

ORANJE-NASSAU ENERGIE UK Ltd.
2015 – ANNUAL ENVIRONMENTAL STATEMENT



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1 INTRODUCTION

This Statement is the 2015 Annual Environmental Statement (AES) for Oranje-Nassau Energie UK Limited (hereafter ONE UK). It has been prepared to satisfy the requirements of OSPAR recommendation 2003/5 and the associated DECC guidance (OSPAR 2003/5 DECC Guidance: Revised Issue 5: May 2014). ONE UK is a subsidiary of Oranje-Nassau Energie B.V. (hereafter ONE B.V.). The report is designed to summarise the Environmental Key Performances of ONE UK for 2015 and highlights the objectives and plans for 2016. ONE UK became licence and duty holder for the Sean operations as per 1st of June 2015.

In January 2015 ONE B.V. was awarded the ISO 14001 certification by DNV GL. Since then, ONE B.V. has been the subject of annual audits with successful re-approval of the certification. In December 2015 ONE B.V. had its follow up audit. It was decided to split up the ISO 14001 certificate for NL and UK operations. In January 2016 the ONE UK operations were certified for ISO14001. Both NL and UK audits were without any non-conformity. This AES covers the period that ONE UK was responsible for the Sean operations. For ETS ONE UK reported the full year 2015, including the Shell part till 01st June.

2 SCOPE OF ONE UK ACTIVITIES

This AES demonstrates the ONE UK commitment to conduct its operations in a sustainable way that protects the health, safety and well-being of employees, contractors and the public and to make every effort to prevent pollution and avoid impact to the environment.

This AES provides an overview of all environmental aspects and is one of the communication tools to the stakeholders and public. This AES provides an overview of the emissions caused by production activities. It also summarizes the measures taken to reduce the environmental impact of the activities. The scope of this AES is the Sean Field comprising:

- The Sean PP & PD installation (Papa)
- The Sean RD installation (Romeo)

The reporting period for this AES covers the period from 01 June 2015 when ONE UK took over the operatorship of the Sean field from Shell to 31st December 2015.

3 OVERVIEW OF ACTIVITIES

Following the successful acquisition of Shell's and Esso's 50% operated share in the SEAN license, ONE B.V. is well positioned to expand its operated asset base in the Dutch and United Kingdom sector with the ambition to become the Southern and North Sea operator of choice.

ONE B.V. is strategically positioned in some important regions for the production of oil and gas: North Sea (Netherlands and United Kingdom) and West Africa (Gabon); with total reserves of 100 million boe, and additionally 175 million boe unrisks prospective resources. The average production in 2015 was 11,000 boe per day. With the acquisition of Sean, ONE B.V. production increased to 18,000 boe per day and will increase to 23,000 boe per day in 2016.

3.1 ONE UK Production Operations

SEAN PP & PD

The Sean Papa (PP & PD) installation is located in the southern part of the UK sector of the North Sea in block 49/25a at approximately 94 km from the nearest point on the Norfolk coast. It is a Normally Manned Installation (NMI) comprising two fixed bridge linked platforms; a wellhead platform (PD) and a production and accommodation platform (PP). Gas from Sean Papa is exported to the Bacton terminal in Norfolk via a dedicated pipeline.

During the production period (June 2015 - December 2015) the Sean fields have produced approx. 476,352,242 Nm³ of gas and 3,675,212 m³ of condensate.



Picture 2: Sean PP & PD installation

SEAN ROMEO

The Sean Romeo (RD) is a normally unmanned installation (NUI) and is approximately located at 4.5 km of the Sean PP & PD in block 49/25a. The Sean Romeo is connected through a 20" duplex pipeline with the Sean PP & PD. The Sean Romeo installation stands in approximately 30 metres of water and is situated 94 km from the Norfolk coast.



Picture 3: Sean Romeo installation

4 ENVIRONMENTAL MANAGEMENT SYSTEM (EMS)

The ONE B.V. Environmental Management System (EMS) comprises of strategic corporate documents originating from ONE B.V. cascading down to ONE UK and Sean specific documents and procedures. The ONE B.V. HSE policy sets out the company’s commitments and forms the basis to develop, implement and monitor our environmental objectives and manage activities that can interact with the environment.

