon the size and/or complexity of the work, activity or task to be undertaken. It is likely that a Method Statement / Task Plan will include:

- a) Management arrangements, including identified persons with authority.
- b) Detailed sequence of work operations in a chronological order.
- c) Information on plant, equipment and substances.
- d) Drawings and/or technical information relevant to the work being completed.
- e) Details of site/vessel features, layout or access that may affect method of working.

An Operating Procedure is a formal written instruction on how to a particular piece of ASSO's or subcontractor's machinery / equipment must be operated by competent personnel to perform the activities described in the Method Statement / Task Plan.

ASSO will prepare and submit Method Statements / Task Plans and Operating Procedures timely for a review to be performed by the Employer.

**03.6.6. Risk Assessment and Method Statement Review**

Daily Review

Daily risk assessments / situation specific assessments will be undertaken by the Offshore Engineer / Offshore Manager / Offshore Shift Superintendent prior to work commencing each day to ensure localized conditions including those related to inclement weather are considered and HIRA/JSA are adjusted accordingly. In the event of an emergency or when an urgent change in work arrangements is needed, the onboard Employer’s representative is notified as well as ASSO Project Manager. If and it is not possible to contact ASSO Project Manager and / or the Employer’s Project Manager / Project Director and the Offshore Manager in charge of the operations has the necessary experience and authority to implement the MOC.

In this instance, the Offshore Manager with the support of the Offshore Engineer, Vessel Master, Offshore Shift Superintendents and Employer’s representatives will evaluate the proposed change with respect to operational and safety implications and a decision will be made on whether alter the relevant approved work instructions. A JSA will be performed on the change and the affected risk assessments and method statements will be updated and reissued.

Those performing the work will be given a toolbox talk relating to the changes and any environmental requirements. The Employer Project Manager will be advised as soon as practicable of the change.

On-going Effectiveness Review

In addition to daily condition assessments, all HIRA/JSA will be kept under review as work progresses and in the event of a significant change to the work practice, legislative change, environmental change or following an accident/incident/near miss the agreed HIRA/JSA may be amended accordingly. All such changes must be agreed in accordance with the Management of Change Procedure detailed in Section 7 below. Changes in HIRA/JSA will be communicated to the workforce via daily meetings and/or toolbox talks.

References:

Doc. ID	Doc. Title
SMM-C09B	Risk Management & Communication
SMM-M09.01	Risk Assessment Library
ASSO-CHPE-RAMS01	TSS Measurement Trial Risk Assessment Method Statement

## Part 04 / Project Arrangements for Controlling Significant Risks

### 04.1. Material Deliveries

The control and coordination of all project-related marine transfer, transport and traffic (including both vessels and personnel) into, out of and within the offshore sites, is carried out by the Vessel Master.

The Vessel Master will provide surveillance and warning cover to any vessel entering the area designated as the construction site.

### 04.2. Waste Management

ASSO ensures that waste management both offshore and onshore shall be in accordance with *relevant* procedure.

In detail:

According to MARPOL 73/78 monitoring of diesel usage, waste generation including hazardous waste, incident statistics, volumes and concentrations of any chemicals discharged to sea etc. will be monitored and recorded by ASSO as operators of the vessels. All uncontrolled discharges to sea will be reported to the Project Director.

The relevant vessel manuals, part of the SMM, include:

- Garbage Management Plan, updated to the new MARPOL requirements;
- Shipboard Oil Pollution Emergency Plan (SOPEP);
- Ship Energy Efficiency Management Plan (SEEMP);
- Oil Record Book;
- Ballast Water Management Plan;
- Ozone-Depleting Substances Record.

The vessels are fully certified to operate and handle waste in accordance with the requirements applicable to the Greek waters. The vessels use only low Sulphur marine gas oil.

The Master of each ship shall ensure that under no circumstances waste will end up in the sea. To this end, the following basic rules shall be respected:

- offshore waste and unused consumables shall be returned to land by ship as cargo in separate containers;
- it is not permitted to mix offshore waste with ship waste, nor can offshore waste be treated on board (MARPOL VI);
- at sea, waste cannot be transferred from one ship to another. It shall be directly transported from the supply and disposal harbor, where it will be sorted and disposed of appropriately.

As soon as waste or leaked ship oil (even if only a small quantity) is noticed in the water, this shall be reported to the Master immediately. The Master shall issue the necessary alerts in accordance with the applicable emergency response plan and initiate immediate measures according to the vessel's SMM to limit/remedy the damage.

Wastewater generated on board the ship that does not result from normal ship operations, such as toilets, galleys or cleaning activities, shall be gathered in appropriate tanks. The tanks shall be emptied in port by an authorized disposal company.

### 04.3. Electricity

Work on energized systems is prohibited unless unavoidable. All work on electrical systems onboard the vessel shall be carried out following relevant permit-to-work procedures included in the vessel's SMM.

All fixed or portable electrical work equipment will be maintained in a safe condition, inspected prior to use and operated by suitably competent personnel.

A register of portable electrical work equipment will be maintained onboard the vessel detailing inspection and test programmes / frequency with equipment clearly marked to indicate that it is fit for purpose.

Works on or near electrical installations / installation components can only be performed by qualified electricians or, to a limited extent, persons trained in electrical engineering (EuP). In accordance with the requirements of DIN EN 50110-1 or DIN VDE 0105-100, special security measures shall be determined.

The 5 safety rules shall be respected for all electrical works. To improve the on-site electrical safety, the following measures are also advised.

- regular electrical safety training
- signalisation and delimitation of the working areas
- first aid training with focus on electrical accidents
- use of manual tools
- avoiding fire and explosion risks.

Live works are not permitted in general.

#### 04.4. Preventing Falls

ASSO and its subcontractors will work in accordance to the published standards of the Working at Height Regulations 2005. Work at height is covered by the vessel's permit-to-work system (described below). As a rule, work at height will be minimized where possible and where it can't be eliminated the following controls will be implemented:

- Work of ladders will only be undertaken if access cannot be gained by an alternative means.
- The ladders will be only used:
  - If they have been properly maintained and they are in good condition;
  - If they are properly tagged with information about last check;
  - If they have been checked prior to use;
  - in one position for a maximum of 30 minutes at the correct angle;
  - for 'light work' - they are not suitable for strenuous or heavy work. If a task involves a worker carrying more than 10 kg (a bucket of something) up the ladder or steps it will need to be justified by a detailed manual handling assessment;
  - where a handhold is available on the ladder or stepladder;
  - where you can maintain three points of contact (hands and feet) at the working position. On a ladder where you cannot maintain a handhold, other than for a brief period of time, other measures will be needed to prevent a fall or reduce the consequences of one (e.g. tied at the top). On stepladders where a handhold is not practicable a risk assessment will have to justify whether it is safe or not.
- Barriers will be placed around work areas/platforms at a height to prevent falls. In addition, an exclusion zone shall be established immediately below an area where personnel are working aloft, which shall be cordoned off and display appropriate signage as applicable
- All personnel who are working aloft, outboard or below decks or in any other area where there is a risk of falling more than two meters, should wear a safety harness (or belt with shock absorber) attached to a lifeline.
- When it is unavoidable for persons to work on deck during transit, persons on deck may be required to wear a harness and, where practicable, secured by lifeline as a protection from falls and from being washed overboard, or against the ship's structure.
- All PPE worn during work at height shall be in accordance with the relevant policy, as described in the vessel's SMM.

