



Equinor UK Limited

OSPAR EMS Public Statement 2018

Offshore Environmental Performance Report



Equinor UK Limited
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London
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1 Introduction

This document is the 2018 public environmental statement for the offshore petroleum activities of Equinor UK Limited. It has been prepared in accordance with recommendation 2003/05 of the Convention for the Protection of the Marine Environment of the North-East Atlantic ("The OSPAR Convention") which has been adopted by the United Kingdom government and offshore industry.

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2 Equinor UK Limited

Equinor UK Limited is a company registered in the United Kingdom. Its principal and registered office is at 1 Kingdom Street, London W2 6BD, in addition to which there is an operational office for offshore oil and gas development activities at Prime Four Business Park, Kingswells, Aberdeen, AB15 8QG. Equinor also has an office at 50 South Denes Road, Great Yarmouth, NR30 3PN for its UK wind energy developments.

Equinor UK Limited is wholly owned by Equinor ASA, an international integrated energy company that has its head-quarters in Norway and is listed on the Oslo and New York stock exchanges.

Equinor is the leading oil and gas company on the Norwegian Continental Shelf (NCS), where it is operator of over 25 surface production installations and over 500 sub-sea wells. It also has many licence interests worldwide, including in North America, South America, North Africa, sub-Saharan Africa, Europe, Asia, the Middle East and Oceania.

Operatorships outside Norway include the Peregrino development offshore Brazil, the Bakken, Marcellus and Eagle Ford fields onshore USA, deep-water licence areas in the Gulf of Mexico, and the Mariner field on the UK Continental Shelf (UKCS). Equinor is also a joint venture partner of the In Salah and In Amenas gas and condensate fields onshore Algeria.

- Approximately 20,500 employees in more than 30 countries
- World's largest deep-water oil and gas operator
- Operator of over 40 producing oil and gas fields
- Market capitalisation of more than £40 billion
- Production of around 2 million barrels of oil equivalent per day
- Proven reserves of around five billion barrels of oil equivalent
- World leader in the use of deep-water technology
- World leader in carbon capture and storage
- One of the world's largest crude oil and gas suppliers
- Second largest supplier of gas to Europe
- One of the world's 500 largest listed companies

Equinor UK Limited has interests in 36 seaward production licences on the UKCS and is operator of 28 of these. The locations of these licences are shown in Figure 1.

Equinor's UKCS operatorships include the Mariner licence (P.335) where there is extensive on-going construction and drilling activity for an approved field development. There were no exploration wells drilled during 2018. Details of recent, current and planned licence activity are provided in the next section.

Equinor also has operatorship of wind energy projects offshore UK. Such projects are outside of the normal scope of an OSPAR public statement but are described in the next section because of their relevance to Equinor's climate roadmap.

Commented [AU1]: No (EXP) drilling in 2018!

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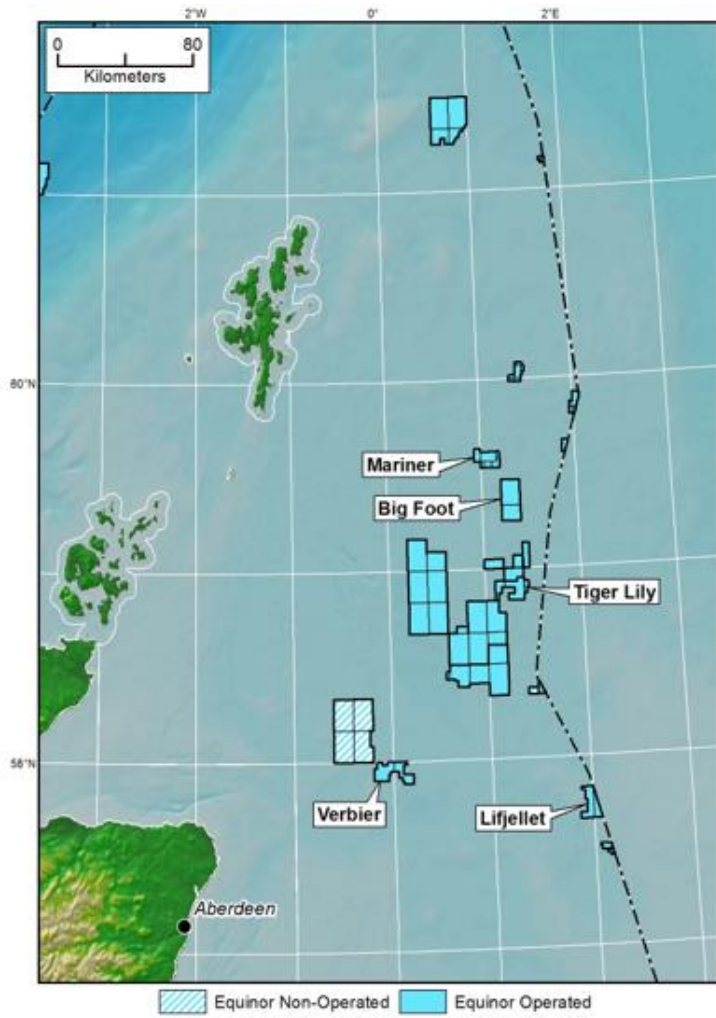