The overall purpose of the ONE UK EMS is to provide a framework for developing and operating oil and gas production in compliance with all relevant legal and stakeholder requirements. The ONE UK EEMS aims to protect the environment and the marine habitat by preventing or mitigating adverse environmental impacts with the use of best available techniques to the level of ALARP and economical achievable.

The ONE UK EMS is structured in line with the requirements of the international standard for environmental management and is certified to the ISO 14001 standard as of January 2016. ONE B.V. and ONE UK management systems are annually reviewed and audited in order to determine the status of the environmental performance. The EMS consists of the elements described in figure 2:

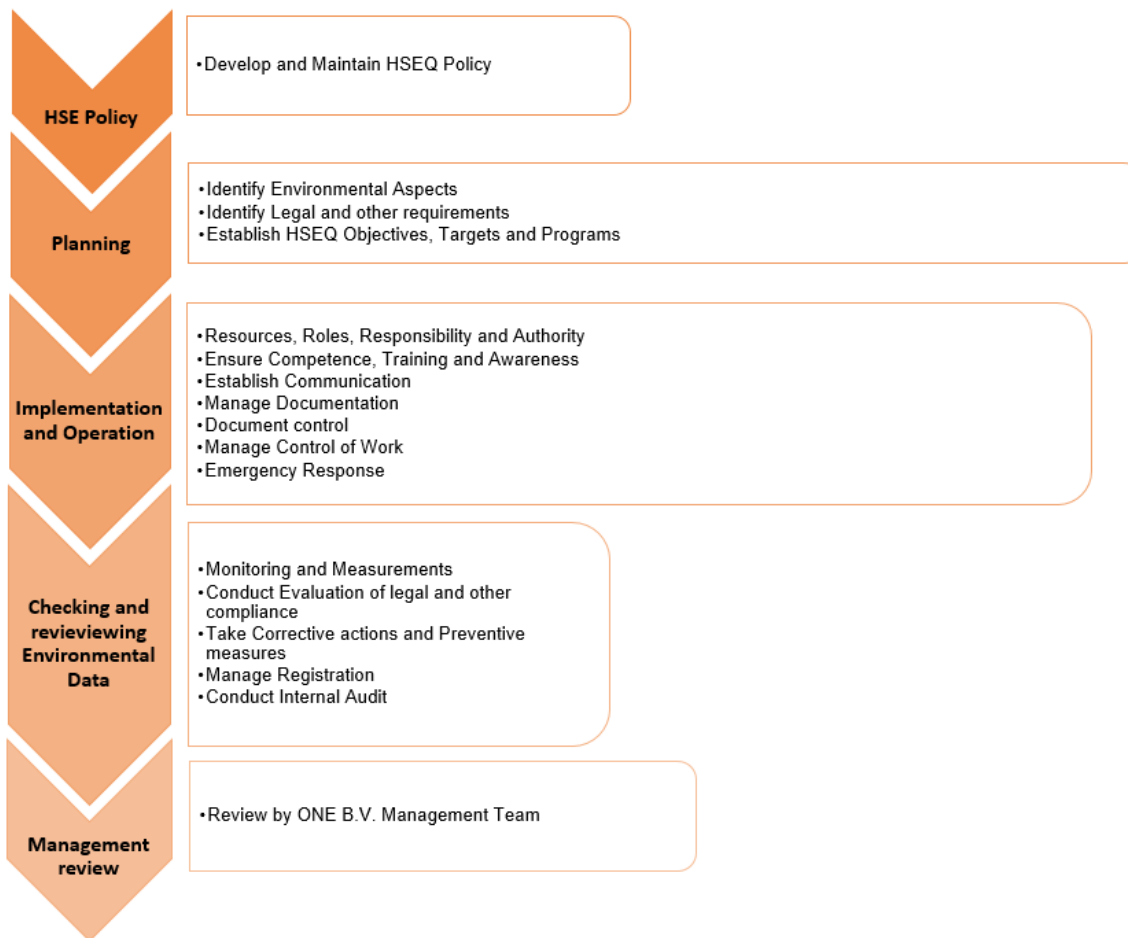


Figure 2. Structure of ONE U.K. Environmental Management System

5 POLICY AND OBJECTIVES

The embedding of health, safety and environment within the organisation has a high priority within ONE U.K.. The Management System is based on the ISO 9000 standard in general and the ISO 14001 standard specific for the environment and environmental, health and safety legislation.

