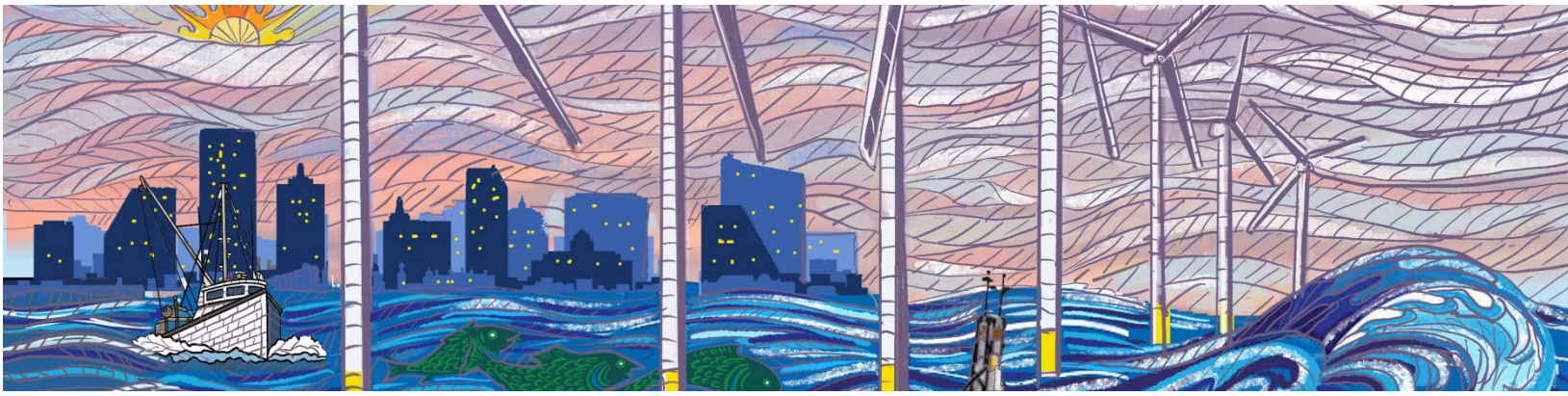


Appendix I-D

HSSE Safety Management System

May 2024

2024

ATLANTIC SHORES offshore wind

HSSE Safety Management System

Revised May 8, 2024

Risk Level		Language	Country
[Risk Level]	OEMS Standard	EN	US

CONTENTS

1. INTRODUCTION 5
1.1 Regulatory Framework 5
1.2 Industry and international standards 6
2. ABBREVIATIONS AND ACRONYMS 6
3. MANAGEMENT COMMITMENT 8
3.1 Roles 8
3.2 Training Requirements 10
3.3 Competence Assessment and Records 10
4. EMPLOYEE INVOLVEMENT 11
5. SAFETY POLICIES 11
5.1 Organizational Reporting Structure 14
5.2 Permit to Work 16
5.3 Job Hazard / Safety Analysis 17
5.4 Driving Safety / Journey Management 18
5.5 Working at Heights / Fall Protection 18
5.6 Lock Out Tag Out (LOTO) 19
5.7 Access and Egress 21
5.8 Electrical Safety 22
5.9 Hot Work 22
5.10 Lifting and Hoisting Safety 22
5.11 Housekeeping 23
6. CONTRACTOR MANAGEMENT 23
6.1 Audits 24
6.2 Training 24
7. MANAGEMENT OF CHANGE 24
7.1 Roles and Responsibilities 25
7.2 Management of Change Process 25
7.3 Management of Change Communication 25
7.4 Training Requirements 26

7.5 Management Review 26
7.6 Audits and Assessments 26
8. UNSAFE WORKING CONDITIONS 26
8.1 Reports of Unsafe Work Conditions 26
8.2 Stop Work Authority 26
9. SAFETY TRAINING AND FITNESS 27
10. Personal Protective Equipment 28
11. DESIGN AND EQUIPMENT 29
11.1 Lights and warning devices 29
11.2 Fall protection systems 29
11.3 Lock Out Tag Out 29
11.4 Confined Space 29
11.5 Boat Landings 30
11.6 Means of Escape 30
11.7 Personnel Landings 30
11.8 Lifesaving Equipment 30
11.9 Fire Detection and Suppression 30
11.10 Maintenance of Emergency Equipment 31
12. Remote Monitoring, Control, and Shutdown Capabilities 31
12.1 SCADA System 31
12.2 Fail Safe Systems 31
13. EMERGENCY RESPONSE 32
13.1 Training Requirements for Emergency Response 32
14. HAZARD IDENTIFICATION AND RISK MANAGEMENT 33
15. IMPLEMENTATION, MONITORING, and REPORTING 35
15.1 Implementation 35
15.2 Performance Monitoring 35
15.3 Incident Reporting 36

1. INTRODUCTION

This document provides an overall description of the key elements to be included in the Safety Management System (SMS) for the Atlantic Shores Offshore Wind project. It describes Atlantic Shores policies with regard to the safety requirements set forth in BOEM's *Guidelines for Information Requirements for a Renewable Energy Construction and Operations Plan (v. 4.0; May 27, 2020) (COP)*.

The SMS is an evergreen document that reflects the core principles of our safety management system and will demonstrate our commitment to supporting ISO 45001 benchmarks, HSSE guidance, management of change, roles & responsibilities, trend analysis, monitoring tools, emergency planning, incident investigation, lessons learned, enhancing reporting culture & mapping training requirements as a minimum. This plan, do, check, act model will support all of our Construction phase activities thus ensuring regulatory compliance.

The SMS provides a structure for:

- Identification and vetting of risks and hazards to the health and safety of people and the Environment;
- Risk management and control measures implemented to ensure prevention of personal injury, asset damage, and adverse environmental impacts.
- Protection of employees, contractors, and the public from foreseeable hazards related to contact with Atlantic Shores operations or assets; and
- Robust health, safety and environmental monitoring and reporting practices.
- Managing industry specific best practices, competence & training

The SMS describes the processes and procedures that, when successfully implemented, ensure the safety of personnel or anyone on or near the facilities. Building upon the SMS foundation of - *planning, doing, checking, acting and striving for continuous improvement* - that safety is ensured. Atlantic Shores understands that health, safety and environmental performance are critical factors during all construction and operations activities on the OCS. As the Project evolves over the planning ,concept select, and design process, Atlantic Shores will update its applicable HSSE documentation accordingly to ensure a true reflection of the safety by design decisions and corresponding work activities. Aperiodic exchange of information with BOEM and BSEE about matters addressed in this document will be initiated as to ensure stakeholder transparency.

1.1 REGULATORY FRAMEWORK

Commercial Lease of Submerged Lands for Renewable Energy Development on the Outer Continental Shelf, OCS-A 0499 ("Lease") includes provisions to address federal safety requirements (Section 14 of the Lease). These requirements are summarized below:

a. Maintain all places of employment for activities authorized under the lease in compliance with occupational safety and health standards and free from recognized hazards to employees of Atlantic Shores or any contractor or subcontractor operating under this lease.

b. Maintain all operations within the leased area in compliance with the regulations in 30 CFR Part 585 and orders from BOEM and other federal agencies with jurisdiction, intended to protect persons, property and the environment on the OCS; and,

c. Provide any requested documents and records, which are pertinent to occupational or public health, safety, or environmental protection, and allow prompt access, at the site of any operation or activity conducted under this lease, to any inspector authorized by the BOEM or other federal agency with jurisdiction.

An SMS must address the requirements set forth in 30 CFR §585.810 (and referenced in 30 CFR § 585.627(d), §585.614(b) and §585.651), including with respect to the COP a description of:

1. How you will ensure the safety of personnel or anyone on or near your facilities.;
2. Remote monitoring, control, and shut down capabilities.;
3. Emergency response procedures.;
4. Fire suppression equipment, if needed.;
5. How and when you will test your Safety Management System.; and
6. How you will ensure personnel who operate your facilities are properly trained.

1.2 INDUSTRY AND INTERNATIONAL STANDARDS

The Atlantic Shores SMS draws from decades of industry-leading offshore wind and other energy infrastructure experience of its parent companies, Shell New Energies and EDF Renewables. Both companies have long-standing, successful records developing, implementing and managing SMS for global and domestic operations. Atlantic Shores considers industry standards, such as ISO 45001, to be an important guideline for the U.S. offshore wind industry[1] As this SMS evolves, Atlantic Shores will look to this standard as our selected guideline to achieve industry best practice. Atlantic Shores does not seek to achieve certification of the standard at present but confirms 45001 alignment measures to support our existing SMS maturity. We endeavor to utilize subject matter experts to periodically assure our alignment against the 45001 standard.

2. ABBREVIATIONS AND ACRONYMS

AED:	Automated External Defibrillator
ALARP:	As Low as Reasonably Practicable
BOEM:	Bureau of Ocean Energy Management
BSEE:	Bureau of Safety and Environmental Enforcement
CFR:	Code of Federal Regulation
COP:	Construction and Operations Plan
CPR:	Cardiopulmonary Resuscitation
CSMP:	Contractor Safety Management Plan
EMP:	Environmental Management Program
GWO:	Global Wind Organization
HAZID:	Hazard Identification
HSSE:	Health, Safety, Security, and Environment
JSA:	Job Safety Analysis
LOTO:	Lock Out / Tag Out
MOC:	Management of Change
NFPA:	National Fire Protection Association
NM:	Nautical Mile

[1] ISO 45001:2018 *Occupational Health and Safety Management Systems* (*see* https://www.iso.org/iso-45001-occupational-health-and-safety.html), *Recommended Practice for a Safety and Environmental Management System for Offshore Operations and Assets, 4th Ed.* (*see* https://www.api.org/products-and-services/standards/important-standards-announcements/recommended-practice-75)

OCS:	Outer Continental Shelf
OSHA:	Occupational, Health, and Safety Administration
PFD:	Personal Flotation Device
PIC:	Person in Charge
PPE:	Personal Protective Equipment
SMS:	Safety Management System
SPCC:	Spill, Prevention, Control, and Countermeasure
USCG:	United States Coast Guard

3. MANAGEMENT COMMITMENT

The commitment of the Atlantic Shores Executive Team to safety is paramount to the implementation of the SMS, and the team has established a goal of eliminating safety-related incidents (referred to as “Goal Zero”). Atlantic Shores management will lead by example, set clear policy, allocate necessary resources, and designate parties to provide subject matter expertise.

