

# **Mobile Offshore Drilling Unit Industry Indoctrination**

## **Objective**

To provide guidance for Coast Guard personnel working towards the Mobile Offshore Drilling Unit Inspector (MUI) competency in meeting the industry indoctrination requirement of the PQS established in ALCOAST 336/13.

## **Discussion:**

MODU Industry Indoctrination is designed to provide Coast Guard personnel with a foundational understanding of how the offshore industry operates and conducts business. Working with the contractors and vessels in the offshore industry will help Coast Guard personnel better understand the inner workings of the industry, and in turn, help them become better decision-makers and regulators. This indoctrination program includes requirements for inspectors to spend time learning about oil drilling and well completion operations, vessel operations and management, MODU crew responsibilities, other involved stakeholders, and the common terminology used in the industry. The experience also provides industry participants an opportunity to meet and develop partnerships with the Coast Guard personnel that will be conducting inspections and examinations on their ships.

Mutual Training Agreements (MTAs) must be in place before Coast Guard personnel can conduct MODU industry indoctrination. MTAs should be coordinated through the Outer Continental Shelf National Center of Expertise (OCS NCOE).

Note: If the Merchant Marine Indoctrination (MMI) Ship Rider requirements of COMDTINST 16705.1 were completed on board a MODU, it is not necessary to complete this Industry familiarization.

Alternative indoctrination plans to those identified in this guide are permissible provided they meet the intent of ALCOAST 336/13. Such an alternative should be provided to the OCS NCOE. The OCS NCOE will review the alternative proposal, communicate with Commandant (CG-CVC-1) and provide a written response to the MITO/TO. If the proposal does not align with ALCOAST 336/13, the OCS NCOE will coordinate with the MITO/TO on an adequate industry indoctrination plan for that unit.

## **Action**

This industry indoctrination is intended to be completed over the course of at least 1 week. Units should first attempt to coordinate travel with the industry participant to occur during regularly scheduled crew changes. Based on the logistical challenges involving travel offshore, it may be necessary to use a Coast Guard-contracted helicopter. In these instances, a 1-week long industry indoctrination is preferred, but may be reduced to accommodate contracted helicopter schedules and minimize transportation costs.

The prospective MODU Inspector shall complete each task identified in this industry indoctrination guide. Upon completion of each task, the prospective MODU Inspector shall verify completion by initialing the “Verified” box.

Once one or all of the sections are completed, a copy of the completed section shall be attached to the MODU PQS workbook and retained by the apprentice.

## 1. MODU Crew

This program provides prospective MODU inspectors with an opportunity to meet and interact with a diverse mix of industry professionals. The table below includes specific tasks to cover with key personnel on board the MODU; however, there are many critical jobs in addition to the ones below. In general, participants should learn about all of the different crew positions on the MODU, their main duties and responsibilities, and the required training, licenses, and certificates (endorsements, routes, and tonnage restrictions) associated with the position. This will also aid in getting a general sense of living and working on a MODU.

✓	Task	Completed
<b>Offshore Installation Manager (OIM)/Master</b>		
	Meet with the OIM or equivalent and discuss his/her daily and overall responsibilities. Discuss the purpose of the Industry Indoctrination and the requirements in this guide. Review general safety requirements.	
	If the vessel has both a Master and OIM, discuss the differences in their roles and responsibilities.	
	Discuss the requirements to become an OIM and the OIM's educational background and career progression.	
	Discuss the OIM's past experience with Coast Guard examination activities.	
	Attend at least two morning conference calls with the OIM/Master. Observe interaction and planning between the MODU management and shore-based management.	
	Discuss procedures for conducting well test/well flow operations. (What safety procedures are in place and how the overall operation is conducted) Note: Not all MODUs have the ability to conduct this operation.	
<b>Company Man</b>		
	Meet with the company man or equivalent and discuss his/her responsibilities.	
	Discuss what their position and jobs entails and how they fit into the overall management of the rig and operations.	
<b>Subsea Engineer</b>		
	Meet with the subsea engineer or equivalent and discuss his/her responsibilities.	
	Discuss what their position and jobs entails and how they fit into the overall management of the rig and operations.	
<b>Driller/Assistant Driller/Tool Pusher</b>		
	Meet with the driller, assistant driller, and/or tool pusher or equivalent and discuss his/her responsibilities.	
	Discuss what their position and jobs entails and how they fit into the overall management of the rig and operations.	
<b>Marine Crew</b>		
	Meet with the marine crew or equivalent and discuss their responsibilities. (Mate, DPO, Barge Engineer)	
	Discuss what their position and jobs entails and how they fit into the overall management of the rig and operations.	

## 2. Vessel Characteristics

Enter the vessel characteristics in the table below. Discuss any unique design features and how they relate to specific vessel operations.

Company Name:	Location:
Trainee Name:	Date:
Vessel Name:	Official #:
Year Built:	Call Sign:

Dimensions		Main Engines	
Length overall		Horsepower	
Breadth (molded)		Service speed	
Maximum draft		Type of steering gear	
DP Class (if applicable)		Bow thrusters (BHP)	
Gross tonnage		Stern thrusters (BHP)	

## 3. Industry Indoctrination Tasks

The following tasks should be completed during the industry indoctrination. Tasks that are not applicable on the particular MODU should be identified with an N/A. These tasks do not have specific crewmembers identified, but should be completed in coordination with the members of the crew who have primary knowledge and responsibility for the systems and equipment.