Figure 1: Location of Equinor's UKCS Oil and Gas Interests and Activities

3 2018 UKCS Activities

3.1 Oil & Gas Exploration Activities

3.1.1 Seismic Surveys

Equinor UK Limited did not undertake any seismic exploration activity on the UKCS during 2018. However, one site survey involving shallow-seismic and other survey methods was undertaken as part of planning for an exploration wells that is scheduled to be drilled during 2019. The surveys covered proposed drilling sites within UKCS blocks 22/10b (Lifjellet prospect).

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Lifjellet Site survey

3.1.2 Exploration and Appraisal Drilling

Equinor UK Limited did not drill any exploration or appraisal wells on the UKCS in 2018

Oil and Gas Development Activities

3.1.3 Mariner

Equinor UK Limited is the majority equity holder and operator for UKCS seaward production licence P.335 covering the Mariner heavy oil-field. A Field Development Plan for the Mariner oil-field was approved by the Secretary of State in February 2013 (and revised in 2016), since when there has been substantial progress towards an operational development.

During 2018 the following development activities took place:

- Throughout 2018 hook up and commissioning activities continued on the Mariner A (PDQ).
- The *Noble Lloyd Noble* remained alongside the Mariner A PDQ providing accommodation during the hook up and commissioning period and preparing to recommence drilling in 2019.
- A flotel, *Safe Boreas*, is stationed, on DP, at the SE corner of the Mariner A platform to provide accommodation for up to 490 personnel during ongoing hook up and commissioning and will remain there until H2 2019

Up to 850 personnel will be involved in the hook up and commissioning and are accommodated across Mariner A, *Safe Boreas* and *Noble Lloyd Noble*. Drilling will recommence in 2019 using both the *Noble Lloyd Noble* and, later in 2019, the PDQ platform rig. First oil production is scheduled for H2 2019.

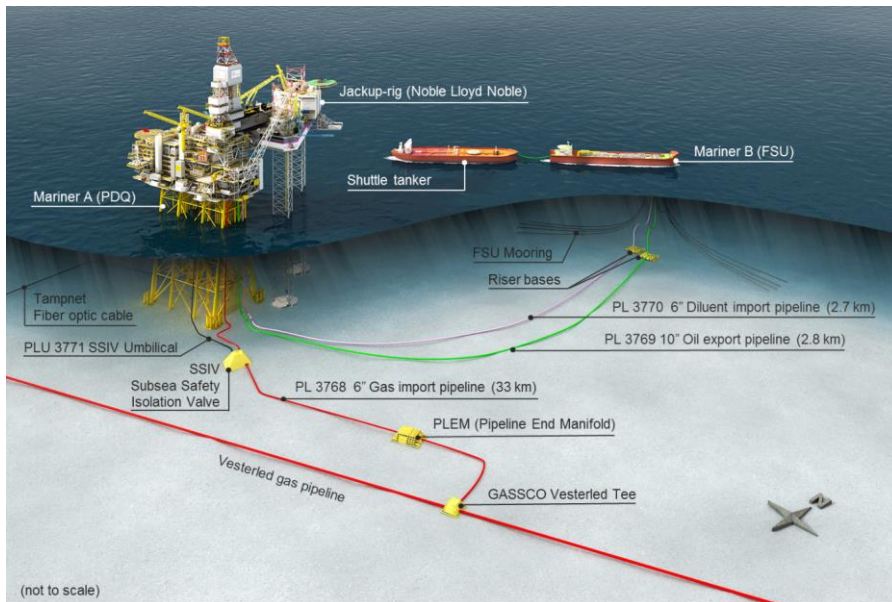


Figure 2: Schematic of the Completed Mariner Development

3.1.4 **Cadet**

Equinor UK Limited is the majority equity holder and operator for the UKCS seaward production licence P.1758 covering the Cadet heavy oil-field. Equinor and its licence partners, JX Nippon, Siccar Point Energy and Dyas, are currently progressing the development of this field and intend to submit a Field Development Plan to the OGA in 2019.