The Goal Zero principle refers to a belief that all accidents are preventable and in the organizational mindset regarding relentlessly pursuing no harm to people and no significant incidents. The three Golden Rules are:

1. Comply with all applicable laws, applicable standards, and prudent industry practices.

2. Intervene in unsafe or non-compliant situations.

3. Respect our neighbors

To achieve the safety culture of Goal Zero, Atlantic Shores will:

- Ensure a systematic approach to the management of HSSE and implement a safety management system designed to ensure compliance with regulations as a minimum and to achieve continuous performance improvement.
- Take responsibility and provide clear leadership.
- Be a leader in developing and promoting best practices in the offshore wind energy industry.
- Respect our neighbors and contribute to the societies in which we operate.
- Set targets for HSSE audits, improvement metrics and performance reporting.
- Require all contractors and subcontractors to manage HSSE in line with Atlantic Shores policy
- Ensure that HSSE compliance is the responsibility of all managers, teams, and individuals.
- Empower everyone to stop any work, or prevent work from starting, without retribution where adequate controls of HSSE risks are not found to be in place or an individual is not certain of the task at hand.
- Include HSSE performance in all staff evaluations.
- Encourage and promote involvement by all employees regardless of position or title.
- Strive for zero safety- or environment- related incidents in our operations.

Atlantic Shores is committed to the safety of all employees, contractors, visitors and vendors at all of its facilities. To guide Atlantic Shores in executing their commitment to safety, and building on lessons learned from the offshore wind, oil and gas, and other industries, a combination of regulatory sources has been assessed to support the development of comprehensive and robust safety management program.

The SMS draws on regulations from 33 CFR Parts 140-145 and incorporates information based on certain elements of 30 CFR Part 250, Subpart S, Safety and Environmental Management Systems (SEMS) and OSHA regulations.

3.1 ROLES

The following roles are tasked with fostering and implementing the SMS:

Executive Team: The Executive Team provides overall leadership to the Project team with regards to HSSE; ensures the safe management of all work associated with the Project; ensures that the project is fully and competently staffed for

managing HSSE and that objectives are clearly defined for all team members; ensures that all levels of staff receive adequate and appropriate training; ensures that a means is in place to provide the appropriate level of response to HSSE protocol that is not followed.

Managers and Leads: Managers and leads provide direct support to help individual contributors manage HSSE compliance in their role; ensure the safe management of work under their direction; ensure that HSSE objectives are followed; ensure that staff under their direction receive adequate and appropriate training.

Individual Contributor: All employees, contractors, and subcontractors contribute to keeping Atlantic Shores incident and injury free; ensure the safe performance of their work; follow HSSE policies; attend all required training.

Task or Requirement	Responsibility Owner
Compliance with the Atlantic Shores' HSSE Management System	All – Project wide
Access to contractor HSSE Management System (Risk assessments, method statements, HSSE Plan, permit to work, monitoring tools, safety alerts, site specific information)	HSSE Manager
Documented risk assessing work activity. High risk activities must be highlighted and identified at the earliest opportunity.	HSSE Manager
Documented sequential methodology of the work scope	HSSE Manager
Issuing a Project specific HSSE Plan	HSSE Manager
Issuing an Environmental Management Plan	HSSE Manager
Issuing a Waste Management plan	HSSE Manager
Issuing a Project specific ERP & emergency contact information	HSSE Manager
Accident, Incidents, near misses, notifications, investigation progression, outcomes & lessons learned	HSSE Manager
Documented sub-contractor selection criteria and procedure	Procurement **Team**
Reliable weather forecasting arrangements	Marine Coordination Team
Control of hazardous energy utilizing LOTO & competence in the application & technology.	Contractor HSSE **Teams**
Insurances to be made available upon request	Procurement **Team**
Project directory & contact information	Project Manager

Project progression & project risk communication with the public & businesses in close proximity to the work scope	External Affairs Team
Public & external complaints	External Affairs Team
Critical lift path, lift plans, pre-user inspections, statutory examinations	Contractor HSSE **Team**
HSE Stakeholder meetings monthly	HSSE Manager

3.2 TRAINING REQUIREMENTS

Atlantic Shores team members will receive ongoing training in implementing the SMS and supporting policies. Team members will receive training to develop and maintain the following capabilities:

- Where to find Atlantic Shores HSSE policies;
- How to perform their work safely;
- The importance of and how to support and improve the Atlantic Shores' safety culture of Goal Zero ; and
- How to report accidents, near misses, or injuries.

A strong Safety culture will be supported through the implementation of a behavioral safety program. It is a requirement that the Project appointed HSSE resources possess competence in coaching techniques to help promote and maintain a strong overall safety and reporting culture. It is expected that throughout the course of the Project that Atlantic Shores will perform audits that focus on its behavioral safety culture. In addition, managers and leads will receive training to ensure they have the necessary skills and knowledge to fulfill their safety leadership responsibilities including:

- Mandatory GWO training
- Cultivate and model the safety culture.
- Communicate Atlantic Shores HSSE policies, expectations, and goals.
- Implement and manage the SMS.
- Ensure that the project is fully and competently staffed for managing HSSE.
- Implement the training program and HSSE recordkeeping, performance tracking, and reporting. Ensure that procedures are in place to provide an appropriate response to incidents or to noncompliance.

Further training requirements are addressed in section 9.

3.3 COMPETENCE ASSESSMENT AND RECORDS

Atlantic Shores will use a competence assessment process to assist the development and maintenance of highly and appropriately trained staff. Contractors working for or on behalf of Atlantic Shores will be required to meet these same training and recordkeeping standards.

Atlantic Shores and its contractors/subcontractors will maintain records for HSSE training of project personnel, situational exercises (e.g., tabletop and mock incident exercises), and relevant safety certifications. The Executive Team will direct

Managers to maintain a recordkeeping system that allows for regular review and reporting of all necessary training records and certifications.

4. EMPLOYEE INVOLVEMENT

Atlantic Shores values a high level of employee engagement in its safety program. Employee involvement in the SMS program will be maximized through initial safety orientation, frequent and repeated safety awareness training, and management programs that include:

- Safety Meetings;
- Safety Training Program; and
- Safety Recognition Program.

Atlantic Shores will establish a corrective action policy that clearly defines the process employees should follow to correct issues that may occur. The policy encourages trained employees to exercise appropriate judgement when undertaking work and to follow established safety policies and procedures. The disciplinary policy clearly defines consequences and disciplinary actions when safety policies are violated.

5. SAFETY POLICIES

Specific safety policies and associated training will be developed in accordance with applicable provisions of 29 CFR Part 1910 (Occupational Safety and Health Standards), 29 CFR Part 1926 (Safety and Health Regulations for Construction), and 30 CFR Part 585 (Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf).

Atlantic Shores HSSE policies will be maintained through training, regular safety meetings, documentation, and audits. The SMS addresses the following safety topics:

Safety Topic	Purpose
Contractor Safety Management Process (CSMP)	To confirm that contracts consistently and effectively cover the management of HSSE risks, and to deliver effective management of HSSE risks during contracted activities
Emergency Preparedness and Response Plan + Contact Form	To plan and prepare for Emergency Responses to Incidents that mitigate the consequences and enable resumption of normal operations/business activities
Project HSSE Plan	To plan and prepare an overview of the site's residual risks, foreseeable risk arising from work activities and how they will be managed.
Crisis Management Plan	Managing crisis situations that can arise with little or no warning, cause a high level of concern in the minds of many stakeholders - external and internal, and puts the Atlantic Shores license to operate at risk.
Oil Spill Response Plan	To prepare for fuel or other liquid hydrocarbon and chemical spills offshore and to develop plans to mitigate their consequences
Office and Work from Home Safety Plan	To improve and maintain worker welfare for employees, contractors, and subcontractors with a goal of driving performance through demonstrating care for people
Environmental Management Program (EMP)	To define detailed plans for ensuring compliance

	with all environmental laws and regulations during construction, installation, and operation.
Incident Management and Investigation Plan	To manage, log, investigate, and learn from incidents.
Drug and Alcohol Policy	To manage the risk caused by the use of alcohol and drugs
Personal Protective Equipment (PPE) Procedure	To manage the risk to people where personal protective equipment is used
Aviation Incident Prevention Plan	Controls to manage air safety are established for aircraft, operators, facilities and operations for aircraft that are owned, operated, managed or contracted by Atlantic Shores
Incident Communication Plan	To direct internal and external notifications and communications for response and learning.
Life Saving Rules and Goal Zero Principle	To state guiding safety principles for project.
Management of Change Process	To manage the HSSE and Social Performance risks resulting from unforeseen consequences of changes
Crane and Material Handling Requirements (Lifting and Hoisting)	To manage the risks of lifting and hoisting operations
Working at Heights/Dropped Object Prevention Policy	To prevent falls and drops and to reduce the consequences if a fall or drop occurs when working at heights
Permit to Work System	To manage the risks of hazardous work and work that could interfere with other hazardous operations
Vehicle Safety Plan	Controls to manage road safety are established for drivers, vehicles and journeys. Extra controls are established for professional drivers and in areas with high road safety risks.
Waste Management Plan	To minimize the generation and optimize the reuse, recycling and disposal of wastes
Facility Security Plan for Shore Base and Substation	To manage security risks by assessing security threats and providing controls to safeguard people, assets including information, and reputation.
Spill Prevention, Control, and Countermeasure Plan (SPCC)	Details proper containment and cleanup procedures for unintentional spill or release of substances at onshore facilities.
Bypassing of Safety Systems	To manage the risk of using override of process safeguarding systems and process safety alarms.
HSSE Disciplinary Action Policy	To provide appropriate consequences for intentional or unintentional failure to follow safety rules
Personnel Transfer at Sea Procedure	To ensure safety of all project personnel during transfers at sea between vessels and helicopter if needed.
Fitness for Duty	To reduce the risk of injury, illness, or incidents by evaluation of personnel's fitness for work
Stop Work Authority	Any individual has the right and obligation to declare a "Stop Work" if an unsafe situation is observed that could potentially result in an incident or would potentially cause harm to the environment or damage to equipment and/or property.
Lock Out / Tag Out Procedure	To manage the risk from exposure of people to energy and hazardous substances by isolating equipment and placing locks and