Any temporary or permanently installed fall arrest equipment involving steel rails or steel ropes and sliders must be compliant with the EN353-1 tests using solid steel weight and must have passed the “fall back” tests to BS5062:1 1985.

#### 04.5. Permit to Work System

A permit-to-work system is an integral part of a safe system of work and can help to properly manage the wide range of activities which can take place close together in a small space, such as is a vessel’s deck.

All potentially hazardous operations on the vessels mobilized for the project will be performed under the control of the vessel’s permit to work procedures, part of the SMM. Such operations include:

- Lifting operations (non-routine);
- Hot work;
- Cold work;
- Permit to work aloft or over the side;
- Enclosed space entry;
- Electrical maintenance;
- Mechanical maintenance.

The following points give a brief description of the vessel’s permit-to-work system.

- An assessment of the situation by a responsible officer is carried out, including weather conditions.
- A safety briefing is conducted between the responsible officer and the crew members that will perform the work.
- The information given in the permit should be precise, detailed and accurate. It should state:
  - The work location.
  - Details of the work to be done.
  - The nature and results of any preliminary tests undertaken.
  - Measures undertaken to make the job safe.
  - The safeguards to be taken during the operation.
- The permit should specify the period of its validity which should not exceed 12 hours.
- Only the work specified on the permit should be undertaken.
- Before signing the permit, the responsible supervisor should personally check that all the measures specified as necessary have in fact been taken and that safety arrangements will be maintained until the permit is revoked or ‘closed’ (terminated or cancelled).
- The person responsible for carrying out the specified work should countersign the permit to indicate his understanding of the safety precautions to be observed. On completion of the work he should notify the issuing supervisor. Thereafter, both MUST jointly inspect the work site to ensure the area is safe and free from latent ignition sources.
- A permit can be suspended by ANY crew member who judges the procedure to be unsafe. The matter should then be referred to the issuing supervisor. If necessary, the matter can be taken to the Master for adjudication. The Master’s judgment is final.
- All permits are registered in the ‘Permits to Work Register’ of the vessel. The responsible person ‘closes’ each entry into the register upon the completion of the prescribed work.

Hot works are activities during which a fire hazard can result from the heating of work pieces or the immediate environment or due to sparks.

Hot works include welding, (torch) cutting, soldering, stripping and comparable processes to work metal material, defrosting, burning out, heating, shrink-wrapping and other works with open flame or hot-air blowing etc.

For hot works, the respective (general) contractor shall define a written work permit procedure (hot work permit) to ensure that prior to the start of the works, the necessary special safety measures, such as removing fire loads

- covering flammable objects
- setting up portable extinguishers
- fire guards etc.

have been determined, implemented and tested.

The written hot work permit shall be provided at the work site for the duration of the works. Immediately after termination of the works, or possibly several times afterwards, the work site and its environment shall be checked for fire pockets etc.

#### 04.6. Control of Lifting Operations

Registers of equipment and accessories including current thorough examination and inspection certification will be maintained and be available on the vessel.

All personnel involved in lifting operations will be suitably trained to do so. All lifting operations will be undertaken under the supervision of the Vessel Master, the Offshore Manager and the Offshore Engineer.

As a minimum, all lifting operations will be:

- Properly planned by a competent person.
- Appropriately supervised.
- Undertaken in a safe manner.

For routine lifting operations an initial plan may only be required once but it will need to be reviewed occasionally to make sure that nothing has changed and the 'plan' remains valid. Complex lifting operations will need to be planned each time they are carried out.

The 'Lift Plan' should consider the following key points:

- The load to be lifted.
- The loads weight, shape, center of gravity, availability of lifting points.
- Initial position of the load, lift path and set down point.
- How often the task is to be repeated using the lifting equipment.
- The nature of the environment in which the equipment will be used including consideration ambient weather conditions.
- The personnel available, their knowledge, training and experience.
- Restriction of access in the lift area to essential personnel only.

#### 04.7. Provision of Plant and Equipment

ASSO realizes that a tool or piece of equipment or machinery can be a problem for employee's health, environment or safety at work if it:

- is not designed to be safe;
- is not well made;
- is not properly guarded;
- is not well maintained;
- is used by untrained operators;
- is used for a purpose other than that for which it was designed;
- is used in conditions other than those for which it was designed e.g. in the wet, near electric cables;

- has been illegally modified or changed;
- is used by an operator without adequate supervision or who is unable to concentrate for some reason.

In addition to the requirement for equipment to be certified, operation of equipment needs to be performed by a 'Certified' Operator.

All plant and work equipment provided for use by ASSO and its subcontractors shall be suitable for the operational activities and must carry a detailed and clear maintenance program record to demonstrate that all safety measures have been considered.

Records of such inspections / checks are maintained by the Offshore Engineer and can be made available upon request.

In the case of plant e.g. lifting equipment, evidence shall be available that a valid Third Party Examination / Inspection has taken place before mobilization on site. Furthermore, all equipment intended for use in classified (hazardous) areas must have a valid third party certificate indicating suitability for use in the classified area. Records of such inspections / checks are maintained the Offshore Engineer and can be made available upon request.

#### 04.8. Plant and Equipment Maintenance

All plant and equipment will be maintained in accordance with the manufacturer's instructions. Any plant, which is not properly maintained to the extent that it is likely to subject personnel to risk, will be withdrawn from service.

Unserviceable plant will be repaired or removed from site as soon as possible. Any item of plant or machinery deemed unsafe by the operator, maintenance technician, or site management must not be used until signed off as safe by the maintenance technician.

The machine operator is responsible for carrying out daily checks on all items of plant and machinery that they operate. The checklist on the operators daily timesheets must be completed daily stating that either the machine is in good working order or list all faults.

Any faults on plant or machinery identified by the operator must be reported to the Offshore Manager.

The vessel's systems and machinery and all vessel's plant and equipment used in project execution are subject to monitoring, inspection and maintenance through the vessel's Planned Maintenance System (PMS), part of the SMM. ASSO shall have the corresponding certificates, assembly instructions, approval notices, permits, testing and control books (as applicable) available onboard for machinery used.

ASSO shall also ensure that machinery is only operated by trained employees.

#### 04.9. Vessel Operations

The details of the ASSO and ASSO-controlled vessels that will be involved in the operations are presented in the following table.

Vessel Name	Flag State & Port of Registry	Owner	Manager
Aethra (IMO 9181481)	Greece (Piraeus)	ASSO Aethra Navigation Company Ltd.	ASSO Marine Shipping Company
Atalanti (IMO 8661616)	Greece (Piraeus)	ASSO Atalanti Navigation Company Ltd.	ASSO Marine Shipping Company
Alcyone (IMO 9452933)	Greece (Piraeus)	ASSO Alcyone Shipping Company	ASSO Marine Shipping Company
Argo (IMO 9523336)	Greece (Piraeus)	ASSO Argo Navigation Company Ltd.	ASSO Marine Shipping Company
Astrea (IMO 8520771)	Greece (Piraeus)	Astrea Shipping Company	ASSO Marine Shipping Company
Hydna (2663)	Greece (Piraeus)	ASSO Alcyone Shipping Company	-

ASSO project management team will issue Notices to Mariners/Weekly Notice of Operations at least 10 days prior to the start of new offshore work, to local port authorities.