3.1.5 **Mariner East**

Equinor UK Limited is the majority equity holder and operator for UKCS seaward production licence P.726 covering the Mariner East heavy oil-field. Equinor and its licence partners, JX Nippon, Siccar Point Energy and Dyas, are currently reviewing development options for this field.

3.1.6 **Bressay**

Equinor UK Limited is the majority equity holder and operator for the licences covering the Bressay heavy oil-field. Equinor and its licence partner, Chrysaor, are currently reviewing development options for this field.

3.1.7 **Utgard**

Equinor UK Limited is the sole equity-holder and operator for UKCS seaward production licence P.312 that covers the UK portion of the Utgard field. Equinor Petroleum AS (one of the Equinor Group's Norwegian entities) is operator of the licence covering the Norwegian portion of the field. A Field Development Plan has been approved by the Secretary of State and a corresponding Plan for Development and Operations has been approved by the Norwegian Ministry. In late May 2018, the Utgard subsea template was installed, drilling of

the two development wells commenced in October 2018 on the NCS, one drilled into the reservoir in Norway, the other deviating into the reservoir in the UKCS. First oil production is scheduled for H2 2019.

3.1.8 Frigg

Equinor UK Limited is the sole equity-holder and operator for UKCS seaward production licence P.2343 that covers the UK portion of the Frigg field. Equinor Petroleum AS (one of the Equinor Group's Norwegian entities) is operator of the licence covering the Norwegian portion of the field. Equinor were awarded the licence in the UK 29th Supplementary Licensing Round on the 1st August 2017. In 2018 shallow seismic data was acquired over Frigg.

3.1.9 Barnacle

Equinor UK Limited is the operator for UKCS seaward production licence P.2460 covering the Barnacle oil field. Equinor and its licence partners, Esso Exploration and Production UK Limited and Spirit Energy Resources Limited, were awarded the licence in the UK 30th Licensing Round on the 1st October 2018.

3.1.10 Peik

Equinor UK Limited is the sole equity-holder and operator for UKCS seaward production licence P.2449 that covers the UK portion of the Peik field. Equinor Petroleum AS (one of the Equinor Group's Norwegian entities) is operator of the licence covering the Norwegian portion of the field. Equinor were awarded the licence in the UK 30th Licensing Round on the 1st October 2018.

3.2 Wind Energy Activities

Equinor is a partner in – and on 1st April 2017 became operator of – the Sheringham Shoal wind energy development located off the north-Norfolk coast. The development comprises 88 wind turbines having a combined generating capacity of 317 MW.

Equinor is also Operator of the nearby Dudgeon offshore wind energy project. Located 32 miles offshore from Cromer in North Norfolk. Construction at Dudgeon commenced in 2016. Construction and commissioning were completed in September 2017. The development comprises 67, 6 MW, wind turbines with a combined generating capacity of 402 MW.



Figure 3: Dudgeon offshore wind farm

Equinor is also the Operator of the Hywind Scotland park (75%) with 25% divested to Masdar. Hywind Scotland is a pilot project of 5 floating wind turbines located off the Scottish coast 25km offshore from Peterhead at Buchan deep. Construction and installation were completed in 2017. The turbines were constructed in Spain and finished in Stord, Norway before being towed, complete, to their current location off Peterhead. Hywind's turbines are 830 feet tall, 256 ft of which is submerged beneath the water's surface. Each tower is tethered to the seabed by chains, weighing approx 1,323 tons. The pilot park covers around 4 square kilometres at water depths of 95-120 metres. Each of the five floating wind turbines can produce 6 MW for a combined generating capacity of 30 MW, sufficient to power around 20,000 households. Unused power can be stored in lithium batteries for later use.