5.1 Policy

The HSE policy combined for ONE B.V. and ONE UK reflects the commitment of the owners of the company and the management team to develop and operate oil and gas production in a sustainable way without damage to health and safety of all persons involved and to prevent damage to the environment and pollution of the marine habitat. It consist of the following HSE policy as shown on the next page (Figure 3).

Health, Safety & Environmental (HSE) Policy



1. Commitment

- *Oranje-Nassau Energie B.V. and Oranje-Nassau Energie UK Limited (hereafter are both companies referred to as "ONE") are committed to conduct their operations in a sustainable way that protects the health, safety and well-being of employees, contractors and the public and will make every effort to prevent pollution and avoid impact to the environment, loss of integrity of assets and damage to the property of the company and third parties. A responsible and pro-active HSE management is considered a key factor in ensuring business success.*
- *We will respect: the United Nations Universal Declaration of Human Rights and the United Nations Convention on the Rights of the Child.*

2. Policies

- *We will comply with the intent and specific requirements of all applicable laws, regulations and agreements with the government and business partners.*
- *It is the responsibility of every individual who works for ONE to comply with the law as well as with ONE policies and practices. This is a condition of employment.*

3. Objectives and Planning

- *For the implementation of our policy we will maintain an HSE Management System including energy efficiency improvement, according to applicable national legislation and company standards.*
- *We will set measurable targets as part of our annual HSE program.*

4. Implementation

- *We will maintain HSE management standards, sound procedures and clear programs.*
- *We will carry out risk assessments so that the business will be conducted with due care to safety, health and environment.*
- *ONE will ensure that all employees and contractors are aware that the HSE aspects of their tasks and responsibilities are an integral part of the business.*
- *If the safe or environmentally responsible completion of a task is not clearly foreseeable, the task shall not be started.*
- *Employees and contractors are expected to take action on any substandard condition and to report any incident that resulted in or could have resulted in injury or damage.*
- *Incidents will be investigated, the root causes determined and the results shared within the organization in order to prevent recurrence.*
- *We will maintain effective emergency response procedures, train employees in their use and conduct emergency exercises.*

5. Monitoring and Audits

- *We regularly conduct inspections and audits to monitor the compliance with and effectiveness of our HSE Management System.*
- *We will share those results with employees, contractors and stakeholders involved, in order to identify strengths as well as opportunities for improvement.*

6. Management Review

- *Management will annually review the HSE policy and the effectiveness of the HSE Management System.*
- *The policy and management system will be adjusted as required.*

7. Continuous Improvement

- *We seek continuous improvement to our health, safety, environmental and energy performance by yearly setting new (individual and company) targets.*
- *We will actively co-operate with industry and authorities to further enhance our HSE standards and performance.*

Alexander Berger
CEO

15/10/2015

ONE_COMP-25-1-PO-00001-0, October 2015

Figure 3. ONE B.V. HSE Policy Statement.

5.2 Objectives and Targets for 2015

The Environmental improvement objectives and targets for 2015 were set out in the ONE B.V. document entitled *HSEQ Plan 2015 Oranje-Nassau Energie*. The HSEQ plan for ONE UK was applicable for the period June up to December 2015. The objectives were developed to ensure that operations are executed in line with the ONE B.V. and ONE UK HSE policy. The relevant environmental objectives for 2015 are summarised in following table along with associated progress status:

ID	Location	Objectives	Status
1	ONE UK	Obtain ISO 14001 certification for all UK operations	<i>Achieved</i>
2	ONE UK	Comply with EU ETS regulation	<i>Achieved</i>
3	ONE UK	Ensure all environmental reporting are submitted	<i>Achieved</i>
4	ONE UK	Complete all HSEQ training program	<i>Achieved</i>
5	ONE UK	Complete Emergency Response exercises	<i>Achieved</i>
4	Sean Papa	Chemicals reduction / replacements or use less hazardous products	<i>Achieved / Ongoing</i>

Table 1: ONE UK Environmental objectives for 2015

6 ENVIRONMENTAL PERFORMANCE

This section provides a summary of the environmental key performance indicators in relation to compliance with the relevant legislative requirements and compliance with ONE UK's environmental policy, goals, objectives and environmental targets. A summary of ONE UK offshore environmental aspects and their associated emissions and impacts is provided below.