A Marine Bridging Document (MBD) will be produced for the vessels by the Employer. The MBD gives instruction to all persons of the responsibilities relating to the parties involved in the ship’s charter (i.e. vessel owner, charterer and as required, subcontractor). The aim of this is to achieve the safe operation of the ships in accordance with the requirements of participating company’s safety management and emergency response systems, project specific documentation and SOLAS requirements. ASSO is responsible for ensuring the safety management procedures as outlined in the MBD are followed and adhered to.

Additionally, limiting environmental conditions as considered during the design phase (i.e. the lowest or highest operational design criteria) for each operation will be defined in relevant operational procedures as a reference for the Project Team. These will be considered by the Offshore Manager and the Vessel Masters when assessing environmental conditions in relation to safe operation of the vessel and its crew.

#### 04.10. Unexploded Ordnance

Employer will have undertaken, if required, UXO surveys of the operational areas and will advise points of concern and appropriate precautions to take if UXO is encountered. If any significant item of debris is located on a proposed route then it will be recorded and identified. Should this recorded debris be identified as munitions/unexploded ordnance then the position will be recorded and the underwater vehicle and vessel will move to a safe distance.

#### 04.11. Housekeeping

A high standard of housekeeping is to be maintained onboard the vessels. Working areas will be kept free of obstruction and potential slip / trip areas subject to risk assessment with identified control measure implemented. Spillages will be cleared immediately using the appropriate media, waste placed in the correct receptacle and lightweight material stored so as to prevent being blown around. No waste shall be discarded into the sea at any time.

#### 04.12. Marine Coordination

The control and coordination of all project-related marine operations, transfer, transport and traffic (including both vessels and personnel) into, out of and within the offshore sites, shall be carried out according to the Marine Coordination Procedure issued for the project. The Masters of the ASSO vessels shall abide strictly to the required notifications and procedures included in the plan.

#### 04.13. Traffic safety vessel

Where applicable Employer shall provide a guard vessel/s to monitor third party vessel traffic, and maintain safety zones by mitigating against unauthorized vessels from entering construction areas and guarding installed structures prior to commissioning.

#### 04.14. General Health Risks

Occupational health will be considered through all phases of the Project. ASSO and its subcontractors will ensure that adequate provisions are made to ensure that all personnel involved in the Scope of Work are protected from exposure to hazards, which may affect their health.

All ASSO personnel are subject to pre-employment medical examination and the issuance of 'Fit for Work' certificate will be made prior to commencement of the project, in accordance with Employer requirements. Medical Examination Reports will be kept and maintained to confirm compliance to the Medical Fitness Standards. Personnel declared to be temporarily unfit will be removed from the worksite.

Moreover, ASSO shall provide to offshore personnel all the necessary medical assistance, such as:

- First aid;
- Pre-employment visits according to worker's duties;
- Medical visits in case of sickness;
- Worker's health surveillance.

It should also be noted that the vessel will comply with the requirements of the Maritime Labour Convention 2006, which covers extensively safety, health and hygiene issues.

#### 04.15. Drug and Alcohol Policy

All spaces and equipment on vessels are subject to inspection or search at any time. As a continuation of the attention to safety, a 'Drugs and Alcohol Policy' is in force. The principal purpose of this policy is to promote a safe working environment for all personnel and to ensure the safe operation of vessels and completion of offshore activities. Personnel are required to provide a valid D&A certificate in line with fitness for work requirements.

Possession and use of alcohol, drugs, or prescription medications without a prescription, on board of the vessels, by any member of the embarked shipboard personnel is strictly forbidden and will not be tolerated.

When violations of this policy are discovered, the following procedures will be adhered to:

- The alcohol will be confiscated and immediately disposed of in the presence of a witness;
- Drugs will be confiscated and placed in a secured location until the vessel reaches home port or another port of call, at which time the offence will be reported, and the drugs turned over to the appropriate authorities for action;
- Disciplinary or corrective action will be taken in accordance with the applicable maritime law and or company policy.

#### 04.16. Smoking Policy

Smoking indoor is not allowed when working onboard unless there is a dedicated smoking cabin at the facilities.

#### 04.17. Manual Handling

Manual handling operations should be avoided when possible and will be engineered out of processes when reasonably practicable. In an effort to reduce the likelihood of manual handling injuries, use of mechanical handling equipment should be utilized whenever practical. Manual handling activities are subject to risk assessment undertaken at the point of work. Training will be provided and documented through the vessel's SMM.

#### 04.18. Hazardous Substances

The Project QHSE Advisor shall evaluate all potential hazardous substances that personnel might use or to which they might be exposed during the activities for cable installation.

The vessels will maintain a register of all known substances onboard; all substances hazardous to health will have Material Safety Data Sheet (MSDS) available. An assessment will be made for substances deemed to be project-related. The RQHSE Manager and the QHSE Advisor shall ensure that all personnel are given training as far as concern MSDSs' requirements to minimize the risks involved and that where possible substances less hazardous to health are used. All hazardous substances and materials will be stored in accordance with COSHH Regulations. A lockable enclosure (steel cupboard) should be used to store hazardous substances/material, including oils and fuels.

#### 04.19. Noise

Work equipment will be assessed prior to use to ascertain noise levels with appropriate controls implemented to limit environmental and personal noise exposure (as applicable).

To ensure compliance with applicable legislation and standards, ASSO will:

- Assess the risk to personnel from noise during operational phases;
- Implement suitable control measures to reduce noise levels at source;
- Provide hearing protection as per risk assessment;
- Ensure that exposure limits are not exceeded;
- Provide information, instruction and training on noise related issues;
- Provide health surveillance as applicable.

Hearing protection signage will be placed at areas that present risk from noise with the use of hearing protection mandatory. Noise measuring equipment will be available onboard.

In areas where a noise level of 80 dB (A) is regularly exceeded, noise protection shall be available to all persons in an easily accessible location. Areas where a noise level of 85 dB (A) is regularly exceeded shall be identified with a warning sign. All persons entering these areas are obliged to wear noise protection.

The use of ship sirens will only be permitted in emergencies or for navigation purposes and not as a means to communicate, e.g. with crane operators or navigating officers.

#### 04.20. Vibration

Use of vibrating work equipment will be subject to risk assessment with anticipated received vibration levels monitored and use restricted as applicable to ensure compliance with the relevant regulations.

Vibrating work equipment will be sourced to ensure the lowest possible exposure to vibration during use and maintained as per manufacturer's recommendations.

#### 04.21. Ionizing Radiation

ASSO will provide a competent Radiation Protection Advisor / Supervisor if work involving ionizing radiation is undertaken. All work will be subject to risk assessment.

In the case of working aloft, a permit to work is required from the vessel to ensure appropriate precautions are taken with regards to Radar operations.