	tags.
Marine Incident Prevention Plan	Controls to manage Maritime Safety Risks are established for owned, operated or contracted vessels. Establish and maintain positive vetting to ensure a vessel is confirmed to be suitable for the intended usage
Manual Handling Procedure	Manual handling procedure to manage transporting or supporting a load by hand or bodily force. It includes lifting, lowering, pushing, pulling, moving or carrying a load.
First Aid, CPR, and AED Procedure	Training and procedure for first responders
Bloodborne Pathogen Procedure	To establish a standard way of safely handling incidents where personnel have the potential to come in contact with blood or bodily fluids
Hearing Conservation Policy	To establish safe practices to address work environments with high decibel sound
Heat Stress Prevention	Establish safe work practices to address and prevent heat stress
Vessel and site-specific induction training	Establish what needs to be included in on-site induction training materials.
Hot Work	To manage the risk of igniting flammable materials during hot work
Confined Space Entry	To prevent or reduce the consequences of incidents related to planning, preparing, executing and supporting confined space work (CSW)
Simultaneous Operations	Each phase of the work scope where simultaneous operations occur will have a SIMOPS Plan encompassing the activities of all contractors (i.e., each CONTRACTOR will not have its own SIMOPS Plan). The SIMOPS Plan shall include the following, at a minimum: List of construction activities, per contracted entity. Overviews of high-level interaction risks, and identification if certain activities cannot be performed at the same time or require additional mitigation measures. Detail of key roles and their responsibilities, including the overall responsible party for all the activities Overview of the interfaces between the PTW procedures of each company. Overview of the emergency response procedures between each company Identification of key documents in which each party will aid in development (e.g., lift plans, commissioning plans, dropped object prevention, etc.) Identification of workshops that are to be held for all CONTRACTORS and SUBCONTRACTORS involved, e.g., risk assessments, etc. Communication schedule between all the parties.
Diver Safety	To prevent or reduce the consequences of incidents related to planning, preparing, executing, and supporting underwater work performed by certified, commercial divers.
Wind Turbine Rescue from Height Procedure	Establish procedure for rescuing personnel from heights during various project phases
Electrical Work Requirements (Shock and Arc Flash Safety)	To manage the risk to people from electrical hazards
Fire Safety Awareness	Verify that all personnel are trained in basic fire prevention and suppression protocol

5.1 ORGANIZATIONAL REPORTING STRUCTURE

Atlantic Shores' organizational structure ensures responsibilities are delineated and accountability is described for all levels of the organization. As needed, positions and duties will be added to the structure, consistent with the Project safety needs and in coordination with project contractors.

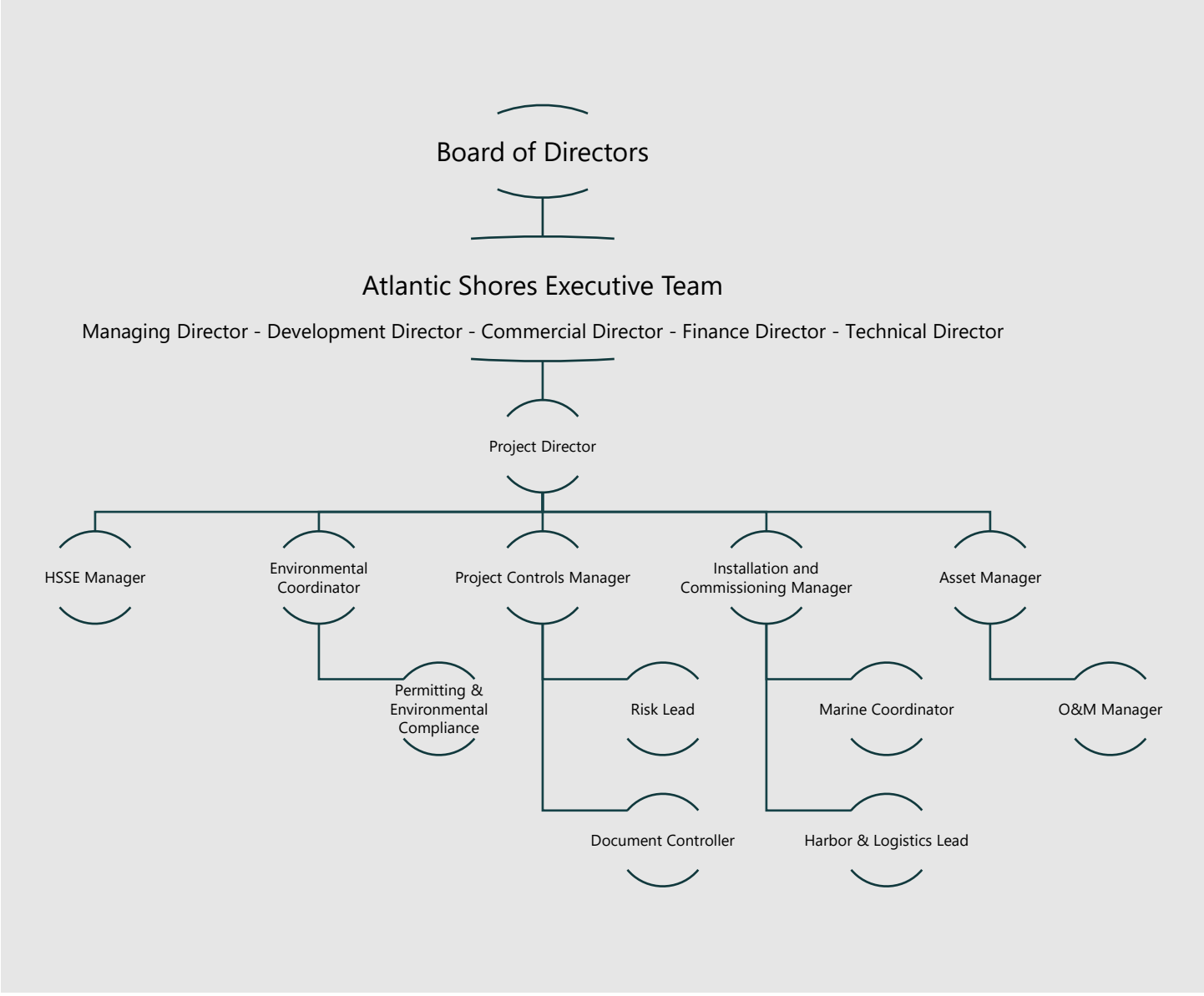


Figure 5-1 Atlantic Shores HSSE Management Organization

5.1.1 KEY ROLES AND DESCRIPTION OF RESPONSIBILITIES

This section lists the responsibilities of Project personnel for administering the SMS, though such personnel may have additional responsibilities that are beyond the scope of the SMS and are addressed elsewhere. Atlantic Shores has developed a RASCI that defines the responsibilities (level of participation) by various roles in the Projectand this RASCI establishes clear roles and responsibilities for key personnel and provides guidance about the composition of ASOW team and identification of key stakeholders as well as identifying key deliverables/documentation for all departments at the design & development concept phase, pre-construction phase and handover from construction to operations and maintenance.

5.1.1.1 PROJECT DIRECTOR

The Project Director will manage all aspects of the Project and will ensure that the Project is constructed safely, in accordance with the environmental permits and applicable quality standards. The Project Director will be Atlantic Shores' authorized representative during the engineering and construction period for all matters related to the SMS including coordination with government authorities, first-responder emergency agencies, and coordination between contractors.

5.1.1.2 HSSE MANAGER

The HSSE Manager will report to the Project Director and will be responsible for monitoring compliance with the approved Construction and Operations Plan, the SMS, all safety-related regulatory requirements, and overall health and safety conditions for the Project. The HSSE Manager will review all contractor's safety management plans for compliance with the COP SMS, regulatory, and contract requirements. The HSSE Manager will establish a "safety first" working mentality at the project sites and on vessels involved in transport and construction. This will be ensured via direct involvement from the manager and a team of site HSSE advisors that will help to create a positive safety culture at all operational sites. Behavioral safety coaching will take precedence and the Project HSSE Advisors commit to reminding all personnel that they have stop work authority should they witness noncompliance concerns or unsafe behavior, further that they are supported by all managers in taking the time to work safely.

5.1.1.3 ENVIRONMENTAL COORDINATOR

The Environmental Coordinator will report to the Project Director and will ensure that all local, state, and federal permit requirements and laws relating to environmental protection and reporting are implemented. The Environmental Coordinator will monitor contractors for compliance with Project specific environmental requirements and shall be responsible for verifying compliance with environmental protection programs and protocols for environmental incident response. The Environmental Coordinator will coordinate deployment of certified marine mammal observers and other environmental resource observers on the vessels as required by the conditions of the Project permits and approvals. The Environmental Coordinator will ensure contractors have compliant oil spill response plans, hazardous waste plans, and waste management plans in place.

5.1.1.4 INSTALLATION & COMMISSIONING MANAGER

The Installation and Commissioning Manager will report to the Project Director and will ensure compliance with permit requirements and applicable laws relating to the Project vessel activities (including installation vessels, transport vessels, service vessels, tugs, rescue boats, etc.). The Installation and Commissioning Manager will be kept informed of all planned vessel deployment each day.

5.1.1.5 MARINE COORDINATOR

The Marine Coordinator will conduct regular meetings with contractors to discuss vessel operation and deployments as appropriate for the level of marine activities scheduled. The Marine Coordinator will be the primary liaison with the

USCG, port authorities, state and local law enforcement, marine patrol, and commercial operators (including ferry, tourist, and fishing boat operators). The Marine Coordinator will be responsible for all marine updates such as coordination with USCG regarding any required Notices to Mariners.