6.1 Atmospheric Emissions

Sean Papa installations operate with permits issued under Pollution Prevention and Control (PPC) legislation, Environmental Permitting regulations and Phase III of the mandatory EU Emissions Trading Scheme for CO₂ (EUETS). This requires ONE UK to focus on energy efficiency and to reduce fuel use as low as possible. Also it requires us to maintain our fuel gas metering and measurements to a high standard.

In 2015, total CO₂ emissions from the ONE UK facilities were 66303 tonnes CO₂ equivalents (tCo₂e). Figure 4 summarises the 2015 CO₂ emissions.

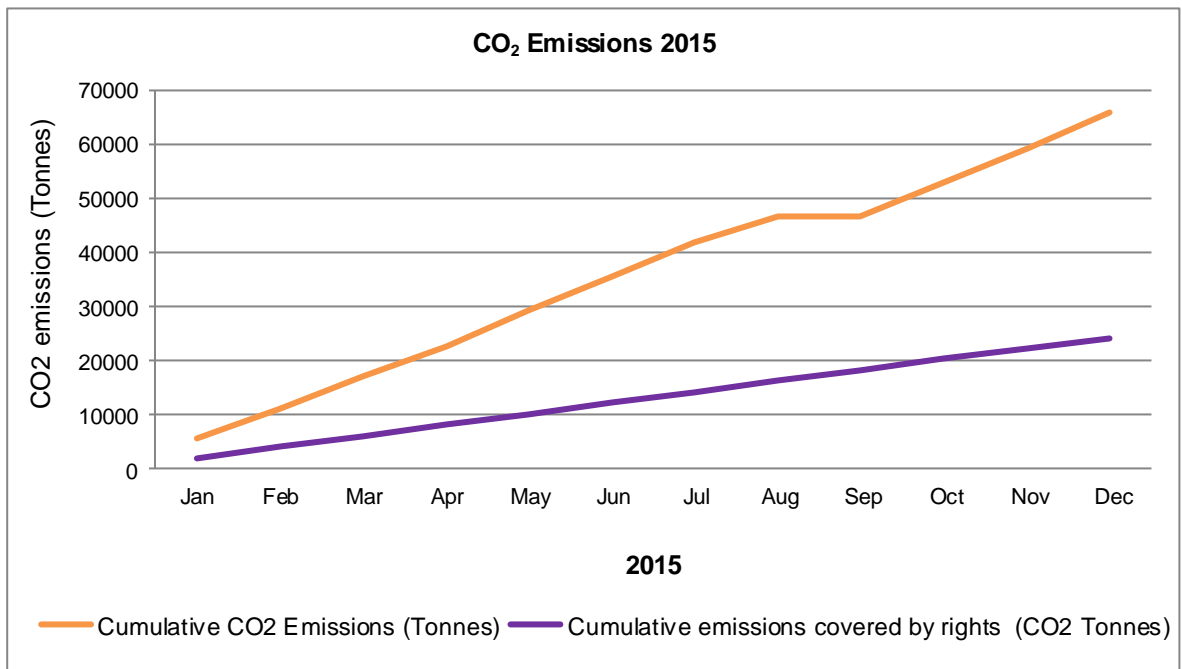


Figure 4: Overview of CO₂ emissions under the EU ETS

Fuel combustion and venting operations are the principle source of atmospheric emissions at the Sean papa. Figure 5 summarises the 2015 NOx, Sox, CO, CH4 and VOC's emissions in tonnes from fuel gas, diesel and venting.