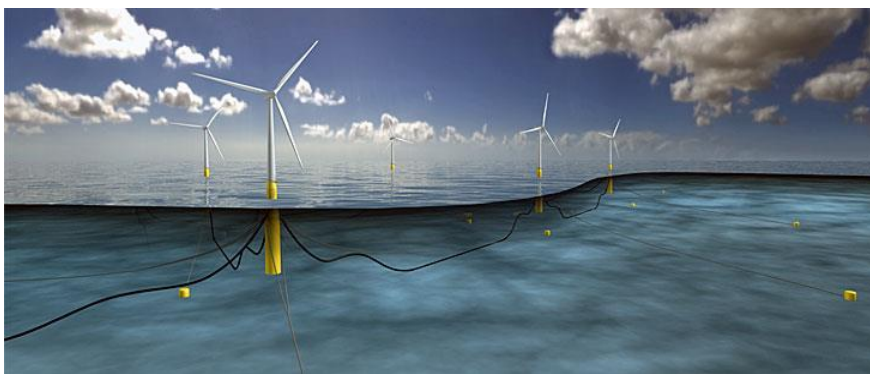


Figure 4: Schematic of Completed Hywind Pilot project



Figure 5: Hywind Pilot project installed turbines

Equinor is also engaged in a joint venture (50%) with SSE in the development of the Dogger Bank windfarm. This project comprises three developments: Creyke Beck A, Creyke Beck B and Teeside A each with a generating capacity of up to 1.2GW. When installed, in combination with other Dogger area windfarms, this will be the world's largest offshore wind development and can supply up to 5% of the UK power requirements.

4 Values and Commitments

4.1 Values

The Equinor Group's Core Values – set-out in the [Equinor Book](#) – are that we are Open, Collaborative, Courageous and Caring. The value Caring requires all of Equinor to:

- *Seek zero harm to people*
- *Respect each other and contribute to a positive working environment*
- *Act in a sustainable, ethical and socially responsible manner*

4.2 Commitments

To meet our Values, and implement what we stand for as a company, Equinor has made a firm set of commitments, also set-out in the Equinor Book. These commitments are as follows:

In all our business activities, we comply with applicable laws, act in an ethical, sustainable and socially responsible manner, practise good corporate governance and respect internationally recognised human rights. We maintain an open dialogue on ethical issues – both internally and externally. Open, honest and accurate communication is essential to our integrity and business success.

Our approach is integrated in our Management System, and we have developed guidance and tools for everyone who works for us. Our Code of Conduct details our commitments and clarifies expectations and requirements of individuals. We do not tolerate any breaches of the law, governing documentation or the Code of Conduct.

4.2.1 Respecting people

We are committed to providing a safe and secure environment for everyone working at our facilities and job sites. Equinor's safety and security vision is zero harm. We provide an environment recognised for its equality and diversity, and we treat everyone with fairness, respect and dignity. We do not tolerate any discrimination or harassment of colleagues or others affected by our operations.

4.2.2 Conducting operations

We have zero tolerance of corruption in any form and take active steps to ensure that corruption does not occur in relation to Equinor's business activities. We are committed to conducting our business activities in an open manner, promoting transparency in our industry. We protect information created by us, or given to us, to ensure appropriate confidentiality and integrity.

4.2.3 Relating to business partners

We seek to work with others who share our commitment to ethics and compliance. We believe in the benefits of competition, and Equinor always competes in a fair and ethically justifiable manner.

4.2.4 Working with communities

We aim to create lasting value for local communities through our business activities. Our contribution may include direct and indirect local employment, local procurement of goods and services, local infrastructure development and capacity-building as well as social investments.

We will conduct our business consistently with the United Nations Guiding Principles on Business and Human Rights and the ten principles of the United Nations Global Compact.

We are committed to preventing harm to the environment and aim for outstanding natural resource efficiency in our business activities. We actively work to limit greenhouse gas emissions from our activities and comply with all applicable environmental laws and regulation.

5 Environmental Goals and Objectives

The 2018 Sustainability Report sets out the Equinor vision and sustainability ambitions:

Shaping the Future of Energy

We turn natural resources into energy for people and progress for society

- *Competitive at all times*
- *Transforming the oil and gas industry*
- *Providing energy for a low carbon future*

We measure progress and results in a holistic way using key performance indicators (KPIs) when relevant, allowing for sound judgement. Updates are done as business conditions change. In our integrated performance process (Ambition to Action) we translate our purpose, vision and strategy into strategic objectives, risks, KPIs and actions describing what we want to deliver. In our process for managing people development, deployment, performance and reward (People@Equinor), we set goals for what and how we want to deliver as teams and individuals, and to drive our personal development.