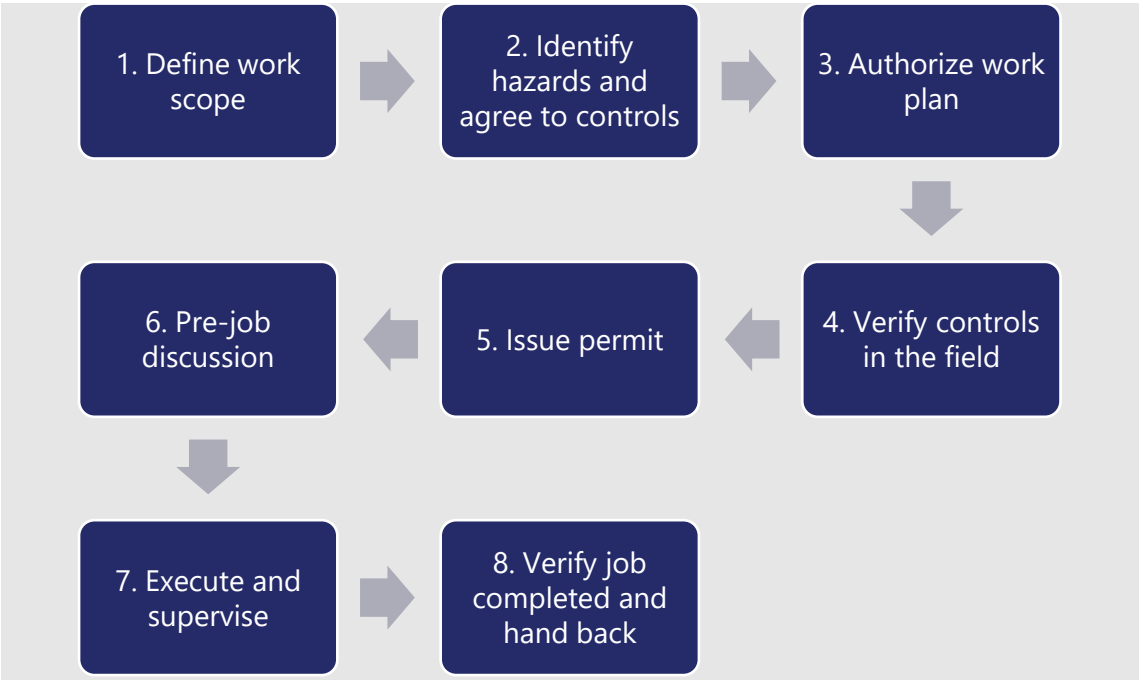
It will be the Marine Coordinator's responsibility to be knowledgeable of weather forecasts and have a communications plan in place with all contractors and vessels involved in the project. The Marine Coordinator will coordinate with the USCG and local law enforcement authorities for planning in the event of trespassing vessels within any safety zone established for the offshore Project construction activity.

5.2 PERMIT TO WORK

Atlantic Shores requires a safe system of work by incorporating a Permit to Work (PTW) process on routine and non-routine work activities. The PTW process is a comprehensive process for analysing, planning, authorizing, and executing work in a manner to prevent incidents. The Permit to Work System should support personnel in safely managing hazards associated with the work activity and the work location or equipment, such that:

- The hazards and controls are understood by the workers.
- The work area is isolated from process hazards.
- Work/activity conflicts are understood and are mitigated for.
- Anyone affected by the work understands the hazard that they could be exposed to

The Permit to Work 8 Step Process



Activities which will require a written safe system of work controlled through Permit to Work will include:

- Access to and work within Confined Spaces
- Access to and work on electrical systems

- Access to and work on mechanical systems
- Lifting and Hoisting operations
- Vessel Permits
- Pressurized pipe systems
- Instrumentation & Control
- Hot work (such as welding or grinding)
- Radiological processes (e.g., NDT)
- Significant Lifting Operations
- Work at Heights
- Work over water
- Transfer of personnel

5.3 JOB HAZARD / SAFETY ANALYSIS

Another key tool to the process, besides the Work Permit, is the Job Safety/Hazard Analysis (JSA/JHA).

The JSA/JHA also helps ensure appropriate precautions and procedures are employed to eliminate or minimize identified hazards and risks of conducted activities. The JSA/JHA is a process for discussing and documenting each step of a job, identifying the existing or potential hazards, and then determining the best way to perform the job to reduce or eliminate the hazards.

JSA/JHA are effective tools to be used for jobs that will take place even when a Work Permit is not required. Atlantic Shores views the JSA/JHA process as an ongoing, continual process that will evolve with the progression of the project from construction, through operations & maintenance, to decommissioning.

Hazards Identification (HAZID) workshop:

A HAZID workshop is held to identify Project hazards associated with the design prior to Project start date, in its current form and discuss the measures that can be implemented to reduce any adverse impact on people or assets. In order to ensure that this is a constructive workshop, appropriate personnel from various relevant disciplines shall be involved. The following people shall participate in this workshop:

Contractor Design team member/s

Contractors Project Manager

Projects Primary Designer

ASOW representative/s – for example, Project Manager, Package Manager,

Other specialists who may be required (for example, lifting operation specialist) as required by the ASOW.

The workshop shall only proceed if there are appropriate representatives in attendance from each of the disciplines identified. Sufficient time shall be allocated for the HAZID. The length of time will depend on the complexity of the design and shall be sufficient to allow all those involved to review the design and for discussions to take place. Relevant information shall be provided in advance of the workshop to attendees, including the latest design drawings, information, and Design Risk Register (DRR). When the design is suitably developed but still at a conceptual design stage, the first HAZID will shall be arranged. Workshops shall be undertaken as the design progresses, as deemed necessary and agreed with the Package Lead, before the final design is produced.

5.4 DRIVING SAFETY / JOURNEY MANAGEMENT

Atlantic Shores employees, contractors, and subcontractors driving a vehicle in the course of their work will comply with Atlantic Shores' driving standards and requirements. These requirements include:

- Have a current driving license that is valid for the location, type of vehicle and, where applicable, the cargo
- Be physically and mentally capable of operating the vehicle.
- Use three-point seatbelts at all times and make sure passengers do so throughout the trip.
- Do not use a mobile phone, pager or similar mobile device (whether hands free or not) while driving.
- Do not allow unauthorized passengers in the vehicle.
- Visually inspect the vehicle for roadworthiness every day before use, including the tires and windshield
- Drive with lights on during daytime, except where prohibited by law.
- Use vehicles equipped with 3-point seatbelts, head restraints, anti-lock braking systems, vehicle side-impact protection, and airbags for both driver and front seat passenger.
- Periodically question and review the number of journeys with the intent to eliminate journeys and lower your travel risk.
- Attend an accredited Defensive Driving Course at a frequency based on the annual miles driven.
- Non-professional drivers shall conduct a Journey Management Assessment (JMA), which is a mental risk assessment, prior to every road trip. The JMA will cover fitness to drive, vehicle condition, the route and road conditions.
- Do not allow driving for more than 10 hours or a combination of work-related activities and driving for more than 14 hours.
- The use of motorbikes, other motorized devices with two or three wheels, All Terrain Vehicles or Quads are not allowed for company business.

5.5 WORKING AT HEIGHTS / FALL PROTECTION

All work at height should be properly planned and appropriately supervised. This includes planning for an emergency rescue. A risk assessment will be completed for work locations that are orientated at any height liable to cause a potential fall as to determine the appropriate level of risk mitigation. All work should be risk based, well organized, and planned in advance. There is a requirement to complete a risk assessment for work at height. The Atlantic Shores Fall Protection Program is intended to provide general procedures for protecting workers working from heights. Activities that expose workers to any potential fall, regardless of height, shall employ suitable fall hazard control measures. Whenever possible, tasks should be planned so that elevated work will not occur.

When fall hazards cannot be eliminated or prevented, personal fall arrest systems shall be used. Personal fall arrest systems ("PFAS") consist of an anchoring point capable of supporting at least 5,000 pounds, double latching snap hooks, a full-body harness with a shock absorbing lanyard and lifeline, or a suitable combination of these. PFAS shall conform to the ANSI Z359.2 Standard. PFAS components shall be configured so workers can neither free-fall more than six feet, nor contact any lower level.

Those working at height should be experienced in working and height and have an understanding of the associated risks and appropriate safety measures required to do so safely. It is the responsibility of the employing company to verify the competence of people who:

- Offshore Personnel hold mandatory GWO work at height training.
- Offshore medicals (i.e., Chester step test)

- Inspect, or maintain Fall Protection Equipment, anchor points, vertical lifelines or permanently installed fall protection systems.
- Inspect, or maintain ladders.
- Use Fall Protection Equipment
- Construct or inspect temporary work platforms.
- Perform work using Rope Access techniques and equipment.

Other measures to prevent injury will include:

- Where there is a Risk of a fall, apply the following Hierarchy of Control:
  - First: Eliminate the work at height via design change or scope modification, etc.
  - Second: Work from a permanent work platform with guardrails and toe boards
  - Third: Work from a temporary work platform (scaffold), or mobile work platform, with guardrails. Assess the hazards of installing, operating, or maintaining the work platform when deciding whether it is Reasonably Practicable.
  - Fourth: Use personal Fall Protection Equipment
- Periodically inspect Fall Protection Equipment and ladders in line with manufacturers' recommendations. Verify that Fall Protection Equipment and ladders that fail inspection are not used.
- Visually inspect Fall Protection Equipment and ladders before each use.
- Tie off 100% of the time when wearing personal Fall Protection Equipment, including while:
  - moving to and from the work at height
  - moving at height; and within 6 feet of a platform edge without a guardrail
- Verify that anchor points meet relevant parts of ANSI/ASSE Z359 before starting work.
- Use a fit-for-purpose harness and lanyard to tie off personal Fall Protection Equipment to an acceptable anchor point.
- Use three points of contact at all times when climbing up and down ladders.
- Use a ladder climbing safety device when climbing up or down uncaged ladders when these are 20 ft or longer.
- Determine the method(s) used to rescue people who have fallen, are suspended in a harness and could develop suspension trauma. Verify the competence of people who are to perform rescues.
- Stop operations if safe conditions cannot be maintained.