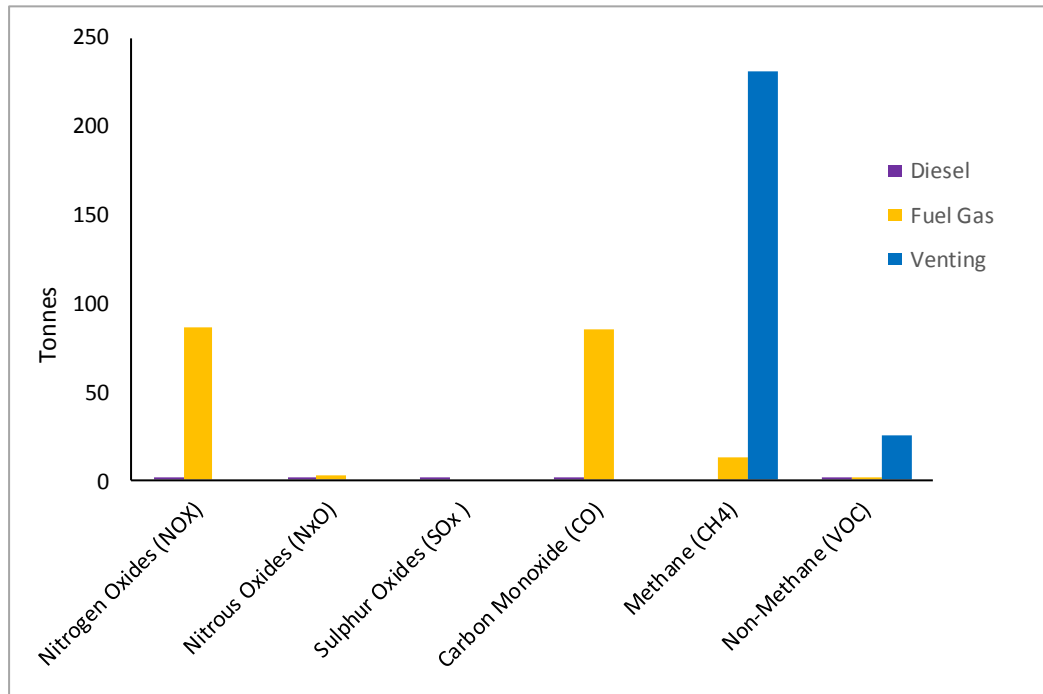


Figure 5: 2015 - NO_x, N₂O, SO₂, CO, CH₄ and VOC's emissions in tonnes from fuel gas, diesel and venting

6.2 Oil in Production Water

Oil in produced water discharges are regulated by the OSPAR commission recommendations through the Oil Pollution Prevention and Control Regulation (OPPC). The produced water generated on Sean Papa platform and Sean Romeo is re-injected into the Sean Papa PD-003 well. Although re-injecting produced water into the well at Sean Papa requires additional energy, it reduces pollution of the marine environment.

The total amount of re-injected produced water volume from the Sean fields in 2015 was 8043 m³. The total oil re-injected from Sean fields in 2015 was 8.6 tonnes.

6.3 Energy Efficiency

6.3.1 Sean Fields

Energy used at the Sean Papa and Sean Romeo installation is provided by fuel gas or diesel. The power generated is used for running pumps, compressors, engines heaters and general platform services. During the planned shutdown in September 2015, the re-wheeled compressor and reduced suction pressure of the wellhead were re-configured to suit the late life requirements of the reservoir. The 2015 energy used per Nm³ gas produced is summarised in figure 6.