✓	Task	Verified
<b>SAFETY MANAGEMENT</b>		
	Request to review the MODU's Marine Operating Manual and Safety Management System (if applicable). Focus on procedures related to watch standing, maintenance and specific vessel operations.	
	Discuss shipboard maintenance procedures, review individual crew responsibilities and recordkeeping; for deck equipment, watertight integrity, engineering, lifesaving and firefighting. If applicable, discuss hot work and welding procedures.	
	If applicable, discuss the company's auditing program (internal, external, third party).	
	If applicable, review reporting procedures for non-conformities and corrective actions and discuss their strategy for improvement.	
	Review procedures for incident reporting, accident investigations, near miss reporting and root cause analysis.	
<b>NAVIGATION AND DYNAMIC POSITIONING</b>		
	Discuss the vessel's Dynamic Positioning (DP) capability and the class of the DP system (2 or 3). Witness DP operations.	
	Discuss risks, limitations and company imposed safeguards (if any) related to the installed DP system.	
	Discuss bridge navigation/communications with crew. Identify each piece of equipment and request the crew to demonstrate its use, if possible.	
	If the vessel has a dynamic positioning system, then discuss with the bridge crew the ESD procedures. Review the WSOG, CAMO, communications with drillers and how they interact during the ESD procedures.	
	Review company procedures related to navigation watches. Under the direction of a Licensed Navigation Officer, stand at least one navigation watch to observe DP and navigation procedures.	

<b>STABILITY</b>		
	Review the MODU's stability program or book and discuss stability limitations and considerations with the crew.	
	Identify how drilling operations affect the stability of the MODU.	
	Discuss how stability is considered and tracked when loading equipment. If possible, under supervision conduct a deck survey to verify the stability load data is correct.	
<b>CARGO AND DECK</b>		
	Discuss procedures, required training and applicable safety hazards associated with anchoring, mooring and rig move operations.	
	Examine associated equipment including ground tackle, lines, wires, winches, shackles, anchoring gear and terminal gear.	
	Review the type and classification of cargoes on board (liquid mud, methanol, dry bulk, fuel, etc). Discuss how the crew stores flammable and hazardous materials.	
	If possible, observe cargo and deck operations and learn how the equipment is used, maintained and stowed.	
	Discuss with the crane operator his/her duties and responsibilities.	
	Witness crane operations. (Pay particular attention to effects of weather, supply vessel limitations and back-up systems.	
<b>ENGINEERING AND MACHINERY</b>		
	Discuss the main engine or propulsion system with an engineer and tour the engine room and machinery spaces. Note equipment manufacturers, the number of main engines and generators, the type of control system and the level of automation.	
	Identify the type of steering system, number of rudders, available steering locations and back-up systems.	
	Review company procedures related to engineering watches. Under the direction of an engineer, stand at least one engineering watch. Discuss the vital systems and observe engineering rounds.	
	Discuss engineering watch roles and responsibilities relating to dynamic positioning in the event of an ESD. Also, discuss how the WSOG and CAMO may affect the machinery status.	
<b>DRILLING</b>		
	Discuss drilling nomenclature and the equipment used in the drilling process. (i.e. top drive, pipe, turn table, blow out preventer (BOP), riser, casing, kill and choke lines, etc.)	
	Discuss the different stages and industry terminology for drilling and well completion operations (i.e setting casing, tripping pipe out of the hole, pumping a pill down, setting cement, etc.).	
	Observe drilling operations.	
	Discuss down-hole operations with a driller or assistant driller. Discuss what a kick is, how they identify a kick from the well and how that kick is controlled.	
	Discuss the components of the BOP stack, marine riser package and any other subsea equipment with the subsea engineer.	
	Witness ROV operations and discuss the different application and use of ROVs offshore. Pay particular attention to BOP stack controls (if available).	
	If the MODU is fitted with a drilling training module, attempt a few drilling scenarios.	
	Discuss with driller their actions in the event of a DP loss of propulsion alarm.	
	Review procedures the driller must follow when there is a reactive change in the DP system based on the WSOG and CAMO.	

<b>EMERGENCY PROCEDURES</b>		
	Review company procedures for responding to incidents and marine casualties such as equipment failures, oil spills, crew injuries, person overboard, abandon ship, collisions and groundings. Ask various crewmembers about personal experiences with any such incidents or marine casualties.	
	Discuss and observe any available training and/or drills conducted to prepare for emergencies.	
	Discuss company reporting requirements in the event of an incident or emergency.	
	Locate fire detection and response equipment and discuss their functionality, operating parameters and on board maintenance and inspection procedures.	
<b>POLLUTION PREVENTION</b>		
	Locate the oil discharge containment and response equipment (such as spill kits) and discuss their contents and use.	
	Locate the written copy of the vessel's fuel-transfer procedures and discuss the responsibilities of the crew when transferring fuel.	
	If applicable, discuss with crew how fuel transfer hoses and other equipment are tested and review the records of the tests and inspections.	
	Discuss procedures for the disposal of garbage, sewage, oily bilge water, oily waste and paint.	
	Locate and discuss the operating procedures of the marine sanitation device (MSD) and oily water separator, if applicable.	

Company Representative: \_\_\_\_\_

Representative Signature: \_\_\_\_\_