

# Ocean Monarch

Mobile Offshore Drilling Unit



## Environmental Plan

Location: Hobart, Tasmania, Australia

Date: November 2018 – January 2019



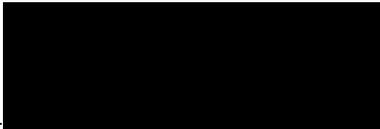
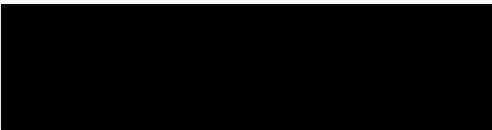
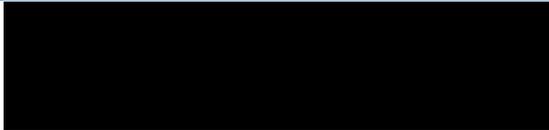
**IADC**  
MEMBER

OM-EP-001  
Revision 2, December 2018

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## Table of Document Approvals

This investigation report has been jointly prepared, reviewed and approved by the assigned investigation team as detailed in the Terms of Reference.

DIAMOND OFFSHORE GENERAL COMPANY (Diamond Offshore)	
 <hr/> Originated by: <i>David Johnson / HSE/QA Manager,</i>	<u>11 Dec 2018</u> Date
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## Document Control

This document is under document control by Diamond Offshore.

Rev	Date	Description
0	16 Nov 2018	Issued for DRAFT Internal Review
1	16 Nov 2018	Issued for use. SEMS reference updated.
2	11 Dec 2018	Updates made due to feedback from EPA Tasmania

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## 1.0 INTRODUCTION

This Environmental Plan (EP) was developed based on the request from EPA Tasmania via an Environmental Protection Notice No. 9983/1, issued under the *Environmental Management and Pollution Control Act 1994*.

Issued to:

Diamond Offshore General Company

██████████

U2, 5 Turner Avenue, Bentley WA 6102

Environmentally Relevant Activity:

The temporary mooring of the Ocean Monarch Mobile Offshore Drilling Unit (MODU) and associated care and maintenance works (Activity Type: EPN only) in the vicinity of 42° 57.016'S, 147° 24.404'E, Derwent River, Tasmania.

Prior to the anchorage of the Ocean Monarch in the Derwent River, or by a date otherwise specified in writing by the Director, EPA Tasmania, a management plan must be submitted to the Director for approval. This requirement will be deemed to be satisfied only when the Director indicates in writing that the submitted document adequately addresses the requirements of the conditions detailed in Environmental Protection Notice No. 9983/1.

## 2.0 OBJECTIVES

The objective of this EP is to ensure that Diamond Offshore General Company (DOGC) complies with the Environmental Management System which encompasses Diamond Offshore's worldwide operations and to comply with applicable environmental laws and regulations for the specific area operations for the protection of the environment.

## 3.0 SCOPE

This EP is only applicable to Ocean Monarch operations during the temporary mooring location in the Derwent River near the entrance to Ralph's Bay in Hobart, Tasmania. This is currently estimated to be mid November 2018 to the end of January 2019. It applies to both the offshore and onshore management responsible for the Ocean Monarch.

During this period of time the Ocean Monarch will not be operational with a reduction of activities during the hours of darkness. It is expected no shipyard tasks will take place and on general day to day maintenance tasks will be conducted during this period.

## 4.0 OCEAN MONARCH MODU

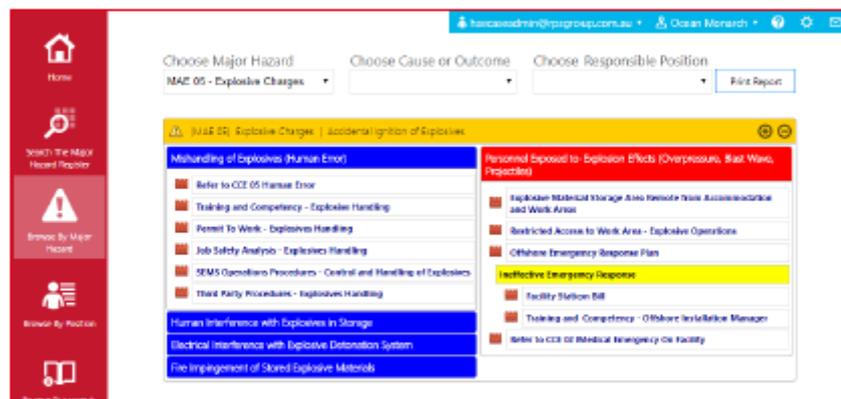
Figure 4.1 presents the Ocean Monarch, which is Keppel FELS Enhanced Victory Class conventionally moored, non-self-propelled semi-submersible MODU. Its classification society is the American Bureau of Shipping (ABS). The Ocean Monarch is designed to drill in up to 3,048m (10,000 feet) water depth. The maximum persons on board (POB) is 150.