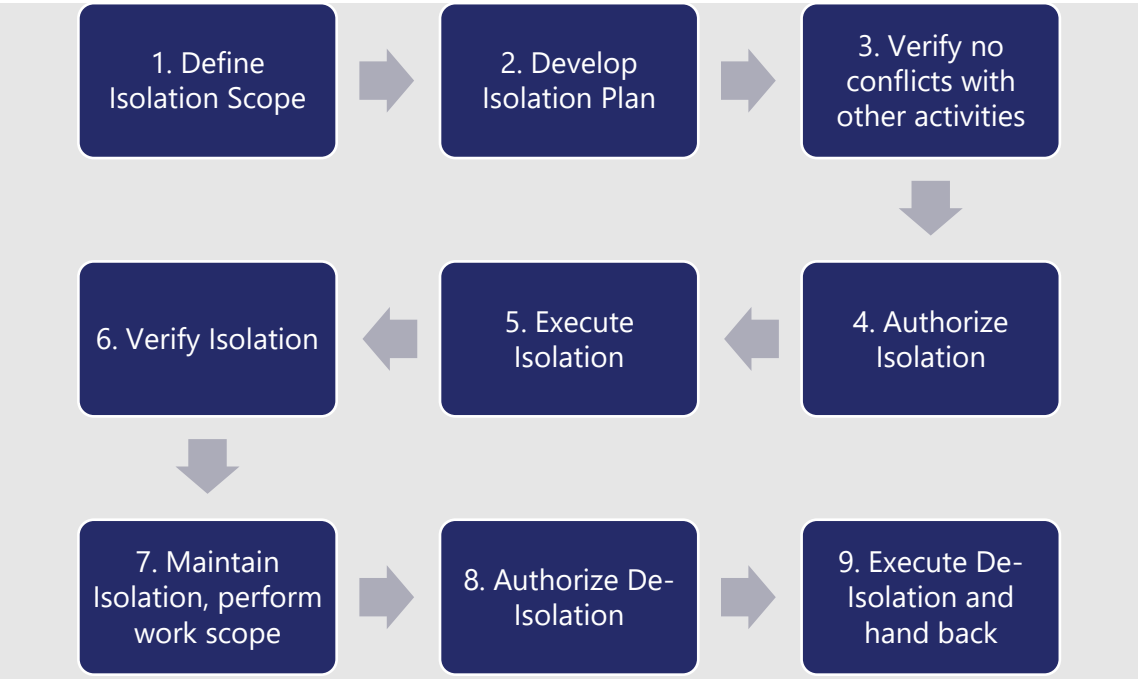
5.6 LOCK OUT TAG OUT (LOTO)

5.6.1 GENERAL LOTO DESCRIPTION

The intent of the isolation and lock out tag out system is to manage the risk to people, the environment, and assets, resulting from exposure to energy (e.g., pressure, electrical, kinetic, temperature) and hazardous substances, during invasive maintenance, through effective isolation of equipment and the placement of locks and tags. Lock out tag out (LOTO) is a procedure required to isolate personnel from all potential energy sources when performing maintenance or service on equipment; especially when that maintenance or service requires the disabling or removal of normal guards and safety devices.

The OSHA standard for The Control of Hazardous Energy (Lockout/Tagout) (29 CFR 1910.147) for general industry, outlines specific action and procedures for addressing and controlling hazardous energy during servicing and maintenance of machines and equipment. The control of hazardous energy is also addressed in a number of other OSHA standards, including marine terminals (1917 Subpart C), longshoring (1918 Subpart G), construction (1926 Subparts K and Q), electrical (1910 Subpart S), and electric power generation, transmission and distribution (1910 Subpart R and 1926 Subpart V).

Atlantic Shores will have written LOTO program in effect for execution and documentation. The 9-step isolation process is mapped below.



5.6.2 LOTO PROCEDURE

- All personnel associated with the scope will share information prior to the start of the work requiring LOTO and agree to make all LOTO procedures uniform for the duration of the project.
- Repairs, maintenance, or other work scopes shall not be carried out on equipment in operation. All equipment shall be shut down and a LOTO device used in such a manner that the equipment cannot be accidentally started while being worked on. The power switch of the equipment to be worked on shall be locked out / tagged out.
- Keys for safety locks shall be stored in a secure location accessible only to those authorized.
- Once locked out and proven to be deenergized, the equipment shall be released for work using a PTW issued by an appropriately authorized person and explained clearly to the recipient working party.
- The current status of work ongoing under a LOTO and PTW shall be recorded in a log and kept up to date with every shift change. The log shall be available to all in control of supervision of works at the site.
- To ensure the equipment has been properly locked out of service prior to starting any work, a qualified person shall isolate the power source and test for dead using calibrated testing equipment to ensure the equipment does not become energized.
- Tower/Nacelle Specific – Before equipment is unplugged or plugged into any power system, the power source shall be locked out / tagged out. This includes all equipment that is unplugged or plugged into portable generators, transformers, controllers, control panels, etc.
- Examples of equipment troubleshooting or maintenance that require LOTO procedures include, but are not limited to the following:
  - Commissioning activities

- Nacelle hub entry;
- Troubleshooting to electrical systems;
- Cabling inspection/repairs.

5.7 ACCESS AND EGRESS

All access to the Offshore Project Area is controlled by the Site Manager or designated subordinate and will be performed to the procedure outlined in the access/egress document. All personnel intending to transfer to the offshore site require up-to-date sea survival training, medical fitness for duty verification, specific training documents for the work they are to undertake, and site-specific induction training. The vessel master keeps a log of all persons that board their vessel and of all the persons transferring onto the differing wind turbines, offshore substations, or other vessels. These log sheets are maintained for audit purposes.

Access/Egress conditions and risks will be assessed prior to transfer activities via NOAA's Operational Risk Assessment or a comparable plan designed by the transfer vessel operator.

Transfer of personnel while at sea shall be required for offshore wind projects as part of normal construction/operations and in times of emergency.

The three primary modes of transfer of personnel to an offshore vessel or fixed structure will be through

(1) helicopter,

(2) gangway or other means of direct access from a vessel to/from a fixed structure or another vessel, and

(3) access via crane lifting device only under exceptional circumstances (e.g., Billy Pugh or Frog device).

Atlantic Shores shall assess the risk of the various personnel transfer at sea options for the task and use the results of the risk assessment as a basis for the chosen option. Atlantic Shores Contractors shall provide their personnel transfer at sea procedures for the technology they are responsible for as part of the Project HSSE Plan.

The personnel transfer at sea requirements shall address the following:

• Identification of the selected means of transfer for a given activity and description of why other means were not selected
• Maintenance/inspection requirements for equipment used for personnel transfer at sea activities

Training requirements for personnel who are expected to transfer at sea The minimum requirements for the offshore Personnel are the following:

• Transfer via helicopter: Comply with the requirements in the Aviation Incident Prevention Plan

• Transfer via gangway / direct access: Identify and communication of the environmental conditions in which direct access is not permissible.

• Crane lifting device: Follow the manufacturer's recommended practices for safe operations. (All crane lifting devices for personnel shall be of the rigid type. MOC shall be in place to use a non-rigid type.)

• All other means of transfer shall be approved by the COMPANY before commencing.

• All personnel boarding turbines or foundations shall be Global Wind Offshore (GWO) certified or equivalent.

• Atlantic Shores Contractors will ensure that the gangway or walk to work system utilized for transferring from vessel to offshore asset or quayside is designed & compliant with 29 CFR Subtitle B Chp XVII PART 915

5.8 ELECTRICAL SAFETY

Atlantic Shores shall address and minimize personnel exposure to electrical hazards through effective equipment operation, design, specification, installation, and maintenance. All electrical work shall be done in accordance with the latest codes, standards, and regulations including NFPA 70E. Electrical hazards include:

- Electric shock/electrocution;
- Electric arc flash;
- Trips and falls;
- Ignition by static electricity in flammable atmospheres; and
- Ignition by electrical equipment in flammable atmospheres.

A subject matter expert for electrical safety will develop Electrical Safety Rules consistent with internationally recognized standards. These Rules will establish work practices and procedure that minimize the exposure to electrical hazards for persons working on or near electrical equipment. These will include:

- Defining which people can work on electrical equipment. Only use property trained and authorized personnel to carry out work on electrical equipment.
- Specify when to require a permit to work.
- Manage work on or near electrical equipment to provide safe isolation.
- De-energize and isolate equipment as required in the Lock Out Tag Out process. Verify there is no voltage.
- Use physical barriers, protective equipment, special tools, or other controls to prevent harm to people when it is not possible to de-energize equipment.
- Verify electrical drawings are provided and maintained.
- Use equipment and work practices that manage static electricity.

5.9 HOT WORK

Hot work is defined as welding, flame cutting, burning, grinding, or using a torch. When possible, hot work should be performed in a shop, outside the facility, or in a Safe Welding Area (“SWA”). A SWA shall be established on all locations where substantial welding or flame cutting is anticipated. All welding and flame cutting operations shall be conducted in the established SWA unless otherwise authorized. The location of the SWA will be based on a specific risk assessment.

If hot work needs to be performed outside of the SWA, especially inside a nacelle, all movable fire hazards in the vicinity shall be removed to a safe distance or guards used to confine the heat, sparks, and slag, and to protect the immovable fire hazards. A Work Permit shall be issued for all hot work done outside of the SWA and approved by the contractor and supervisor. Hazards and recommended special precautions should be documented in the Work Permit.

The hot work equipment and work area shall be inspected prior to beginning any hot work operations to ensure safe working conditions. This includes checking for explosive atmospheric conditions in all vessels, piping and confined spaces and documenting the results on the Work Permit. Oxygen and acetylene cylinders shall be stored valve end up and properly secured. Only certified personnel/welders shall be permitted to perform hot work.

5.10 LIFTING AND HOISTING SAFETY

Only trained and qualified personnel shall operate cranes and other such lifting equipment. All cranes and lifting equipment shall be strictly maintained in accordance with the manufacturer’s recommendations and regulatory requirements.

The following requirements will minimize the possibility of an HSSE incident during lifting and hoisting operations:

- Verify Competence Assurance for people in HSSE Critical Positions who supervise or perform Lifting and Hoisting operations and who inspect and maintain lifting equipment.
- Apply procedures that are approved by a Subject Matter Expert for Lifting and Hoisting
- For Routine Lifts, develop general lifting procedures that identify and control the hazards.
- For all Non-Routine Lifts:
  - Assign the Authorized Person for the Lifting and Hoisting operation, and the Person in Charge Of The Lift
  - For Non-Routine Simple Lifts:
    - conduct a specific Job Hazard Analysis to define the lift plan.
    - assess Site Factors to define logistics, crane stability, and radius of operation.
    - assess Load Factors to define load integrity and stability.
  - For Non-Routine Complex Lifts:
    - use a Subject Matter Expert for Lifting and Hoisting to establish the lifting plan.
    - assess Site Factors to define logistics, crane stability, and radius of operation.
    - assess Load Factors to define load integrity and stability.
    - provide the requirements for lifting of personnel.
    - provide the requirements for performing Blind Lifts.
- Equipment to be used for Lifting and Hoisting must be inspected, maintained, and certified.
  - Use equipment only for its intended purpose and within its designed operating limits.
  - Maintain and inspect equipment in line with the manufacturer's recommendations.
- Manage Non-Routine Lifting and Hoisting in line with the Permit to Work process
- Check the Lifting and Hoisting equipment before all lifts and confirm that.
  - equipment is suitable for its intended purpose.
  - safety devices are installed and operational
- Confirm that required Controls are in place and the lift is carried out as per the applicable lift Procedure
- Keep people clear of overhead loads and areas of potential impact
- Assign a flagman when moving cranes near overhead electrical lines, reversing, or manoeuvring in an area with plant, machinery, or personnel

5.11 HOUSEKEEPING

Good housekeeping is essential so work may proceed in a safe and orderly manner. All walking areas, work areas, handrails, equipment, tools, firefighting, and life-saving equipment, etc. shall be kept clean and free of obstructions. Tools should be placed appropriately so as not to cause a hazard to the job at hand while in use, and promptly put away after use. Hand and power tools shall be kept in good condition with guards in place without modification. Defective tools shall be repaired by qualified repairpersons or replaced.