#### 04.22. UV Radiation

Personnel working in sun exposed areas will be provided with sunscreen (minimum protection factor of SPF25). Skin protection will be discussed during induction, TBTs and briefings as appropriate. Safety Glasses will be provided to personnel, which will offer protection from UV Radiation as well as the normal impact / foreign body eye protection.

#### 04.23. Environmental Conditions

Limiting environmental conditions as considered during the design phase (i.e. the lowest or highest operational design criteria) for each operation will be defined in relevant operational procedures as a reference for the Project Team.

Environmental conditions are to be assessed by the Vessel Master in line with vessel procedure and any contractual/limiting environmental conditions defined in the procedure. If environmental conditions are thought to present unnecessary risk to personnel or assets then operations are to cease and the vessel relocated to a safe area until work can be commenced.

#### 04.24. Personnel Transfer

Personnel transfers between shore and ASSO Vessels shall be performed by Vessels pilot ladder. The personnel transfer procedure issued for the project will be followed with a JSA at time of transfer which following events, per vessel, might be addressed via a toolbox talk, this will clearly define the method of transfer, specific site hazards, risk assessment requirements, PPE arrangements, go / no go criteria and list of personnel undertaking the transfer. A copy of the Procedure, JSA and Toolbox Talk will be provided to the Vessel Master as applicable to ensure effective tracking of personnel is maintained.

The vessels will maintain a current list of persons onboard (POB) and next of kin (NOK) details. Both lists will be updated when manning levels / circumstances change. POB and NOK lists will be sent to the Project Manager and Human Resources Department.

The captain of the personnel transfer vessel bears the responsibility for all individuals on board until they are safely brought to shore/vessel. She/he shall assess the risks involved in a transfer and is entitled and obliged to report or halt a transfer if the prevailing conditions are considered too unsafe to proceed.

All transfers shall be carried out in accordance to ASSO specific procedure.

#### 04.25. Working over Water

The case of personnel working over water is covered in detail in the vessels' permit-to-work system, part of the SMM, which will be applicable for all onboard project personnel. In addition, work life vests shall be available to personnel working near the edges of the vessel's deck.

#### 04.26. Night time Operations

ASSO will take all required measures for night time operations onboard the vessels and the hazards associated with such operations will be carefully examined in the briefings / TBTs conducted before execution.

#### 04.27. Spills

Any operational spills will be managed according to the vessels' SMM, which follows strict IMO and flag state guidelines.

#### 04.28. Heat /Cold Stress

The following measures will be in place to remove or reduce the possibility of heat or cold stress to project personnel, where possible:

- Provide adequate clothing;
- Provide PPE;
- Provide training;
- Identify employees who are more susceptible;
- Allow workers to acclimate.

#### 04.29. Stop Work Policy

All personnel involved in project operations are entitled to request on their own initiative and without the fear of punishment the stoppage of work activities performed at the time that they may consider to be unsafe and can cause harm to personnel and environment.

#### 04.30. SIMOPS

SIMOPS procedure will be produced by ASSO, taking into consideration the major Simultaneous Activities foreseen during project execution. The SIMOPS procedure gives instruction to all persons of the responsibilities relating to the parties involved in the SIMOP (i.e. different subcontractor). The aim of this is to achieve the safe completion of the SIMOPS in accordance with the requirements of the participating contractor's safety management and emergency response systems and project specific documentation. Contractor involved in the SIMOP is responsible for ensuring the safety management procedures as outlined in the procedure are followed and adhered to.

#### References:

Doc. ID	Doc. Title
SMM-C07E	Health & Safety Instructions
SMM-M06.01C	MLC Manual
SMM-M07.01	DP Operations Manual
SMM-M07.02	Marine Operations Manual
SMM-C10	Vessel Maintenance

## Part 05 / Project Health & Safety Activity Plan

All measures and controls in place by ASSO to ensure the health & safety during the project are summarized in the 'Project Health & Safety Activity Plan', included as **Annex 1** to this document.

## Part 06 / Management of Change

Should a variation to the installation activities be required including but not limited to any change to any procedure, routine operation or task, vessel, equipment or plant and on occasion, key personnel during the project, a review of the risk assessment will be performed. If there are new SHE risks arising then these will be communicated to the Employer.

The 'Project Health & Safety Plan' will be updated and re-issued as required. The affected risk assessments and method statements / task plans will be updated and re-issued. A JSA will be conducted and all interested parties and statutory consultees will be informed. Those performing the work will be given a toolbox talk relating to the changes and any environmental requirements.

The Project RQHSE Manager and the Offshore Engineer are responsible for ensuring the development and approval of the Project documentation which will provide and maintain a safe and healthy work environment for all employees as well as and minimizing the environmental impact of the operations.

The Management of Change process followed by ASSO includes all appropriate stages of design and operational review appropriate to assessing the risks associated with any change, including designing-out risk through design re-evaluation, if appropriate. The assessments for the MOC are carried out and are approved by all ASSO key personnel and are submitted for approval to Employer key personnel.

Management of change shall be accomplished in accordance with the process flow detailed below.

ASSO ensure that their arrangements include the following requirements:

- A register for all plant and process changes that are proposed, in progress and completed.
- A Job Safety Analysis (JSA) of each change.
- Approval and authorization requirements involving competent persons who shall be accountable and responsible when moving through key stages when a change is being made.
- Identification of the requirements for SHE reviews.
- Identification of requirements to review and revise statutory safety documents or reports, environmental permit submissions, and if necessary to inform the regulatory authorities of the change.

In the event of an emergency or when an urgent change in work arrangements is needed and it is not possible to contact the Project Manager then the Offshore Manager in charge of the operations has the necessary experience and authority to implement the MOC. In this instance the Offshore Manager with the support of the Offshore Engineer, the Vessel Master and the Employer's representatives and MWS will evaluate the proposed change with respect to operational and safety implications and a decision will be made on whether alter the approved work instructions. A JSA will be performed on the change and affected risk assessments and method statements will be updated and re-issued.