- **Always Safe**
- **High value**
- **Low carbon**

Objectives, KPIs and actions are established at all levels of the company, including for safety and sustainability (more widely known as health, safety and environment). At a corporate level the objectives, KPIs and actions for 2018 included the following:

Corporate level health, safety and environmental perspective 2018

Strategic objective: An industry leader in safety, security and carbon efficiency

KPIs	Targets	Actions
<i>Upstream CO2 intensity</i>	<i>Top quartile in IOGP benchmark</i>	<i>Implement Equinor's Climate Roadmap</i>
<i>Total serious incident frequency SIF (per million hours worked)</i>	<i>Less than 0.6</i>	<i>Further clarify safety expectations throughout the company</i>
<i>Total recordable injury frequency TRIF</i>	<i>Less than 2.7</i>	<i>Define Safety Leadership Independent safety verifications</i>
<i>Serious oil and gas leakages (number per year)</i>	<i>Less than 9</i>	<i>Quality assessment of Safety and Security Assurance plans</i>

These KPIs, targets and actions are reflected in the Ambition to Action for business units and local entities. For example, Development and Production International business division and its UK/Ireland unit both adopt the above SIF and TRIF targets, whilst drilling and wells unit within the Technology, Projects and Drilling business division has set itself a target of zero well control incidents.

Equinor has also set long-term objectives for improvement. For example, there is a firm objective to achieve a reduction of 3 million tonnes CO2 emissions per year by 2030, in addition to the 1 million tonnes reduction achieved by 2016. The target portfolio carbon intensity for 2030 is 8 kg per barrel of oil equivalent, with an intermediate target of 9 kg per barrel in 2020. This compares to Equinor's current performance of 9 kg per barrel and a current industry average of 18 kg.

6 Environmental Management System

6.1 Introduction

The Equinor environmental management system (EMS) is an integral part of the group's overall management system. The management system has three main objectives:

- *Contribute to safe¹, reliable and efficient operations and enable us to comply with external and internal requirements*
- *Help us to incorporate our values, our people and our leadership principles in everything we do*
- *Support our business performance through high-quality decision-making, fast and precise execution, and continuous learning*

The management system is hierarchical, with mandatory business fundamentals – defined by the Equinor Book and the Function Requirement documents – supported by work processes, technical requirements, procedures, guidelines and information documents:

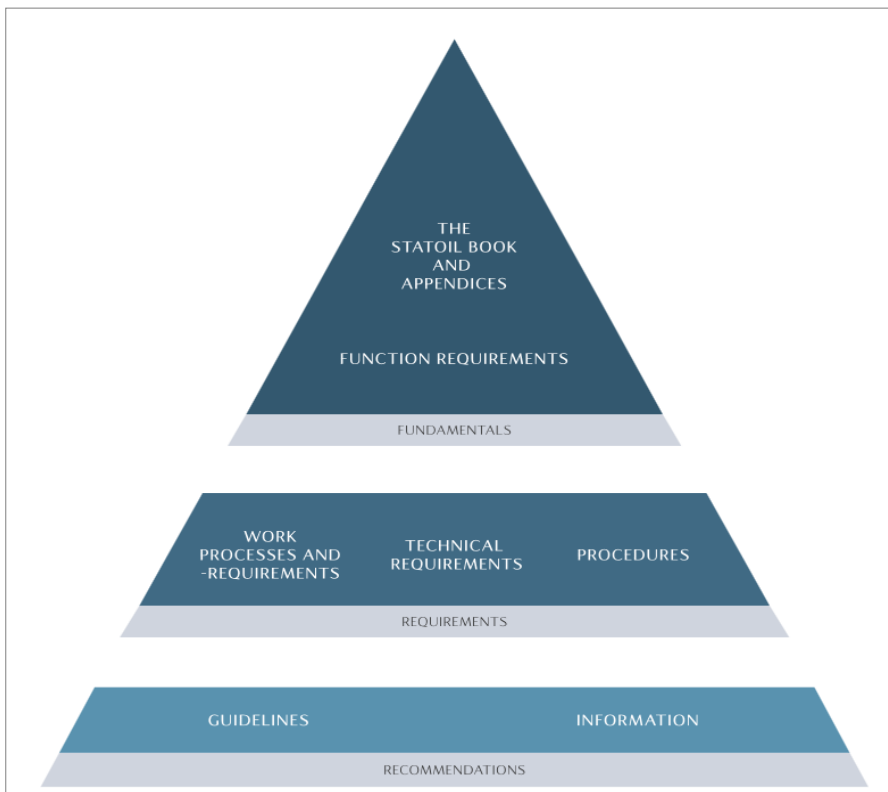


Figure 4: Equinor Management System Structure

¹ Equinor's use of the term "safe" includes no damage to the environment.

6.1.1 Fundamentals

Fundamentals are essential regulations for the company and are valid company-wide. They describe what the company wants to achieve and include our values, principles, commitments and mandates. Fundamentals are documented in the Equinor Book and in our Functional Requirement documents.