6. CONTRACTOR MANAGEMENT

Third party contractors and support services will be integrated into the SMS. Specific requirements will be developed for contracting, including:

- Minimum requirements for bridging documents
- Contractor safety audits
- Minimum contractor safety training
- Contractor roles in an emergency

Contractors are required to follow the same policies and procedures that Atlantic Shores employees follow for maintaining the principles of safety. Contractors will follow their own in-house safety documentation in respect to executing their work tasks subject to Atlantic Shores review & acceptance. Atlantic Shores will manage all contractors to ensure consistent safety policies and practices are implemented. Contractor HSSE representative shall be well versed in the project SMS and be responsible for the following:

- Day-to-day site HSSE supervision (onshore/offshore)
- HSSE monitoring, inspection, and auditing
- Support the HSSE Manager in establishing and fulfilling project training needs.
- Participate in planning and coordination of all marine operations relating to the Project.
- Assist with preparation and maintenance of all HSSE documentation.
- Management of PPE inventory, inspection, and testing
- Participation in HSSE meetings, risk reviews and workshops
- Set an exceptional example of safe work for all others involved with the Project.

Contractor operations should not expose Atlantic Shores employees, contractors, subcontractors, or the public to hazards in violation of governmental regulations and Atlantic Shores policy. Contractors will submit proof of training and copies of certificates to the Site HSSE Representative before the start of any work activity. The competencies and training records of all employees will be requested and examined by the Site HSSE Representative before commencing work activities.

6.1 AUDITS

Safety programs for all contractors will be subject to audit by Atlantic Shores. Audits may include review of safety policies, procedures, training records, etc. and may be performed prior to contracting and during the course of the contract.

6.2 TRAINING

All contractors will be fully qualified to perform the roles for which they are contracted, including any prescribed safety standards and training. Atlantic Shores will provide safety orientation to familiarize contractors with any site-specific safety issues. Contractors may be required to demonstrate, through documentation or practical application, their knowledge and understanding of safety requirements for offshore wind farm construction.

7. MANAGEMENT OF CHANGE

Atlantic Shores will maintain a procedure for Management of Change (MOC), which helps to identify the potential risks associated with the change and receive any required approvals prior to the introduction of such changes.

The MOC process provides a coherent, systematic, and simple mechanism for identifying and controlling hazards through the change process with emphasis on the transition phase. When well implemented, MOC ensures that the safety of the Project and its personnel are safeguarded by the evaluation of hazards, threats, and other potential undesired events related to a significant change, and the intended benefits of the change are fully realized as planned.

7.1 ROLES AND RESPONSIBILITIES

The Project Director will be responsible for the implementation of the MOC program. All MOC documentation will be maintained by the HSSE Manager. Any Atlantic Shores employee can initiate the MOC process.

7.2 MANAGEMENT OF CHANGE PROCESS

The Management of Change policy shall be utilized for at least the following changes whether they are temporary or permanent:

- Physical Changes: including work site changes such as changes in construction vessels, working platforms, access and egress locations, etc.
- Organizational Changes: including changes in personnel, individual responsibilities, contractor or sub-contractor changes, etc.
- Technological Changes: including changes in equipment, equipment design, software controls or the technology used on the work site, etc.
- Procedural Changes, including changes to processes (i.e., work schedules, materials, equipment unavailability, new equipment, or operating conditions.

Atlantic Shores will develop a form to facilitate the processing of changes. The change form will, at a minimum, include a description and the purpose of the change, the technical basis for the change, safety and health considerations, documentation of changes for the operating procedures, maintenance procedures, inspection and testing, P&IDs, electrical classification, training and communications, pre-startup inspection, duration of applicability, approvals, and authorization.

For a more complex or significant design change, a hazard and risk evaluation procedure will be used, such as a Hazard Identification (HAZID) workshop. HAZID is further described in Section 11. Risk assessments should demonstrate that the risks with controls are “As Low as Reasonably Practicable.” Contractors also have a responsibility to carry out risk assessments based on the risks associated with their scope of work.

Documentation of changes will be kept in an accessible location to ensure that design changes are available to any member of Atlantic Shores who may require them.

7.3 MANAGEMENT OF CHANGE COMMUNICATION

The communication of changes to appropriate personnel is essential to safety and preventing incidents. The following lists activities that fulfil those requirements:

- A meeting of all involved parties will be held for major changes in Project organization, procedure, or technology; and
- An e-mail notification will be sent out to all team members for each implemented change agreed in the meeting.

Each change shall be supported by an appropriate risk impact assessment that considers risks introduced by implementing the change. The impact assessment shall evaluate the risk associated with the change, and the risk following implementation of mitigation measures identified during the risk assessment.
Technical changes shall be supported by an appropriate risk assessment that uses methodologies consistent with ASOW Risk Management & Quantitative Modeling Framework (RQF) which includes:

- Risk & Opportunity Management Process (ROP)
- Impact Assessment Process (IAP)
- Quantitative Modeling Process (QMP)

When appropriate, additional measures (such as trainings or awareness sessions) will be employed to ensure the change is appropriately communicated and understood by all relevant parties.

Where changes occur to work scope methodology, work scope risks or emergency arrangements then the workforce must stand down until the change has been captured in a documented dynamic risk assessment. This dynamic risk assessment allows for the communication of new potential risks to the workforce and ensures organizational legal compliance. Once a dynamic risk assessment is complete it should be sent as soon as possible to the HSSE department so the approved (original) safety documentation can be updated and re-distributed to the workforce.

7.4 TRAINING REQUIREMENTS

All individuals will receive initial training on the MOC program and will also receive refresher training as required.

7.5 MANAGEMENT REVIEW

On an annual basis, management will review the MOC process and advise improvements or areas to refocus. The executive team and the HSSE Manager will ensure that the MOC policy has been properly implemented and all elements have been completed and documented.

7.6 AUDITS AND ASSESSMENTS

Audits of the MOC program shall validate that the exercise of the MOC policy includes the following:

- Reason for change
- Authority for approving changes
- Analysis of implications
- Acquisition of required work permits.
- Documentation of change process
- Communication of change to affected stakeholders inside and outside the organization.
- Time limitations
- Qualification and training of personnel affected by the change (including Contractors)

8. UNSAFE WORKING CONDITIONS

All employees, contractors, and subcontractors have the personal responsibility and work-place authority to report any unsafe work practice or to immediately stop any unsafe work practice during operations.

Unsafe work conditions may be reported anonymously. Emergent safety issues shall be addressed immediately.

8.1 REPORTS OF UNSAFE WORK CONDITIONS

All employees, contractors, and subcontractors shall report to the appropriate supervisor any violation of a safety regulation or any other hazardous or unsafe working condition on any Atlantic Shores owned or leased property, facility, structure, or equipment. They may also report any unsafe practice or condition occurring while engaged in Atlantic Shores business.

8.2 STOP WORK AUTHORITY

All employees, contractors, and subcontractors have the responsibility and authority to intervene in an effort to stop any unsafe task or operation where the risk to people, the environment, or equipment cannot be managed in accordance with

Atlantic Shores' established safety policies, procedures, or safe work practices.

No employee or contractor will be retaliated against for stopping work that is based on a good faith belief that it is unsafe.

9. SAFETY TRAINING AND FITNESS

As part of the safety culture, safety training is on ongoing component of the Atlantic Shores safety program. Safety training and awareness will include the following topics, as well as any emergent safety issues that may arise. The training topics listed in this section are the minimum required training for all employees, contractors, and subcontractors. Atlantic Shores shall institute a strict access control policy and procedures for the site to prevent unauthorized access and protect assets and the public from operations. The main site entries shall post information on how to contact Atlantic Shores and that access is restricted. In addition, a community relations plan will be established to ensure that good public relations are always maintained during the construction Project with the general public and operational businesses in close proximity to the Project activity.

Orientation Training Visitors

- Site safety rules for moving around on the site.
- Safety equipment for moving around on the site.
- Restricted areas
- Emergency protocol and muster points
- Who to contact in an emergency or with a safety related need.

Site workers

- All visitor topics
- Driving rules (on site and off site)
- Hazardous substances
- Waste, dust emission and noise on site
- Permit to work systems.
- Accommodations for workers
- PPE requirements
- Employee and Contractor general roles and responsibilities
- Incident reporting procedure
- Site security

Example of Minimum HSSE training requirements depending on job function.

- Working at heights
- Electrical safety
- Water survival
- Confined space entry
- First aid and CPR
- Fire fighting

*Example of Specialized and Task Specific Training

- Use of specialized equipment
- Scaffolding and personnel platform equipment
- Diving operations
- High voltage and switching

Medical Audits and Fitness for Duty: Pre-employment screening completed by an occupational doctor may consist of the following:

- Medical history
- Occupational history
- Physical Examination
- Determination of fitness to work wearing PPE
- Baseline monitoring for specific exposures
- Respirator fit test

Periodic Medical Examination completed by an occupational doctor may include:

- Yearly update of medical and occupational history
- Yearly physical examination
- More frequent testing based on specific exposures

10. PERSONAL PROTECTIVE EQUIPMENT

All Atlantic Shores employees, contractors, and subcontractors will receive training or shall be able to demonstrate that they have received training on Personal Protective Equipment (PPE) and its requirements for use, maintenance, and care for all specific safety related equipment, as appropriate.