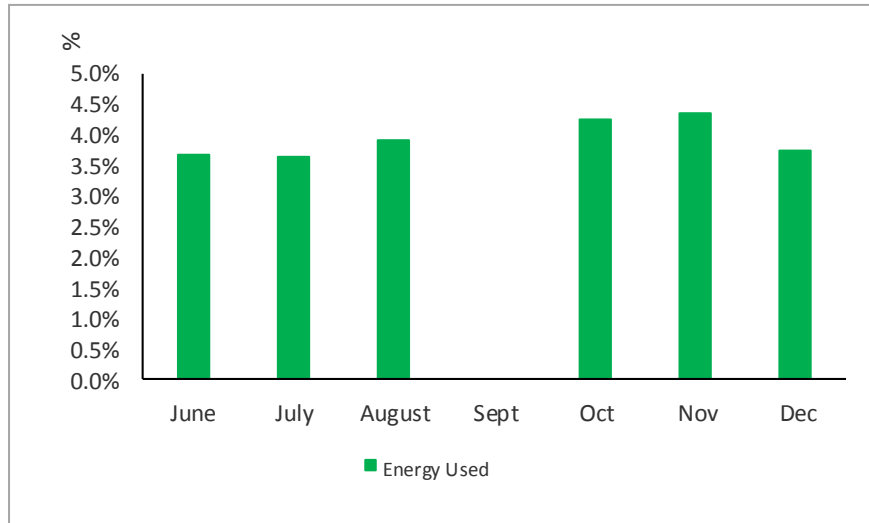


Figure 6: Sean energy used in % (zero energy used in September due to shutdown)

6.4 Waste

Waste is controlled across all ONE UK operations with ONE UK installations actively segregating their waste streams for more environmental acceptable routes of disposal.

During 2015, a total of 123.083 tonnes of waste was generated at the Sean Papa and Sean Romeo platform. From the above total 17.3 tonnes of waste was recycled and reused which is 14% of the generated waste. The majority of waste was disposed of as waste for energy (86%). Waste from the Sean fields is shipped to the Netherlands.

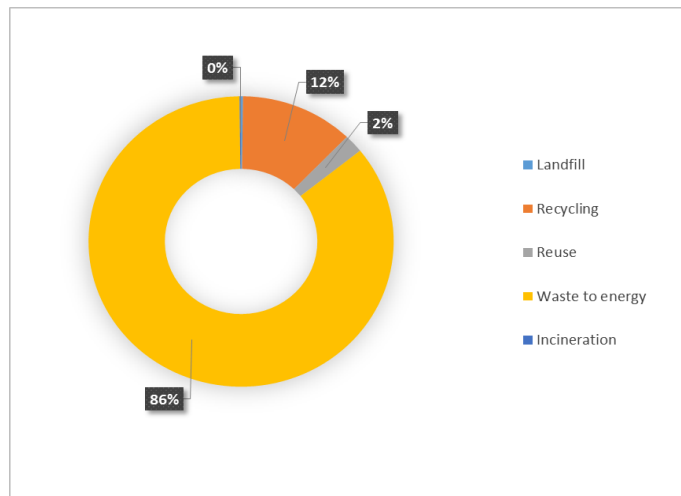


Figure 7: 2015 Sean Production waste and disposal routes

6.5 Chemicals Management

Our use and discharge of chemicals in production and wells operations is controlled by the Offshore Chemicals Regulations and ONE UK's environmental requirements. The majority of the chemicals (91%) that ONE UK used in 2015 were not listed as candidates for substitution. However, approximately 9% of the chemicals used had a substitution warning. Wherever possible these chemicals should be phase out in favour of substitution free alternatives.

During 2015, ONE UK used chemicals listed as NO LABEL and have a lowest OCNS category Gold (91%) and E (9%). Figure 8 and 9 shows the use of offshore chemicals for the purpose of gas production at the Sean field by chemicals label and OCNS ranking. Since there is no discharge of production water at Sean Papa, various chemicals are re-injected into well PD-003.