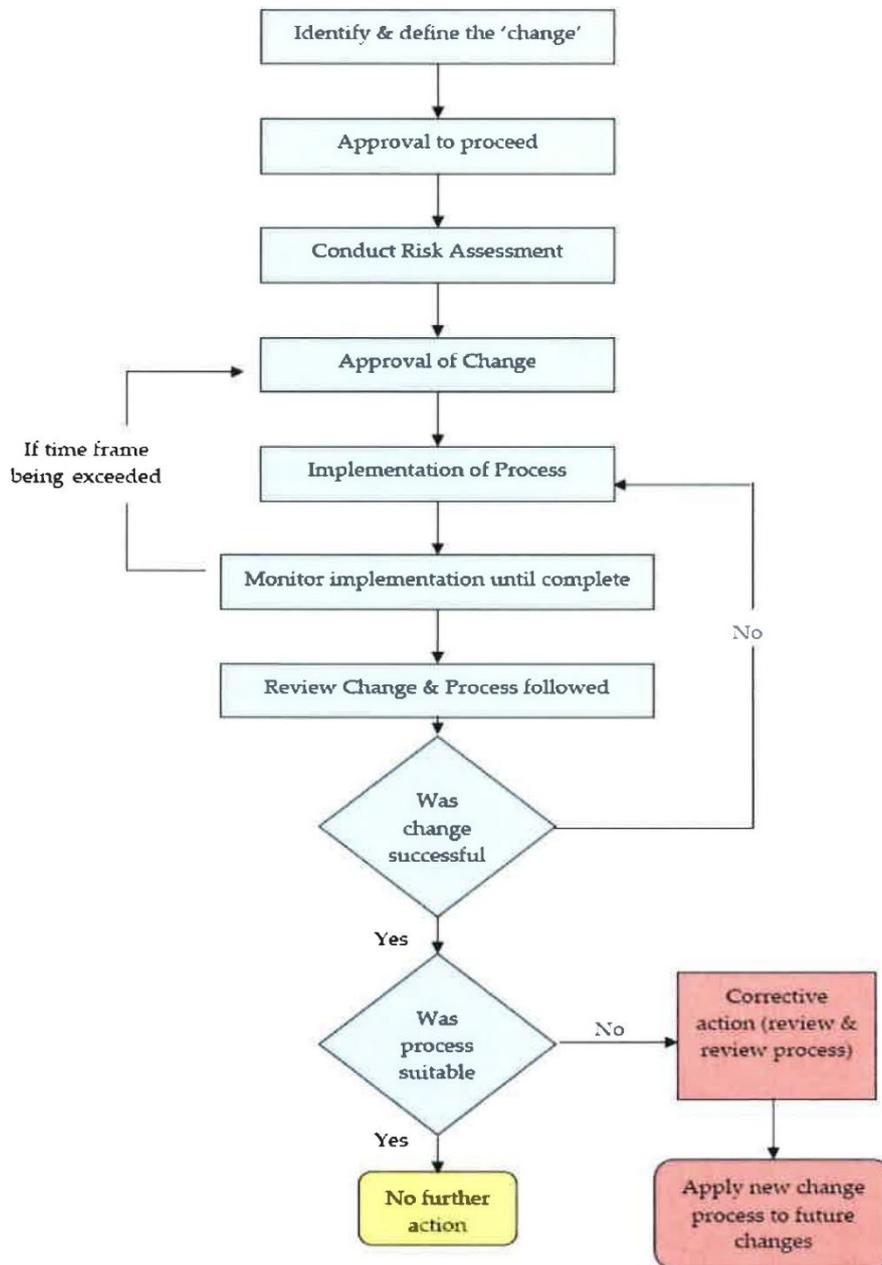


Figure 4 - MOC process flowchart

## Part 07 / Health & Safety File

ASSO will maintain a Health & Safe File with all manuals, plans, records, reports, certificates etc. for the whole duration of the project. The File will be available to employer at any time for review.

## Appendix 1: Health & Safety Policy



Doc. Type: ASSO Policy  
Doc. Title: Statement of the ASSO Health and Safety Policy  
Asso Doc. ID: ASSO-CORP-530

### Statement of the ASSO Health & Safety Policy

The ASSO Group is committed to the implementation of the requirements of the Health and Safety National & European Community legislations and all relevant regulations. The group will provide the resources and actively seek the cooperation of all employees to meet the commitment to maintain safe working practices and a safe working environment. At the same time, it is recognized that all employees have a legal duty to observe the group's policies and legislation for the health and safety of themselves and their fellow workers.

The ASSO Group recognizes that safety is a long-term strategy that requires sustained effort and commitment and it is therefore a primary function of the group's management to provide all relevant resources & training in order to achieve the health and safety targets.

The ASSO Group requires the support and commitment of all members of the workforce in treating safety as one of the group's most important assets.

It is, therefore, the policy of the ASSO Group to:

- ensure the health, safety and welfare of all employees;
- ensure the health, safety and welfare of subcontractors and other involved persons;
- make such arrangement as may be necessary to ensure the safety and absence of risk to all persons;
- provide and maintain site, vessel, equipment, machinery and methods of working that are safe and without risk to health;
- identify and evaluate all hazards to ensure safe places of work and methods of working;
- to investigate and identify the cause of incidents and hazards to health and to ensure that practical corrective actions are implemented to prevent recurrence;
- supply subcontractors / suppliers advice and warnings to the users of all substances and equipment that may be hazardous to health;
- provide such information, instruction and training as may be necessary to ensure the health and safety of all employees;
- recognize that the human resource is in order to the most valuable source of information in order to achieve the continual improvement of the health and safety system.

All executives are committed to the above Health & Safety Objectives of the ASSO Group making a continuous effort towards the improvement of the provided services.

The Health & Safety Policy is known and implemented by all personnel of the group and is reviewed for continuing suitability and effectiveness by Senior Management.

For the ASSO Group



Dimitrios Tziotakis  
Managing Director of Asso.subsea Ltd.

## Annex 1 - Project Health & Safety Activity Plan

### A2.1. Management Controls

No	Control Measure	Description of control measure	Reference	Responsibility	Relevant document	Verifying document	Acceptance Status	Comments
1.1	Review of project requirements	Legislative and regulatory requirements applicable to the project as well as requirements set by the employer and /or the end user regarding health & safety will be thoroughly reviewed to inform project planning	Company QHSE Management System Manual	Project Manager / Project RQHSE Manager	All project-related documentation	Project Scope document (internal)		
1.2	Project QHSE Management System	Establishment and implementation of Project QHSE Management System in accordance with international standards ISO 9001:2015, ISO 14001:2015, ISO 45001:2018	Relevant QHSE standards	Project Manager / Project RQHSE Manager	Project QHSE Plans	Issued documents		
1.3	Project QHSE Plans	Preparation and implementation of plans covering project quality assurance, quality control (inspection & testing), environmental protection, operational safety and occupational health & safety	Relevant QHSE standards	Project Manager / Project RQHSE Manager	Project Quality Plan / Project H&S Plan / Project Env. Plan / Bridging Doc.	Issued plan documents		
1.4	Responsibility & Authority	Establishment of project organization chart and assignment of required levels of responsibility and authority with respect to project activities and QHSE management to individual persons	Relevant QHSE standards	Project Manager	Project QHSE Plans	Issued documents		

No	Control Measure	Description of control measure	Reference	Responsibility	Relevant document	Verifying document	Acceptance Status	Comments
1.5	Health & Safety Policy	Establishment of company health & safety policy that will be enforced throughout the project	Relevant QHSE standards	Project Manager / Project RQHSE Manager	Project Health & Safety Plan	Signed policy document		
1.6	Drug & Alcohol Policy	Establishment of company drugs & alcohol policy that will be enforced throughout the project	Relevant QHSE standards	Project Manager / Project RQHSE Manager	Vessel Safety Management Manual	Signed policy document		
1.7	PPE Policy	Establishment of company policy regarding the use of personal protective equipment that will be enforced throughout the project	Relevant QHSE standards	Project Manager / Project RQHSE Manager	Project Health & Safety Plan / Vessel Safety Management Manual	Signed policy document		
1.8	Risk Assessment	Performance of detailed analysis of potential hazards and threats to project quality, means, personnel and the environment	Relevant QHSE standards (ISO, DNV, HSE)	Project Manager / Project RQHSE Manager	Project HIRA	Issued document / Risk Register		
1.9	HIRA / HAZID meeting	Performance of detailed Hazards Identification Risk Assessment and Hazard Identification study before the start of the operations to identify all significant hazards associated with the project execution activities.	Relevant standard (DNV)	Project Manager / Project RQHSE Manager	Project HIRA	Completed form (Minutes of HAZID meeting)		