At a minimum, the following PPE will be included:

- Eye and face protection
- Head protection
- Foot protection
- Hearing protection
- Protective clothing
- Respiratory protection
- Safety belts and lifelines
- Personal flotation devices (PFDs)
- Eyewash equipment

In addition to care and maintenance of PPE, training will also address:

- Housekeeping
- Guarding of deck openings when required

11. DESIGN AND EQUIPMENT

11.1 LIGHTS AND WARNING DEVICES

Appropriate lights and warning signals will be deployed during construction and when the Project is operational. Requirements for lights, markings, and warning devices for structures are codified in 33 CFR Part 67. Structure lights and warning devices will comply with relevant guidelines and regulations including the following:

- General
  - BOEM Draft Proposed Guidelines for Providing Information on Lighting and Marking of Structures Supporting Renewable Energy Development
- Aids to Navigation
  - USCG District 5 Local Notice to Mariner (LNM) 45/20
  - USCG COMDTINST M16500.7A *Aids to Navigation Manual - Administration*, Chapter 4 section G, Offshore Renewable Energy Installation – 02 March 2005
  - NVIC 01-19 Guidance on the Coast Guard's roles and responsibilities for offshore renewable energy installations (OREI)
  - Navigation Regulations 33 CFR Part 67: Aids to navigation on artificial islands and fixed structures
  - IALA Recommendation 0-139: The Marking of Man-Made Offshore Structures
- Obstruction Lighting
  - FAA Advisory Circular 70/7460- 1M *Obstruction Marking and Lighting*
  - FAA Advisory Circular 150-5345-43J *Specification for Obstruction Lighting Equipment*

11.2 FALL PROTECTION SYSTEMS

Design of fall protection systems and anchor points will comply with all relevant parts of ANSI/ASSE Z359. Guardrails and other permanent forms of fall protection will be designed in accordance with generally accepted industry standards and applicable regulations, including:

- 33 CFR §142.87 -- Guarding of deck openings, which provides requirements for guarding decks of offshore structures.
- 29 CFR §1910.29 -- Fall protection systems and falling object protection—criteria and practices, which provides requirements for handrails of elevated platforms and walkways.
- ISO 14122 series Safety of machinery ‑ Permanent means of access to machinery, which provides requirements for guardrails and other permanent forms of fall protection

11.3 LOCK OUT TAG OUT

Equipment will be designed so that Lock Out Tag Out (LOTO) procedures compliant with 29 CFR Part 1910, Subpart J, Section 147 can be used during operation. Design of machinery, electrical, and hydraulic fluid power systems for safe isolation will comply with ISO 14118, IEC 60204-1, and ISO 4413, respectively.

11.4 CONFINED SPACE

Equipment will be designed to support the use of confined space procedures compliant with 29 CFR Part 1910, Subpart J, Section 146 during operation.

11.5 BOAT LANDINGS

Boat landings will meet requirements provided under 33 CFR §143.105 (*Personnel Landings).*

11.6 MEANS OF ESCAPE

All structures shall be equipped with escape means, as appropriate for unmanned structures and in accordance with the requirements of 30 CFR §143.101.

11.7 PERSONNEL LANDINGS

Personnel landings will be provided on all structures and will consist of boat landings and access ladders. Guards and rails will be installed for the unprotected perimeter of all floor or deck areas and openings, catwalks, and stairways. Training will ensure all workers are aware of the requirements and have sufficient knowledge to report any deficiencies.

11.8 LIFESAVING EQUIPMENT

Lifesaving equipment will be provided in compliance with SOLAS Chapter III – *Life-Saving Appliances and Arrangements* and 46 CFR Part 160 as far as practically possible. This includes:

- Survival (transfer) suits will be worn for marine transfer to/from vessels when a risk assessment considering air and water temperatures, other PPE interactions, expected duration of exposure, tidal strength, expected vessel reaction times, etc. warrant.
    - These survival suits will conform to USCG – UL1197 and/or be SOLAS approved.
    - Survival suits will always be coupled with a suitable USCG compliant industrial life jacket.
- Personal Floatation Devices / Work Vests are required for all personnel who require transport and access to the wind farm.
    - Atlantic Shores will provide awareness training on the type(s) of approved PFDs and their uses, stowage, care, and inspection, including additional requirements for hybrid work vests, if used.
    - These PFDs will be USCG approved and fitted with an integrated Personal Locator Beacon.

11.9 FIRE DETECTION AND SUPPRESSION

The fire and safety design are dependent on the selected operational philosophy (e.g., manned versus unmanned platform and the resulting design risk assessment). A fire hazard analysis will be performed to identify the critical scenarios and the actual mitigation for each scenario, utilizing applicable NFPA codes where possible.

A SOLAS approved fire, smoke and heat detection system based on the self-monitoring principle should be installed in accommodation, machinery spaces and other areas deemed high risk. The fire detection system should be designed to rapidly detect the onset of fire in areas covered by the detectors and should include both audible and visual alarms where appropriate. Appropriate fire extinguishing equipment shall be provided, each clearly labeled as to the type of fire that each is suitable for. Locations of such equipment must be strategically placed and clearly marked in accordance with SOLAS requirements.

Project design and firefighting systems will be consistent with the following standards, at a minimum:

- 46 CFR 108 Subpart D, *Fire extinguishing systems*
- 29 CFR 1910 Subparts E, *Exit Routes and Emergency Planning*
- 29 CFR 1926 Subpart F, *Fire Protection and Prevention*
- 29 CFR 1910 Subpart L, *Fire Protection*

- 33 CFR Part 145 Firefighting Equipment
- Applicable NFPA standards

11.10 MAINTENANCE OF EMERGENCY EQUIPMENT

Each piece of emergency equipment will be part of the Atlantic Shores maintenance program. All emergency equipment in use will be listed and include a description of the maintenance requirements or technical references for maintaining each piece of equipment.

12. REMOTE MONITORING, CONTROL, AND SHUTDOWN CAPABILITIES

12.1 SCADA SYSTEM

The Project's Supervisory Control and Data Acquisition (SCADA) system will provide the operator with the capability to remotely monitor and control the project assets, including the ability to shut down the equipment remotely if necessary.

The SCADA system will continuously assess the status of the wind turbines and subsystems. Control room operators will observe how the plant is functioning and can make modifications or interventions remotely as required.

The system will incorporate redundancies, such as multiple network connections (e.g., a combination of radio, fiber optic cables, satellite, LTE) to ensure constant control of project assets. Primary communication will be the fiber optic cables connecting each wind turbine, the offshore substations, and the onshore substations.

The SCADA system will be designed in compliance with relevant EN, IEC, and IEEE standards.

Security of the SCADA system is of primary importance and is a key principle of the design. Cyber security will be in accordance with North American Electric Reliability Council Critical Infrastructure Protection (NERC CIP) standards, IEC27001, IEC 62351, IEC 62443, and Atlantic Shores' security policy and include, at a minimum, the following considerations:

- Authentication of users
- Role based authorization of authenticated users
- Separation of systems within the project
- Separation of SCADA system from the internet
- Secure transfer of information
- Compliance with appropriate standards
- Physical access to equipment
- User and organizational aspect
- Intrusion detection

12.2 FAIL SAFE SYSTEMS

In addition to the capabilities of the SCADA system, the wind turbines will utilize standard fail safe mechanisms (e.g., mechanical brakes, pitch systems to feather blades) and protocols. In the event that the wind turbines lose power or are communications with the operations facility; these systems will ensure that the turbines initiate a safe shutdown until the connection is restored and system integrity is verified.

The wind turbines and associated fail safe systems will be designed in accordance with relevant industry standards, to be defined and agreed with the selected supplier(s) in the Employers' Requirements.

13. EMERGENCY RESPONSE

The SMS is primarily focused on preventing incidents. However, it is also critically important to be prepared if emergencies do occur. For this reason, Emergency Preparedness and Response plans are essential for responding effectively to an incident. Proper planning, training, and drilling will ensure that any impact of an incident will be kept to a minimum for the public and the environment.

Emergency response plans will be developed for a range of emergency situations. Plan development will include procedures for testing emergency plans through drills and exercises. Plans will be developed, at a minimum, for the following scenarios:

- Collision between vessel and structure
- Fire on structure and/or service vessel
- Evacuation
- Pollution incidents
- Adverse weather
- Vessel in distress, man overboard, and Search & Rescue
- Remote monitoring, Control and Shut Down procedures

Atlantic Shores & its Contractors shall develop a written site Emergency Response Plan (ERP) referencing the corporate emergency procedures when necessary and are expected to provide an interface to work scope ERP and Project ERP. The ERP shall address but not limited to fire, severe weather, rescue of an incapacitated worker, enclosed space rescue, helicopter evacuation, earthquake, loss of power, (vessel), collision & vessel water ingress, structural collapse in respect to trenches and excavations, scaffold collapse, chemical release, workplace violence, impact to the environment, security threats, etc. It shall include identification of evacuation point, shelter in place, and notification system. Project Personnel shall ensure all are instructed on the plan and will conduct and conduct a test exercise to validate the ERP at least quarterly per OSHA 29 CFR 1926.35. The ERP teams identified will compromise the necessary training and competence for such planning.

13.1 TRAINING REQUIREMENTS FOR EMERGENCY RESPONSE

Individuals who will lead emergency responses, as well as those who will participate as emergency response team members, will receive initial training prior to their first involvement in an emergency response. These individuals shall also receive refresher training on an annual basis.

Data and other observational information from past drill and actual events shall be incorporated into training. Learning from external events not related to Atlantic Shores shall also be incorporated as applicable.

The emergency preparedness response plans (EPRP) shall be prepared, updated, kept available and communicated to Atlantic Shores Personnel, & all Contractor personnel both on- and off-site. Emergency plans shall be subject to periodic test (drills), the EPRP will be tested, drilled & documented prior to Construction. Emergency drills will, comply with the requirements of SOLAS and national legislation requirements. This will include “Musters, drills, on-board training and instructions, and Decision Support Systems”. In any event a minimum of a Fire and Abandon Ship drill for the vessels crew will take place on a monthly basis. Information on the frequency and type of emergency drills shall be incorporated into our EPRP & Contractors EPRP’S. The EPRP shall reflect the site arrangements & facilities for emergencies, including response, access/egress, paramedic support, trained first aiders or medics and communications and reporting and documentation requirements. Every offshore technician is trained in emergency response techniques and in most cases enhanced first aid training, this means an emergency response team is assembled locally and immediately as required. We will ensure a recovery room and sufficient welfare is readily available throughout Project life cycles. Emergency planning and incident control shall be included in the EPRP for dealing with reasonably foreseeable

environmental contingencies, addressing but not limited to:

- Pollution incident recognition and action for discharges at sea
- Spill control and clean-up
- Notifications and reporting to regulatory agencies, including HSSE Manager per notification timelines
- Arrangements to mitigate any incident, minimizing potential for exposure.
- Foreseeable HSSE incident's & automated responses
- Recovery arrangements and investigation, detailed report preparation and learning

14. HAZARD IDENTIFICATION AND RISK MANAGEMENT

Managing risk effectively is critical to achieving the HSSE objectives under this management system. Atlantic Shores will review HSSE risks associated with planned operations, assess the impact and likelihood of the risks materializing, and implement effective actions designed to safeguard assets to enable safe operations.