The Facility Description in the Ocean Monarch Safety Case [1] provides a detailed description of the MODU, including its capabilities, operating limits, and safety features and equipment.

**Figure 4.1: Ocean Monarch**



Access to the entire safety case shall be provided to external and internal stakeholders through the Diamond Offshore HSECase.com web service. Access details will be provided on request to the HSE/QA Manager.



Note the accepted Ocean Monarch was accepted by NOPSEMA and while in the current location does not come under the jurisdiction of NOPSEMA as the rig is not operating as defined by the applicable legislation. This information provides for detailed description of the facility, the SMS and a comprehensive formal safety assessment.

## 5.0 ENVIRONMENTAL MANAGEMENT

### Global Excellence Management System

Diamond Offshore maintain their Global Excellence Management System (GEMS) in accordance with the format described in the General Overview section of the SEMS. This section defines the structure and hierarchy of documentation required to provide a robust and coherent system for the management of HSE issues pertaining to the company's operation.

The framework is structured into 13 major elements that provide a consistent, worldwide management system. Each of these elements communicates specific expectations for performance to Diamond Offshore employees and other key stakeholders. These elements are:

1. General
2. Leadership
3. Risk
4. Management of Change (MOC)
5. Operations
6. Health, Safety and Environment (HSE)
7. Training
8. Maintenance
9. Performance
10. Emergency Response
11. Incident Investigation
12. Audits and Corrective Actions
13. Information and Document Control Document Control.

### External Access to GEMS

A version GEMS has been created specifically for our customers and external stakeholders. It offers access to all of our Safety and Environmental Management System (SEMS) documents and their associated forms.

To access GEMS:

1. Enter [REDACTED] into your preferred browser (the system was design for IE 8,9 AND 10)
2. When prompted, entered the username and password:

Username: [REDACTED]

Password: [REDACTED]

## Environmental Management System

An environmental management system (EMS) has been developed to establish standards and company policy for environmental management in operations to protect the environment and to comply with applicable laws and regulations, and is applicable to company operations worldwide.

Annual goals for the EMS are set, monitored and measured according to frequency and volume. The ultimate goal is zero incidents, but the target is continuous improvement by exceeding the previous year's performance as stated in the corporate annual plan. Annual plans and goals are described in the SEMS performance monitoring manual.

Diamond Offshore recognises the importance of all employees working together to achieve the goals in the protection of the environment. Therefore, each employee has the responsibility to conduct activities with the protection of the environment as one of the main priorities. The EMS also includes specific responsibilities that contribute to protection of the environment.

In addition to the elements detailed above, the environmental practices section addresses the topics shown below:

- Environmental policy
- Environmental aspects
- Regulatory compliance
- Environmental procedures
- Waste management.

## Environmental Policy

Diamond Offshore has established an environmental policy to ensure all operations are conducted with the protection of the environment as a priority. The policy must be posted at all Diamond Offshore facilities.

Diamond Offshore is committed to protecting the environment and will conduct all operations in a responsible manner in compliance with applicable environmental laws and regulations. Diamond Offshore is dedicated to improve our operations to minimise environmental impact and for the prevention of pollution. Diamond Offshore actively encourages care and regard for the environment among employees and in the community.

Diamond Offshore's objectives in the fulfilment of this policy are:

- To foster environmental awareness and responsibility in employees, customers, contractors and suppliers
- To manage waste utilising waste minimisation methods
- To promote conservation and the use of environmentally sensitive products
- To train employees to conserve resources, minimise wastes and work efficiently and safely with respect to environmental protection
- To audit and monitor the EMS to identify opportunities for improvement
- To maintain procedures and methods which aim to reduce the risk of accidental spills, emissions and discharges
- To maintain procedures and methods for emergency response with regards to environmental protection.