6.1.2 Requirements

Requirements are used to manage risks and to ensure safe and efficient operations. They describe what we need to comply with when performing tasks. Requirements are set out in our Organisation, management and Control documents, Work Processes, Work Requirement documents, Technical Requirement documents, System and Operation documents, Key Control documents and Emergency Response Plans.

Recommendations

Recommendations support people when performing tasks and enable compliance with fundamentals or requirements. They describe suggestions or proposals for the best course of action and are based on the collective learning and experience in the company. Recommendations are documented in Guidelines or integrated in our governing documentation as Information elements and 'Should' sentences.

6.2 Fundamentals for Sustainability

The non-negotiable fundamentals for sustainability are:

1. *Management of environmental and social performance shall be an integrated part of strategies, business planning, risk management and decision-making processes.*
2. *Continual improvement shall be achieved through systematic analysis of significant environmental and social aspects, setting ambitious targets and implementing measures.*
3. *Energy demand shall be minimised and energy efficiency optimised through design and operation of our facilities.*
4. *We shall actively work to limit greenhouse gas emissions from our activities.*
5. *All Equinor operated assets shall work systematically to reduce all flaring and to eliminate routine flaring in order to fulfil our commitment to zero routine flaring by 2030. In our partner-operated assets we shall work actively to help achieve the same objective.*
6. *Efficiency of natural resource use shall be optimised through substitution, reduction, reuse and recycling efforts.*
7. *Management of our planned activities shall include development and implementation of cost-effective measures to avoid, minimise or mitigate adverse environmental and social impacts, all in accordance with good international practice and applicable laws and regulations.*
8. *Communities significantly affected by our activities shall be actively consulted, and their views considered in the decision processes.*
9. *Our activities shall contribute to social and economic development in communities where we operate*
10. *Adverse impacts on human rights of those affected by our activities shall be avoided. Appropriate remedy shall be provided if adverse impacts have occurred.*
11. *Our sustainability reporting shall be open, clear and reliable, reflecting material sustainability issues and impacts, and in accordance with relevant requirements and reporting frameworks.*

6.3 ISO 14001 Status

Equinor policy is that the overall Group does not seek certification of its management system against ISO or other international standards. However, the management system is designed to be compatible with recognised standards, such as ISO 14001 for environmental management, so that individual entities may seek accredited certification if there is a specific business need or local legal requirement to do so.

Equinor UK Limited has been independently verified compliant with ISO14001 on four occasions – in 2008, 2014, 2016 and 2018. In 2018 the management system and its implementation were verified as meeting the OSPAR and BEIS EMS requirements without comments. That verification expires in January 2020 and a new verification will therefore be carried out in late 2019.

7 Environmental Performance

This section presents quantitative environmental performance data for UKCS licence activities carried out by Equinor UK Limited during 2018. The data that are presented include:

- Quantities of regulated chemicals that were used and discharged to sea during our offshore oil and gas licence activities, i.e. regulated chemical use/discharge during Mariner hook up and commissioning activities.
- Quantities of waste generated, the emissions to air, and discharges to sea at installations operating at our oil and gas licence areas:
 - Mariner field:
 - Mariner A
 - Mariner B
 - Safe Boreas flotel
 - Noble Lloyd Noble jack up rig (providing accommodation only)

Wastes, emissions and discharges from the vessels that support hook up activities at Mariner are excluded because the relevant vessels fall under maritime legislation and are not considered to be offshore installations for the purposes of OSPAR. However, it may be noted that these maritime operations were conducted without any significant adverse health, safety or environment incidents or effects.

The quantities of regulated chemicals used/discharged, waste generated, emissions to air and discharges to sea that are presented below were reported to OPRED at year-end, or will be reported following expiry of any term permits. This reporting is via the OPRED Environmental Emissions Monitoring System (EEMS). Permit non-compliances and any unplanned discharges were reported to OPRED as soon as possible following their occurrence.

7.1.1 Discharges

Planned:

Discharges of chemicals are included in the following sections. An oil discharge permit is in place for the drains on Mariner A, however, these were still under commissioning in 2018 and no discharges from here have occurred. There was one permitted discharge to sea from Mariner B of 0.9kg of oil from the Mariner B slops tank.