No	Control Measure	Description of control measure	Reference	Responsibility	Relevant document	Verifying document	Acceptance Status	Comments
1.10	HAZOP study meeting	Performance of detailed Hazard & Operability study before the start of the operations to search for any unidentified and unplanned dangers to project execution	Relevant standard (DNV)	Project Manager / Project RQHSE Manager	Project HIRA	Completed form		
1.11	Monitoring health & safety performance	Performance indicators (following the S.M.A.R.T principle) will be established before the start of the operations and monitored continuously throughout project duration to assess performance of the company in this field	Marine KPI project / IMCA / HSE	Project Manager / Project RQHSE Manager	Project QHSE Plans	Relevant form / DPR		
1.12	Safety officials	An onboard Offshore Engineer will be appointed following company procedures, who will work together with the vessel's Safety Officer to constantly supervise and monitor performance in this field	Relevant QHSE standards	Project Manager	Project Health & Safety Plan / Vessel SMM	Vessel crew list / Project Organization Chart		
1.13	Auditing of QHSE Management System	A schedule for auditing at regular intervals all aspects of project QHSE management and vessel safety management during project execution will be produced before the start of the operations.	Relevant standard regarding auditing practice (ISO) / Employer Procedures / Employer requirements	Project Manager / Project RQHSE Manager	Project QHSE Plans / Vessel SMM	Signed audit plan form / Audit Reports		

No	Control Measure	Description of control measure	Reference	Responsibility	Relevant document	Verifying document	Acceptance Status	Comments
1.14	Incident reporting and investigation	Procedure in place for the correct and timely reporting of all incidents during project execution (accidents, near misses, environmental incidents, technical incidents, defects) and their thorough investigation to determine root cause	Relevant QHSE standards / Employer Procedures / Employer requirements	Project Manager / Project RQHSE Manager	Project QHSE Management Plan / Vessel SMM	Completed incident report / investigation forms		
1.15	Corrective and preventive actions	Following on from incident reporting and investigation, procedure in place to implement corrective and preventive actions during project execution	Relevant QHSE standards	Project Manager / Project RQHSE Manager	Project QHSE Plans / Vessel SMM	Completed NCR forms		
1.16	Defect reporting	Procedure in place to report machinery / equipment / vessel defects during project execution	Relevant QHSE standards	Offshore Manager / Vessel Master	Project QHSE Plans / Vessel SMM	Relevant forms		
1.17	Management review	Procedure in place for management review of the implemented Project QHSE Management System during project execution	Relevant QHSE standards	Project Manager	Project Quality Plan	Completed form		
1.18	Proper external communication arrangements	Establishment of clear and effective communication lines with other parties involved in the project (owner, main contractor, subcontractors, authorities etc.)	Relevant QHSE standards	Project Manager	Project QHSE Plans	Plans / Safety meeting reports		

No	Control Measure	Description of control measure	Reference	Responsibility	Relevant document	Verifying document	Acceptance Status	Comments
1.19	Management of change	Procedure in place to assess dangers to project execution when significant changes in conditions, procedures, machinery, personnel etc. take place and establish appropriate measures	Relevant QHSE standards	Project Manager	Project Health & Safety Plan / Vessel SMM	Completed form		
1.20	Proper documentation and document & record control	Procedure in place to ensure appropriate control of documents and records throughout the project duration	Relevant QHSE standards	Project Manager / Project RQHSE Manager	Project Quality Plan / Vessel SMM	Master document register / forms register		
1.21	Security arrangements	Plan in place to ensure security for personnel / machinery / equipment / vessel during project execution	Relevant IMO code	Vessel Master	Vessel Security Plan	Proper certification and auditing		
1.22	Proper coordination with Ship Manager	Arrangements in place to ensure good coordination between Company and Ship Manager	Relevant project management standards (PMI)	Project Manager	Project QHSE Plans / Vessel SMM	This document		
1.23	Language	The language of communication onboard the vessel is set to be English.	Relevant QHSE standards (esp. ISM)	Project Manager	Vessel SMM	Language of all documents		
1.24	Safe systems of work	Procedures in place for all activities, after proper risk assessment to ensure execution of all tasks in a safe manner	Relevant QHSE standards (HSE, COSWP)	Project Manager	Method Statements / Task plans / operating procedures / vessel checklists	Completed and signed documents		

No	Control Measure	Description of control measure	Reference	Responsibility	Relevant document	Verifying document	Acceptance Status	Comments
2.1	Proper manning	Procedures in place to ensure that adequate number of qualified personnel will be employed in project execution	Relevant QHSE standards	Project Manager	Project Management Plan / Vessel SMM	Crew / technicians lists		
2.2	Personnel selection	Procedures in place to ensure that personnel participating in the project are properly trained, qualified and experienced	Relevant QHSE standards	Project Manager	Project Management Plan / Vessel SMM	Files with crew / technicians documents / competence matrix		
2.3	Personnel fitness-for-work	Procedures in place to ensure that personnel participating in the project are medically-fit	Relevant QHSE standards	Project Manager	Vessel SMM	Files with crew / technicians documents		
2.4	Personnel training	Procedures in place to assess training needs of personnel participating in the project and develop a plan for their continuous training	Relevant QHSE standards	Project Manager / Project RQHSE Manager	Project Management Plan	Completed form		
2.5	Vessel familiarization	Procedure in place for the proper familiarization of all onboard personnel with the vessel and vessel routines	Relevant QHSE standards (ISM)	Vessel Master	Vessel SMM	Completed forms		

## A2.2. Personnel Controls

No	Control Measure	Description of control measure	Reference	Responsibility	Relevant document	Verifying document	Acceptance Status	Comments
2.6	Project induction	Provision of induction training to all personnel participating in the project.	Relevant QHSE & PM standards	Project Manager	Project QHSE Plans / Vessel SMM	Signed minutes of meeting		
2.7	Personnel work schedule	Procedures in place to ensure that both crew and technicians have work and rest periods onboard during project execution are in compliance with international rules and guidelines	MLC 2006	Offshore Manager / Vessel Master	Project Health & Safety Plan / Vessel SMM	Relevant form		
2.8	Personnel rotation	Procedures in place to ensure technicians rotation onboard during project execution takes place according to international rules and regulations	Relevant legislation	Project Manager	Project Health & Safety Plan / Vessel SMM	Crew / technicians lists		
2.9	Proper supervision	Based on project organization chart, provision of adequate supervisors for each task and work shift to ensure smooth and safe performance	Relevant QHSE standards	Offshore Manager	Project QHSE Plans	Project onboard log		
2.10	Behaviour-based program	Establishment of behaviour-based program for supervisors to continuously monitor the personal traits of personnel with regards to safety	Relevant QHSE standards	Offshore Manager / Vessel Master	Vessel SMM	Completed personalized form (confidential)		