It is recognised that to achieve the goal of operating environmentally sound involves all employees working together. Each employee has the responsibility to conduct activities with the protection of the environment as a priority. Diamond Offshore's environmental policy is not simply procedures to follow, but also a "state of mind" in the work environment.

A copy of the Diamond Offshore Health, Safety and Environmental Policy is provided in SEMS 2.3.1.

## Environmental Aspects

An environmental aspect is any element of the company's activities, products or services that can interact with the environment. As an offshore drilling contractor, Diamond Offshore owns and operates drilling units around the world. Environmental aspects resulting from Diamond Offshore's operations include:

- Energy use
- Storage and use of chemicals
- Emissions
- Waste
- Unintentional discharges.

Diamond Offshore has adopted the JSA as a key tool for safe operations and the protection of the environment. The objective of the JSA program is to systematically plan and organise jobs, tasks and procedures in order to minimise risk to employees, equipment or the environment, and to maximise operational efficiency.

Each facility utilises the general Environmental Aspects Chart to identify and control facility specific environmental aspects and impacts within their JSA process. The environmental aspects lists links the aspect with the associated JSA to ensure safeguards are in place to minimise environmental impacts. Each facility must maintain their environmental aspects list with its master JSAs. It is the responsibility of the OIM to ensure that the Environmental Aspects Chart is complete and available.

The detailed Environmental Aspects procedure is provided in SEMS 6.3.3.

### **Regulatory Compliance**

SEMS 6.3.4 contains detailed and continually reviewed and updated information on regulatory requirements in all regions where Diamond Offshore has operated or currently is operating. The following general worldwide regulatory requirement topics are addressed:

- Ozone depleting substances
- Overboard discharges
- Overboard discharge valves
- Ballast water management

- Sewage discharges
- Solid waste management
- Asbestos. (Refer to SEMS 6.1.3.4 Asbestos)

If any region has any specific regulatory requirements, or has more stringent requirements of the above topics, these requirements are outlined in the separate sub-sections of SEMS 6.3.4.

## **Environmental Procedures**

The environmental procedures section covers the following topics:

- Environmental incident reporting and procedures
- Environmental tracking
- Pollution prevention
- Onboard fluid transfers.

The Environmental Incident Reporting Procedures and Reporting document ensures that reporting requirements are met for local government, flag state and Diamond Offshore to ensure compliance on all levels.

The Environmental Tracking Procedure will be utilised to measure the efforts of the offshore fleet and land based facilities to increase positive change in the protection of Earth and its resources.

The Pollution Prevention Procedure aims to reduce the risk of accidental spills, emissions and discharges to protect the environment in which Diamond Offshore's facilities operate.

The Onboard Fluid Transfers Procedure aims to ensure all fluid transfers that occur onboard the facility are conducted in a safe and responsible manner whereas to prevent the possibility of any pollution incidents from occurring.

## **Waste Management**

SEMS 6.3.6 contains an array of region specific Waste Management Procedures to ensure that waste is collected and stored properly to minimise risk of spill, pollution or injury to personnel.

Each facility must have a designated area for the storage and collection of waste. Guidelines for waste containment system design and operation, waste container specification and procedures for handling damaged waste containers are described in SEMS 6.3.6.

The Waste Management Procedure describes in detail the disposal procedures for many different types of waste that are likely to accumulate on a drilling unit, which aim to reduce the amount of waste generated, promote recycling, set the standards for protecting our environment and to ensure regulatory compliance among various world countries. Any deviation from these procedures must have the approval of Diamond Offshore's Environmental Affairs Manager.

The Waste Management Procedure also defines the different types of waste, including special wastes that may be encountered, and describes waste minimisation techniques that should be utilised on all Diamond Offshore facilities.

## 6.0 SITE SPECIFIC ENVIRONMENTAL CONTROLS

### Floodlighting

During the moored period the Ocean Monarch will have a reduction of activities during the hours of darkness. Where it is deemed safe to do so all non-essential lights will be turned off during the hours of darkness. Any lights that are deemed necessary will be direct to reduce any potential impact. Ie directed towards the water. If there are any complaints from person(s) that have experienced nuisance as a result of excessive floodlighting the situation will be investigated to determine suitable recommendations to prevent a reoccurrence of any nuisance identified.