Comprehensive risk management will reduce risks and mitigate consequences associated with safety, health, environmental and security incidents by providing essential information for decision-making and planning of work activities. The goal will always be to reduce the hazard to a level as low as reasonably practicable.

- A process including risk analysis methodology will be established that involves hazard identification, risk assessment, selection of controls and mitigation (recovery) measures to reduce risk to the Lowest Practicable Level.
- HSSE hazards will be identified and documented including their effects on people, assets, community and the environment in a Hazard and Effects Register, including methods for managing the risks.
- Instruction, training, and supervision will be provided so that employees, contractors, and subcontractors (as applicable) are competent to apply the HSSE & SP risk analysis methodology in their area of responsibility.
- Security risk management will be conducted in accordance with national legal requirements and Internationally Recognized Standards, including the Voluntary Principles on Security and Human Rights
- Environmental risks will be identified and assessed together with consultation from a Subject Matter Expert to determine impacts to the environment.
- Health risks will be identified and assessed together with consultation from a competent person to determine potential impacts to people.
- Risk assessments will be conducted for ongoing Atlantic Shores projects and operations to identify and address potential hazards to people, assets, the community and the environment.
- Assessed risks will be addressed and documented by specified levels of management appropriate to the nature and magnitude of the risk.
- The Hazard and Effects Register will be reviewed and updated when existing operations/activities are changed in a way that would change the hazards or reduce the effectiveness of controls and mitigation measures, and when learning is established as an outcome from incident investigations.
- A follow-up process will be established to ensure that risk management decisions are implemented into plans, procedures, training programs and as part of the Management Review process.

CONSEQUENCES				LIKELIHOOD					
					Greater than 10^{-1}	Between 10^{-2} to 10^{-1}	Between 10^{-3} to 10^{-2}	Between 10^{-3} to 10^{-6}	Less than 10^{-6}
					Happens often and might be expected	Known to have occurred within Company	Known to have occurred within industry	Conceivable but unusual in the industry	Almost impossible. Rare in industry
People Impact	**Environmental Impact**	**Asset Damage**	**Community Impact**	**#**	**A Frequent**	**B Occasional**	**C Possible**	**D Unlikely**	**E Improbable**
More than 3 Fatalities OR Multiple life-threatening injuries	Massive effect	Property damage greater than $350 Million	Massive community effect	**5**					
Up to 3 fatalities OR Single life-threatening injury	Major effect	Property damage from $10 Million to $350 Million	Major community effect	**4**					
Major injury or health effect	Moderate impact	Property damage from $1 Million to $10 Million	Moderate community impact	**3**					
Minor injury or health effect	Minor effect	Property damage from $100K to $1 Million	Minor community effect	**2**					
Slight injury or health effect	Slight to No effect	Property damage less than $100K	Slight community effect	**1**					

The HSSE Risk Assessment Matrix (RAM) is used to ensure a consistent approach to risk assessment and supports effective risk management practices through a common terminology around which risk can be understood and communicated. The RAM standardizes qualitative risk assessment and facilitates the categorization of risk to people, assets, community, and environment (PACE). The matrix axes are consequences and likelihood. Assessing the risk of a particular scenario should be done in sequence, i.e., first the potential consequences are estimated and only thereafter the likelihood of such consequences occurring are assigned. The axes meet at a coloured square, that designates the tolerability of the risk (Zone 1, 2, 3, 4). The HSSE Risk Assessment Matrix (RAM) is designed to:

• serve as a tool used to assess the risk of hazards

• enable a consistent approach to risk assessment and risk management practices

• provide a common terminology around which risk can be understood and communicated

• specify how each risk must be managed through controls and mitigations

• identify the level of in the organization ultimately required to endorse the residual risk in order to properly use the Risk Assessment Matrix, the following definitions are provided:

Consequence: An effect on people, assets, the environment or community as a result of a hazard being released. Severity: The worst-case credible consequence which could occur, assuming no controls are in place Likelihood: Estimate of how frequently the consequence under consideration could occur, assuming no controls are in place Risk: Combination of the severity and likelihood as defined above A simplified version of the Risk Assessment Matrix. The vertical axis represents decreasing severity of the consequence, while the horizontal axis represents decreasing likelihood of the consequence occurring given the controls in place. The complete Risk Assessment Matrix contains additional definition regarding severity and likelihood for the following consequence categories:

• People

• Environment

• Asset

• Community impact

15. IMPLEMENTATION, MONITORING, AND REPORTING

15.1 IMPLEMENTATION

The HSSE Manager ensures that the SMS is implemented and monitors the program's effectiveness using both proactive and reactive measures. The preparation of an SMS process is only the first step in the implementation of a safety management system. Execution of plans and implementation of procedures means putting them into practice. This is most easily achieved if specific individuals are given responsibility for the implementation of plans and procedures (sometimes key procedures may have a 'process owner' [e.g., Management of Change, Permit to Work]). The HSSE Manager will work with Project Director to assign the appropriate individuals with specific SMS implementation tasks. While the Project Director has the highest authority for all project personnel, the HSSE Manager has the authority to intervene on matters related to SMS implementation and will report back to the Project Director, as needed.

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These individuals should have roles that cover:

- Identifying people to lead aspects of the plan execution and identify process owners for key procedures to drive implementation, monitor effectiveness and manage improvement.
- Communicating plans and procedures to those affected.
  - Clearly communicating who plans and procedures are for and who is expected to follow them.
  - Clearly defining who is responsible for actions that need to be taken.
- Acting as leaders to set expectations and to follow up on progress.
  - Measure progress against clear milestones and/or KPIs and take action to adjust where it is clear that events are not going as per plan.
- Demonstrating commitment at all levels to execute the plans and to implement procedures.
- Providing training in procedures so that those who need to follow them know what is expected.

15.2 PERFORMANCE MONITORING

Plans and Procedures put in place to meet SMS requirements need to be monitored regularly to ensure they are in place and working effectively. Monitoring can be either pro-active (e.g., inspections and audits) or reactive (e.g., incident reporting). In both cases the results should be used to understand any weaknesses in plans and procedures and to identify corrective actions.

Atlantic Shores shall develop a system to accommodate regular audits, assessments, or inspections that will include documentation and records review and interview plans with dates and assigned responsibilities. Atlantic Shores shall perform internal HSSE audits and inspections as a part of leading indicator activities to measure safety related performance; its Contractors shall be included in such audits. Audit findings shall be documented, and plans developed to address the findings with immediate and long-term corrective actions identified, responsibilities assigned, and completion dates determined.

Monitoring activities should be prioritized based on risk. Activities that check that controls are in place and effective range from:

- Field Inspections
- Management Safety Walks
- Formal Behavioral Safety Observation Programs
- Self-Assessment checks
- Checks on logs e.g., shift handover logs,
- Procedure Checks and Audits

Atlantic Shores will establish and maintain effective systems of monitoring HSSE performance and SMS compliance. Data will be recorded and reported, including:

- Providing input for the HSSE targets and KPIs
- Reporting and communicating the key messages obtained from HSSE statistics gathered
- Reportable incidents
- Exposure hours
- Environmental data (waste generated/disposed, spills, releases, etc.)
- Fines and settlements
- Annual management review of the SMS to assess its suitability and effectiveness, to propose amendments, and to report status to the Board of Directors

15.3 INCIDENT REPORTING

15.3.1 SAFETY OBSERVATION AND NEAR MISS REPORTING

- Safety observations should be either immediately corrected or reported so that an appropriate action can be completed.
- All near misses must be formally reported by employees, contractors, and subcontractors as soon as practical after the event. Every near miss will be investigated by the Site EHS Manager or the appropriate designee.
- Where appropriate, drills will be carried out to maintain a robust emergency process and competence to ensure measures adopted from near misses are appropriate.

15.3.2 NOTICE OF INCIDENTS

Atlantic Shores will maintain and follow an evergreen Project-specific Incident Communication Plan that includes internal and external reporting. Atlantic Shores will report to BOEM all incidents in the manner described in 30 CFR §585.832 and 30 CFR §585.833.

This includes immediate verbal reporting and written notifications within 15 days for:

- Fatalities, which also include a written report of casualty in accordance with 33 CFR §146.30.
- Incidents that require the evacuation of person(s) from the facility to shore or to another offshore facility.
- Fires and explosions

- Collisions that result in property or equipment damage greater than $25,000.
- Incidents involving structural damage to an OCS facility that is severe enough so that activities on the facility cannot continue until repairs are made.
- Incidents involving crane or personnel / material handling activities, if they result in a fatality, injury, structural damage, or significant environmental damage.
- Incidents that damage or disable safety systems or equipment (including firefighting systems)
- Damage affecting the usefulness of primary lifesaving or firefighting equipment.
- Other incidents resulting in property or equipment damage greater than $25,000.
- Any other incidents involving significant environmental damage or harm.

A written report must be provided within 15 days for:

- Any injuries that result in the injured person not being able to return to work or to all of their normal duties the day after the injury occurred.
- All incidents that require personnel on the facility to muster for evacuation for reasons other than weather or drills.

In addition:

- The USCG shall be notified immediately of any HSSE incident requiring their assistance offshore.
- The USCG and USACE must be notified for all operations and incidents impacting the seabed.

15.3.3 INCIDENT INVESTIGATION

If an incident should occur, it shall be thoroughly investigated by trained persons to establish the root cause and prevent any recurrence. Atlantic Shores reserves the right to hold its own review for any near miss, accident or incident should they be off the opinion that further in-depth investigation is necessary Actions arising from investigations should be agreed with the actioned parties with target dates for completion. The actions should be tracked to completion, and it is expected that Personnel follow a proven technique for investigation. The Project Personnel shall include the lessons learned for incidents and share their findings. This should include the method of investigation to identify the root causes of the incident. This should also include the methodology of applying the lessons learned to the organization to improve its safety systems and overall safety performance.

15.3.4 POLLUTION INCIDENTS

Pollution incidents will be reported in accordance with 33 CFR §146.45. The approved Atlantic Shores Oil Spill Response Plan (per 30 CFR Part 254) will be followed for specific pollution response actions.