### A2.3. Operational Controls

No	Control Measure	Description of control measure	Reference	Responsibility	Relevant document	Verifying document	Acceptance Status	Comments
3.1	Task Plans & Operating Procedures	Written instructions for the execution of all project-related activities.	Relevant QHSE standards	Offshore Manager / Project RQHSE Manager	Project Execution Plan	Signed documents		
3.2	Lifting operations	Procedures for the safe execution of lifting operations during project execution	Relevant QHSE standards	Offshore Manager / Vessel Master	Project Health & Safety Plan / Vessel SMM	Completed lifting plan		
3.3	DP operations	Procedures for the safe operation of the vessel in dynamic positioning mode	Relevant standards (IMO / IMCA)	Vessel Master	Vessel SMM (DP Operations Manual)	Relevant operational forms		
3.4	Navigation	Procedures for the safe navigation of the vessel.	Relevant code (ISM)	Vessel Master	Vessel SMM	Relevant operational forms		
3.5	Engine room(s) safety	Procedures for safe working arrangements in the vessel's engine rooms	Relevant code (ISM, COSWP)	Vessel Master	Vessel SMM	Relevant forms		

No	Control Measure	Description of control measure	Reference	Responsibility	Relevant document	Verifying document	Acceptance Status	Comments
3.6	Work close to platforms	Arrangements for the safe approach and work inside the 500m zone of platforms.	Contract / project scope	Vessel Master	Vessel SMM / Field procedures	Relevant checklists / licenses / forms		
3.7	Personnel transfer	Procedures for the safe transfer of personnel from vessel-to-vessel	Relevant QHSE standards	Vessel Master	Vessel SMM	Relevant checklist and form		
3.8	Weather monitoring	Continuous monitoring of project area weather conditions. Provision of prediction services, apart from the normal nautical channels, by specialist third party. Strict adherence to prescribed weather and environmental conditions limits.	Project scope	Offshore Manager / Vessel Master	Project Execution Plan	DPR / communication with third party		
3.9	Traffic awareness	Use of normal nautical signs and information channels to notify / warn vessels about the ongoing project works	Project scope	Vessel Master	Vessel SMM	Transcript of relevant Notice to Mariners		
3.10	SIMOPS	Arrangements for the safe execution of simultaneous marine operations in a designated area.	Project scope	Vessel Master	Vessel SMM / Field procedures	Relevant checklist and form		

## A2.4. Machinery / equipment / materials Control

No	Control Measure	Description of control measure	Reference	Responsibility	Relevant document	Verifying document	Acceptance Status	Comments
4.1	Vessel pre-mobilization inspection	Inspection based on IMCA CMID.	Relevant guidelines (IMCA)	Project Manager / Project RQHSE Manager	Project QHSE Plans	Completed and signed CMID with all outstanding issues closed		
4.2	Vessel certification	Review of vessel certification to ensure that all certificates are valid and no action is overdue.	Relevant code (ISM)	Project Manager / Vessel Master	Vessel SMM	Up-to-date certificates list		
4.3	Lifting gear certification	Review of vessel lifting gear and associated equipment certification to ensure that all certificates are valid and no action is overdue.	Relevant code (ISM) and guidelines (IMCA, HSE)	Project Manager / Vessel Master	Vessel SMM (DP Procedures Manual)	Relevant register and certificates file		
4.4	Machinery acceptance tests	Tests performed before machinery transport to the vessel so as the Project Manager is satisfied that it functions according to requirements	Relevant QHSE standards	Project Manager	Project Inspection & Test (QC) Plan	Signed acceptance documents		
4.5	Functionality checklists	Documents that prescribe all the tests and checks needed before operation to ensure that a piece of machinery / equipment functions properly.	Relevant QHSE standards	Offshore Manager	Project Quality Activity Plan	Completed and signed checklists		

No	Control Measure	Description of control measure	Reference	Responsibility	Relevant document	Verifying document	Acceptance Status	Comments
4.6	Vessel maintenance	System that ensures proper maintenance of the vessel and vessel's machinery	Relevant code (ISM)	Vessel Master	Vessel SMM (Planned Maintenance System – PMS)	PMS records		
4.7	Work equipment safety	Procedures to assess all hazards imposed by the machinery and equipment used in the project	Relevant regulations (COSWP, HSE)	Project Manager / Project RQHSE Manager	Vessel SMM	Completed assessment forms		
4.8	Control of hazardous substances	Procedures for the safe handling and use onboard of substances classified as hazardous	Relevant code (IMDG) and regulations (COSWP, HSE)	Project Manager / Project RQHSE Manager	Vessel SMM	Completed assessment forms and relevant MSDS		

## A2.5. Worksite Controls

No	Control Measure	Description of control measure	Reference	Responsibility	Relevant document	Verifying document	Acceptance Status	Comments
5.1	Safety inspections	Procedures for the execution of periodical safety inspections onboard the vessel during project execution.	Relevant regulations and guidelines (IMCA, COSWP, HSE, MLC)	Offshore Manager / Vessel Master	Vessel SMM and MLC Manual	Completed and signed forms		
5.2	Use of PPE	Prescribed rules (in addition to the PPE policy) for the use of personal protective equipment by project and vessel personnel during project execution.	Relevant code (ISM) and regulations (COSWP, HSE)	Offshore Manager / Vessel Master	Vessel SMM	Included in above item.		
5.3	Permit-to-work system	Procedures for the safe planning and execution of particular hazardous activities onboard during project execution.	Relevant code (ISM) and guidelines (IMCA, COSWP, HSE)	Vessel Master	Vessel SMM	Relevant register and forms		
5.4	Safety isolation (incl. lock-out / tag-out)	Procedures for the isolation (no accidental use) of hazardous areas and out-of-use pieces of machinery.	Relevant regulations and guidelines (IMCA, COSWP, HSE)	Vessel Master	Vessel SMM	Relevant register and forms		
5.5	Boarding arrangements	Procedures for the safe boarding of the vessel.	Relevant code (ISM)	Vessel Master	Vessel SMM	Relevant forms		

No	Control Measure	Description of control measure	Reference	Responsibility	Relevant document	Verifying document	Acceptance Status	Comments
5.6	Safe movement	Guidelines for the safe movement of personnel onboard	Relevant regulations and guidelines (COSWP, HSE, MLC)	Vessel Master	Vessel SMM and MLC Manual	Verified during safety inspections		
5.7	Painting	Guidelines for necessary precautions during painting work onboard	Relevant regulations and guidelines (COSWP, HSE, MLC)	Vessel Master	Vessel SMM	Verified during safety inspections		
5.8	Compressed gases	Guidelines for the safe handling, storage and use of compressed gas cylinders and associated equipment onboard	Relevant regulations and guidelines (COSWP, HSE, MLC)	Vessel Master	Vessel SMM	Verified during safety inspections		
5.9	Work stations assessment (ergonomics)	Assessment of the ergonomic compliance of the various work stations onboard	Relevant regulations and guidelines (COSWP, HSE, MLC)	Vessel Master	Vessel SMM	Verified during safety inspections		
5.10	Lighting	Assessment of proper lighting of all work areas onboard, esp. deck areas during night operations	Relevant regulations and guidelines (COSWP, HSE, MLC)	Vessel Master	Vessel SMM	Verified during safety inspections		