Unplanned:

There were five incidences, in 2018, of unplanned, accidental oil/chemical discharge reported to OPRED under a Petroleum Operations Notice 1 (PON1):

- One at Mariner A: a small (subsea release of hydraulic fluid from a damaged lead on the subsea isolation valve).
- At Noble Lloyd Noble: two for small amounts of dry powders (1 barite, 1 cement) and one for a minor release of base oil during bunkering (under 0.05 litre).
- In addition there was a long running PON 1, now closed, relating to sheens observed from the exhaust deluge on the Safe Boreas main engine exhausts.

7.1.2 Regulated Chemical Use and Discharge

As a general principle Equinor selects only those chemicals which are categorised as Gold / Low RQ or are in OCNS category E. However, in some cases this is not possible due to the lack of a suitable alternative. All chemicals are risk-assessed and justified for the specific operations, both as part of project planning and for permit applications. In addition, chemicals flagged for substitution are re-justified annually.

There was no drilling in 2018

Use and discharge of non-drilling chemicals were limited to biocides, oxygen scavengers and dyes, which are necessary to control biological growth, inhibit corrosion and detect leaks during leak-testing. This was associated with completion and pre-commissioning of the Mariner pipelines as shown in Figure 5 below. All chemical quantities were small, and typical for the nature and scale of the activities.

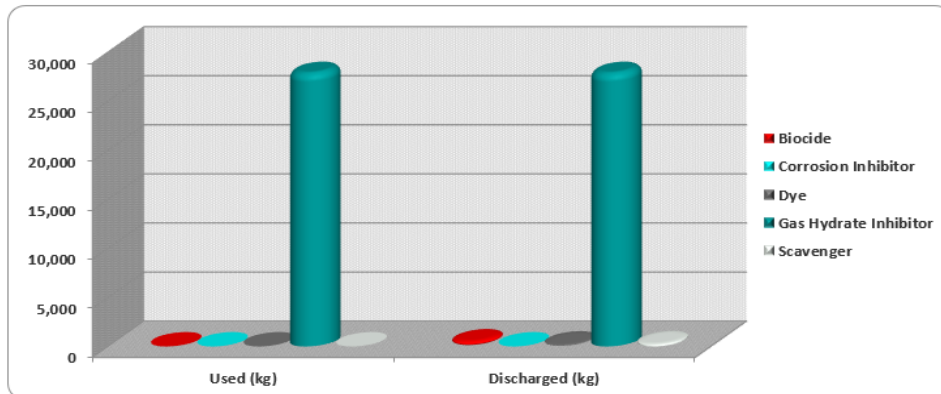


Figure 5: Use and Discharge of Pipeline Chemicals

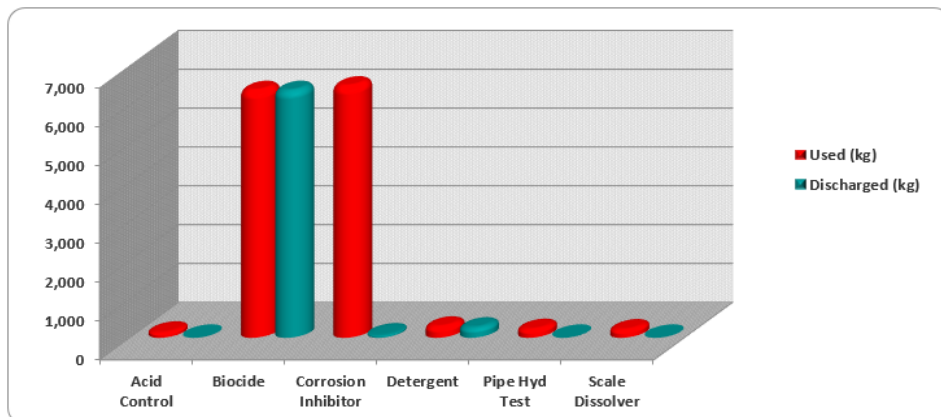


Figure 6: Use and Discharge of Chemicals on Mariner

There were two reported OCR non-conformances in 2018.

7.1.3 Waste Products Generated

In 2018 waste products generated by Mariner A (under commissioning), Mariner B (under commissioning), NLN (providing accommodation) and Safe Boreas (flotel) in 2018 during offshore activities were taken to shore for treatment and disposal. These wastes, and the relevant disposal routes, were as shown in Figure 7.