#### GEMS References:

SEMS 6.3.3	Environmental Aspects.
SEMS 6.3.5.1	Environmental Incident Procedures and Reporting.
SEMS 6.3.5.3	Pollution Prevention

### Waste Management

Adopting waste minimization, recycling, safe storage and transportation of all hazardous substances we aim to have virtually no effect on the natural environment. Diamond Offshore will:

- Develop and adhere to waste minimization techniques.
- Foster environmental awareness through continued training for all Diamond employees, contractors, suppliers and customers.
- Adopt a personal attitude to the sustainability and welfare of all surrounding ecosystems associated with Diamond Offshore operations.

#### Waste Stream

Waste is removed from the Ocean Monarch via the agents, Taylor Bros vessels. The types of waste and the disposal method which is coordinated via Taylor Bros are listed below:

- General Waste – Collection by JJ.Richards – disposed at Southern Waste Solutions Lutana (disposed of at Copping Landfill)
- Oily Rags (no residue) – Collection by JJ.Richards – Glenorchy landfill

- Cooking Oil – Johnsons Oil Recycling
- Engine Oil – Hagen Oil (Launceston for refining and reuse)
- Food Waste – Collection by JJ.Richards – disposed at Southern Waste Solutions Lutana

Note Toxic Waste is to be held onboard and disposed of on return to Victoria at licenced Toxic Waste Disposal Station.

The amount waste generated will can vary greatly however during this period it is expected to be in low than normal waste generated during rig operations. Waste is manifested and if required these records can be provided on request.

GEMS References:

SEMS 6.3.6	Waste Management
SEMS 6.3.6.1	AUS Waste Management

## Pollution Prevention

Possible pollutants could include the following:

- Spills to deck and or overboard (eg Hydraulic oil, fuel)
- Emissions (eg Ozone Depleting substances, engine emissions)
- Discharges (eg Ballast Water)

For a detailed list please refer to the Safety Case, Part 4, Annex B Hazard Register. This provides details such as:

- Hazard and potential source
- Worst Case Reasonable Consequence
- Prevention and Control Measures
- Recovery Control Measures
- Risk Ranking

The following SEMS references apply to reduce the risk of accidental spills, emissions, discharges to protect the environment in which we operate.

GEMS References:

SEMS 6.3.4.1.a	Ozone Depleting Substances
SEMS 6.3.4.1.d	Ballast Water Management Plan
SEMS 6.3.4.1.e	Sewage Discharge
SEMS 6.3.4.1.f	Solid Waste Management
SEMS 6.3.4.1.g	Environmentally Critical Valves
SEMS 6.3.5.3	Pollution Prevention
SEMS 6.3.5.4	Onboard Fluid Transfers

## **Invasive Marine Species**

Last Invasive Marine Species (IMS) inspection of the Ocean Monarch was conducted on the 25 – 26 April 2017.

Inspection report as prepared by Biofouling Solutions was provided to EPA Tasmania prior to the Ocean Monarchs arrival in Hobart.

## **Biosecurity**

The Department of Agriculture and Water Resources confirmed that on the 11<sup>th</sup> November 2017 the Ocean Monarch was considered to present an acceptable biosecurity risk under the *Biosecurity Act 2015*.

At this time the department recognised the Ocean Monarch met the conditions required and was recorded as having a low biosecurity risk.

This status of low biosecurity risk was confirmed by written correspondence from the Department of Agriculture and Water Resources dated 4<sup>th</sup> July 2018, Ref: 2018/008960E.

In addition to the above and after the Ocean Monarch arrived on location in the Derwent River, The Department of Agriculture and Water Resources contacted Diamond Offshore confirming that the Ocean Monarch was currently on a low risk status and that we came under Biosecurity Control and as such requested the below information:

- Locations, voyages and activities after last entry into Australia.
- Detail of all existing stores on board the Ocean Monarch, including any fresh fruit or vegetables, meat and/or animal products.

- Copies of the last two stores and/or provision orders for the Ocean Monarch, detailing origin and type of stores.
- Has the waste on board the vessel been securely contained in a container or sealed room so that no waste is accessible to animals.
- What is the procedure of removing waste from Ocean Monarch at its present location. Which parties are involved.
- Location the crew boarded the installation, health status and intended movement of the crew of the Ocean Monarch.
- Are there any animals/pets or plants on board Ocean Monarch.
- Was any insect infestation e.g. bees detected on board Ocean Monarch.