No	Control Measure	Description of control measure	Reference	Responsibility	Relevant document	Verifying document	Acceptance Status	Comments
5.11	Use of high power tools	Guidelines for the safe use of high power tools onboard.	Relevant regulations and guidelines (COSWP, HSE, MLC)	Vessel Master	Vessel SMM	Verified during safety inspections		
5.12	Gas free certification	Rules for certifying certain vessel areas as 'gas free' before the execution of hot work.	Relevant regulations and guidelines (COSWP, HSE, MLC)	Vessel Master	Vessel SMM	Relevant gas free certificates		
5.13	Tanks & pressurized systems	Guidelines for the safe use of tanks and pressurized systems onboard.	Relevant regulations and guidelines (COSWP, HSE, MLC)	Vessel Master	Vessel SMM	Verified during safety inspections		
5.14	Securing on deck	Guidelines for the safe stowage and securing of machinery and equipment on deck.	Relevant regulations and guidelines (COSWP, HSE, MLC)	Vessel Master	Vessel SMM (Cargo Securing Manual)	Verified during safety inspections		

## A2.6. Occupational Health & Hygiene Controls

No	Control Measure	Description of control measure	Reference	Responsibility	Relevant document	Verifying document	Acceptance Status	Comments
6.1	Personnel general hygiene and health	Guidelines for ensuring the health and well-being of personnel working onboard	Relevant regulations and guidelines (COSWP, HSE, MLC)	Vessel Master	Vessel SMM and MLC Manual	Verified during safety inspections		
6.2	Noise and vibration	Guidelines for alleviating the hazards associated with excess noise and vibration conditions onboard	Relevant regulations and guidelines (COSWP, HSE, MLC)	Vessel Master	Vessel SMM and MLC manual	Verified during safety inspections / certifications		
6.3	Cold / hot stress	Guidelines for the application of protective measures to personnel onboard for excess heat or cold conditions	Relevant regulations and guidelines (COSWP, HSE, MLC)	Vessel Master	Vessel SMM and MLC Manual	Verified during safety inspections		
6.4	Manual handling	Guidelines for the use of safe manual handling techniques by the personnel working onboard during project execution.	Relevant regulations and guidelines (COSWP, HSE, MLC)	Vessel Master	Vessel SMM	Verified during safety inspections / training forms		
6.5	Fall protection	Guidelines for the protection of crew and technicians from potential falls onboard during project execution.	Relevant regulations and guidelines (COSWP, HSE, MLC)	Vessel Master	Vessel SMM	Verified during safety inspections		

No	Control Measure	Description of control measure	Reference	Responsibility	Relevant document	Verifying document	Acceptance Status	Comments
6.6	Accommodation	Rules for the maintenance of the vessel accommodation in good condition with respect to cleanliness and healthiness.	Relevant regulations and guidelines (COSWP, HSE, MLC)	Vessel Master	Vessel SMM and MLC Manual	Verified during safety inspections		
6.7	Food & catering	Rules and guidelines for the provision of adequate, quality, safe and healthy food and drink to all onboard personnel during project execution.	Relevant regulations and guidelines (COSWP, HSE, MLC)	Vessel Master	Vessel SMM and MLC manual	Verified during safety inspections		
6.8	Housekeeping	Guidelines for the proper housekeeping of all areas onboard the vessel during project execution.	Relevant regulations and guidelines (COSWP, HSE, MLC)	Vessel Master	Vessel SMM and MLC Manual	Verified during safety inspections		
6.9	Visual displays	Guidelines for the safe use of visual displays onboard.	Relevant regulations and guidelines (COSWP, HSE)	Vessel Master	Vessel SMM	Verified during safety inspections / training forms		
6.10	Ionizing & UV radiation	Guidelines for the protection from ionizing and UV radiation onboard.	Relevant regulations and guidelines (COSWP, HSE)	Vessel Master	Vessel SMM	Verified during safety inspections / training forms		

## A2.7. Safety promotion, communication and motivation

No	Control Measure	Description of control measure	Reference	Responsibility	Relevant document	Verifying document	Acceptance Status	Comments
7.1	Safe work practices manual / reference materials	Provision and availability onboard of reference material accessible to all personnel involved in the project	Relevant regulations and guidelines (COSWP, HSE)	Offshore Manager / Vessel Master	Vessel and project safety manuals	Verified during safety inspections		
7.2	Safety briefings & Toolbox talks	Procedures for the execution of periodical meetings / briefings regarding safety issues onboard	Relevant regulations and guidelines (COSWP, HSE)	Offshore Manager / Vessel Master	Vessel SMM	Completed and signed forms		
7.3	Job Safety Analyses	Procedures for the execution, if required, of task-specific risk assessment and safety analyses onboard	Relevant QHSE standards and guidelines (COSWP, HSE)	Offshore Manager / Vessel Master	Vessel SMM	Completed and signed forms		
7.4	Consultation with employees (safety committee & safety reps)	Procedures for the continuous communication onboard between management and employees on safety issues	Relevant regulations and guidelines (COSWP, HSE, MLC)	Vessel Master	Vessel SMM and MLC Manual	Completed and signed forms (minutes of meeting)		
7.5	Safety observation cards	Establishment of a system with which personnel onboard can draw management's attention to identified or potential safety issues	Relevant regulations and guidelines (COSWP, HSE)	Vessel Master	Vessel SMM	Completed forms		

No	Control Measure	Description of control measure	Reference	Responsibility	Relevant document	Verifying document	Acceptance Status	Comments
7.6	Safety warning notices & signs	Placement of clear and legible safety signs and notices onboard warning for potential hazards.	Relevant regulations and guidelines (IMO, COSWP, HSE, MLC)	Vessel Master	Vessel SMM and MLC Manual	Verified during safety inspections		
7.7	On-board complaints	Procedure for personnel onboard to log official complaints on any issue affecting their safety, health and well-being	Relevant regulations (MLC)	Vessel Master	Vessel MLC Manual	Completed complaint forms		

## A2.8. Emergency Controls

No	Control Measure	Description of control measure	Reference	Responsibility	Relevant document	Verifying document	Acceptance Status	Comments
8.1	Emergency Response Plan	Plan that describes the process and contacts for handling emergency situations during project execution.	Contract / Project Scope	Offshore Manager / Vessel Master	Project Emergency Response Plan	Documentation generated during any emergency situation		
8.2	Emergency Preparedness	Procedures describing action lists followed in case an emergency situation affects project execution.	Relevant regulations and guidelines (ISM, COSWP)	Vessel Master	Vessel SMM	Completed and signed checklists		
8.3	First aid	Availability of first aid provision onboard during project execution.	Relevant QHSE standards and guidelines (COSWP, HSE)	Vessel Master	Vessel SMM	Relevant SMM forms		
8.4	Casualty treatment	Availability equipment and communication arrangements for further treatment of potential casualties onboard or at local facilities	Relevant regulations and guidelines (ISM, COSWP, HSE, MLC)	Vessel Master	Vessel SMM and MLC Manual	Relevant SMM forms		