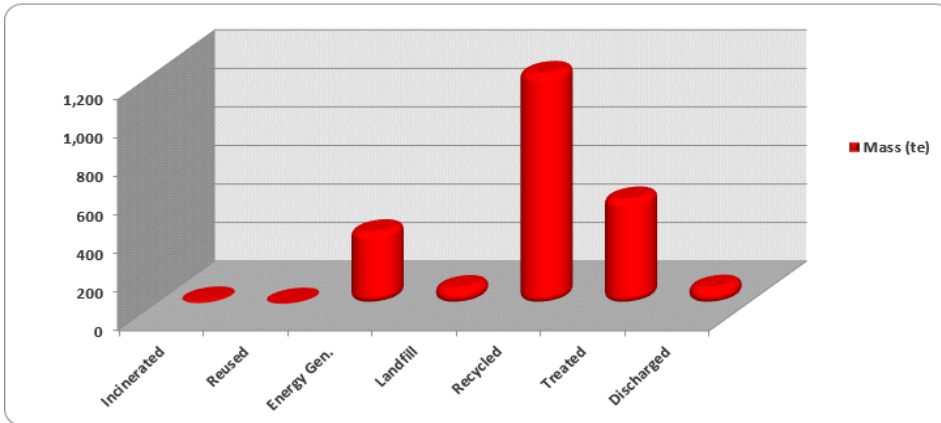


Figure 7: Waste Products Generated Offshore

7.1.4 Atmospheric Emissions

The principal atmospheric emissions were from diesel fuel in engines on Mariner A, Mariner B and the Noble Lloyd Noble. Fuel consumption and resultant emissions were as shown in Figure 8. There was no venting or flaring of hydrocarbons in 2018.

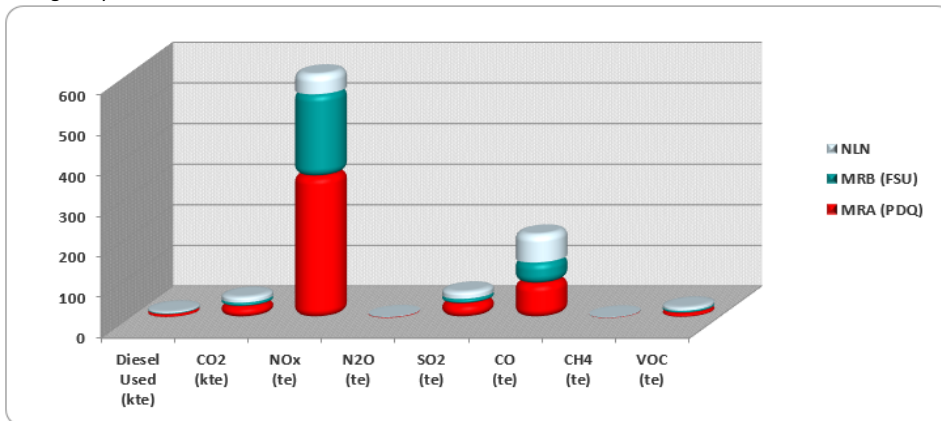


Figure 8: Atmospheric Emissions Offshore - Mariner and Noble Lloyd Noble

8 Abbreviations

BEIS	Department of Business, Energy and Industrial Strategy
CH ₄	Methane
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
DP	Dynamic Positioning
EEMS	Environmental Emissions Monitoring System
EMS	Environmental Management System
FSU	Floating Storage Unit
GW	Gigawatt
IOGP	International Oil and Gas Producers (association)
ISO	International Standardisation Organisation
ISO 14001	International Standard for Environmental Management Systems
kg	Kilogram
KPIs	Key Performance Indicators
MEG	Monoethylene Glycol
MW	Megawatt
NCS	Norwegian Continental Shelf
NO _x	Nitrogen Oxides
N ₂ O	Nitrous Oxide
OBM	Oil-Based Mud
OCNS	Offshore Chemicals Notification Scheme
OCR	Offshore Chemicals Regulations
OPRED	Offshore Petroleum Regulator for Environment and Decommissioning
OSPAR	Oslo-Paris (convention)
PDQ	Production, Drilling and Quarters (platform)
PON	Petroleum Operations Notice
RQ	Risk Quotient
SO ₂	Sulphur Dioxide
STL	Submerged Turret Loading (buoy)
SSU	Safety and Sustainability
te	Tonnes
UKCS	United Kingdom Continental Shelf
VOC	Volatile Organic Carbons
WBM	Water-Based Mud

8 Links to Further Information

8.1 The Equinor Book

- [Values](#)
- [Commitments](#)
- [Management System](#)

8.2 Equinor's Web-Site

- [Our business](#)
- [Our locations](#)
- [Sustainability](#)
- [Climate Change](#)
- [Impact Assessments](#)