Ocean Monarch was also requested to submit a ballast water report informing The Department of Agriculture and Water Resources about its current ballast water situation through online reporting system Maritime Arrivals Reporting System (MARS).

Note all of the above information has been provided to The Department of Agriculture and Water Resources.

## Local CSIRO Research – Spotted Handfish

EPA Tasmania has advised Diamond Offshore of the CSIRO outlining concerns regarding support boats for the oil rig anchoring in the sheltered bays, which is where the spotted handfish and newly planted ASH arrays are located. The below figure below provides details of the location of the research areas where the ASH arrays are located. Diamond Offshore has raised the awareness of these research areas and will take steps to avoid. In addition to this the operators of the vessels supporting the Ocean Monarch have also been informed.

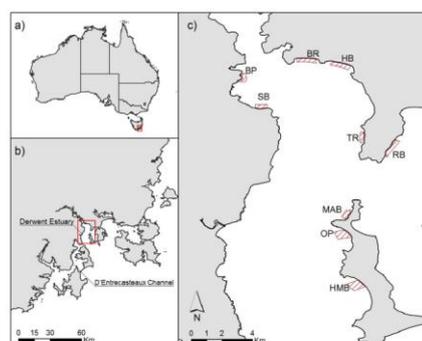


Fig 1. Maps of study regions. (a) Location of South-East Tasmania, (b) the study region in the Derwent Estuary, and (c) the nine Derwent estuary study sites highlighted in red. Abbreviations for each site: Battery Point (BP), Bellerive Beach (BR), Howrah Beach (HB), Half Moon Bay (HMB), Mary-Ann Bay (MAB), Opossum Bay (OP), Ralphs Bay (RB), Trannmere (TR) and Sandy Bay (SB).

## 7.0 ADDITIONAL NOTIFICATION REQUIREMENTS

### **Notification of Incidents under section 32 of EMPCA**

Where a person is required by section 32 of EMPCA to notify the Director of the release of a pollutant, the Director can be notified by telephoning 1800 005 171 (a 24 hour emergency telephone number).

### **Notification of incidents under section 25I PWONSA**

Where a person is required by section 25i pwonsa TO NOTIFY THE Deputy Secretary of the Primary Industries, Parks, Water and Environment of discharge or probable discharge of oil or an oily mixture or the disposal or probable disposal of garbage from the Ocean Monarch into State waters, the Deputy Secretary can be notified by telephoning 1800 005 171 (a 24 hour emergency telephone number).

## 8.0 SITE SPECIFIC ENVIRONMENTAL LEGAL OBLIGATIONS

### **Discharge of Sewage into State Waters**

The provision of Division 2BAB Part 11 of the PWONSA apply where relevant. Note that the Ocean Monarch's sewage system and any sewage discharge from the Ocean Monarch will comply with Marine Order, Number 96 in force under sections 33(1)(a), 33(1)(c) and 34(1) of the *Protection of the Sea (Prevention of Pollution from Ships) Act 1983* of the Commonwealth.

### **Disposal of Garbage into State Waters**

The provisions of Division 2B Part 11 of the PWONSA apply where relevant.

### **Pollution by Oil into State Waters**

The provisions of Division 1 Part 11 of the PWONSA apply where relevant.

### **Biosecurity Obligations**

A person responsible for the activity must comply with any direction of the Minister made under Part 10 Division 1 *Living Marine Resources Management Act 1995*.

## 9.0 DIAMOND OFFSHORE KEY CONTACTS

Shorebase Management			
Duncan Coulson	Operations Manager	[REDACTED]	[REDACTED]
Chris Melzer	Drilling Supt	[REDACTED]	[REDACTED]
David Johnson	HSE/QA Manager	[REDACTED]	[REDACTED]
Natasa Rizmanoska	Safety Supervisor	[REDACTED]	[REDACTED]
	Material and Logistic Supvr	[REDACTED]	[REDACTED]

Ocean Monarch Contact Details		
OIM	[REDACTED]	[REDACTED]
Radio Room	[REDACTED]	[REDACTED]
Hospital	[REDACTED]	[REDACTED]
Barge Supervisor	[REDACTED]	[REDACTED]
Store	[REDACTED]	[REDACTED]