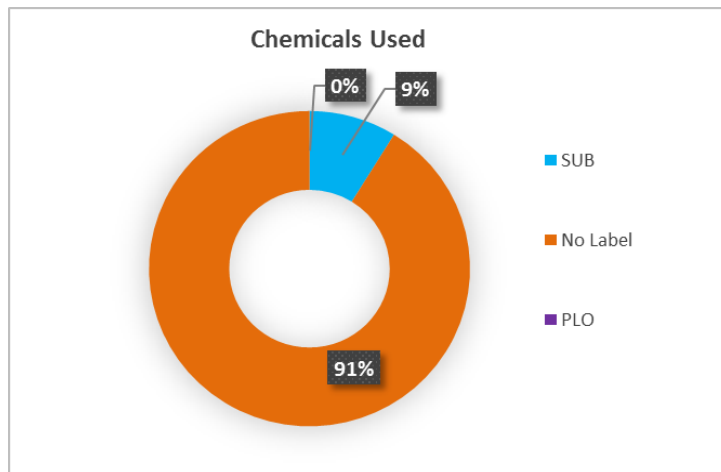


Figure 8: 2015 chemicals used by chemicals label

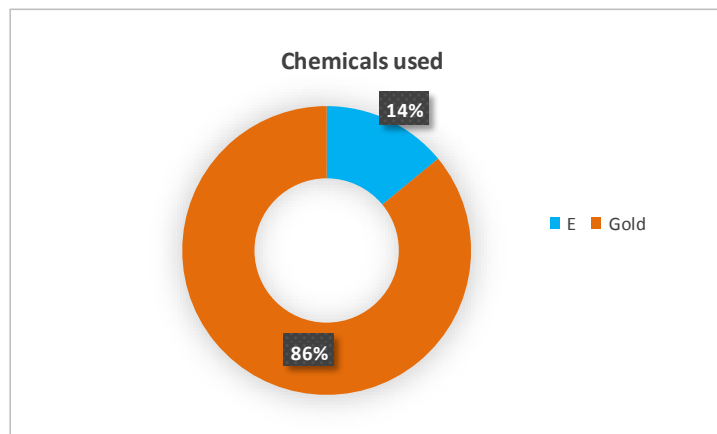


Figure 9: 2015 chemicals used by OCNS Ranking

The reduction of chemicals have been achieved through a combination of factors:

1. Replacement of chemicals by less hazardous versions
2. Removal of unused products from permits

6.6 Environmental Events

Although ONE UK is putting many efforts in avoiding any spills or dropped object to the sea, two events occurred in 2015. In the event of an incident, all spills to the sea must be reported to DECC via a PON 1 submission. Table 2 summarises the number of events to the environment. Corrective actions have been taken to prevent new incidents. The following environmental related events were reported to DECC.

Installations	Chemicals		Oil	
	Number of spills	Quantity (tonnes)	Number of spills	Quantity (tonnes)
Sean PP & PD	0	0	1	0.022
Sean Romeo	0	0	1	2.6

Table 2: Volume of unplanned releases by actual outcome 2015

On the 17th of June 2015 during the visit of the normally unmanned Sean Romeo platform, an observation was made by the platform staff that the conductor of well 5006 (RD03) was overflowing. And estimated amount of 2.6 tons of rape seed oil was lost to sea. Immediate action was taken to re-direct the fluid via a hose to a containment tank. Captured fluid was send onshore for disposal to a dedicated treatment facility.

6.7 Certifications

The ONE UK operations are covered by an Environmental Management System (EMS) certified to ISO 14001. The ONE UK was certified for the first time in 2016. Figure 10 shows the ONE UK ISO-14001 certificate.

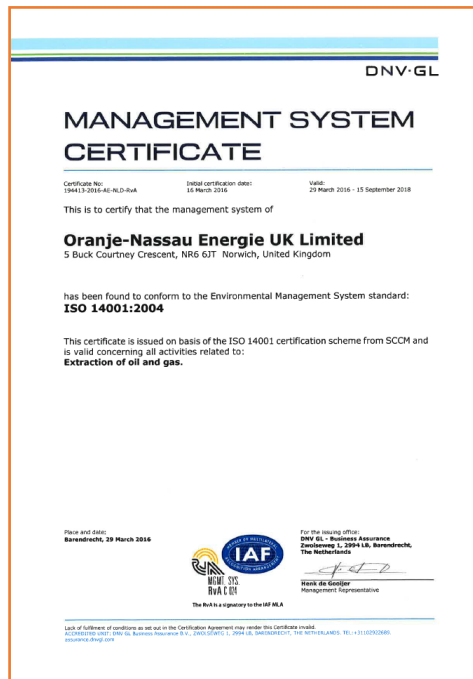


Figure 10: ONE UK ISO-14001 Certificate

6.8 Environmental Objectives for 2016

ONE U.K. has developed the following environmental objectives for 2016:

- Continue compliance with EU ETS regulation
- Monitor vent and fugitive emissions of Sean PP and PD with the aim of reduction
- Continue certification of ONE U.K. operations for ISO 14001
- 50 % reduction in the number of chemicals and hydrocarbon spills to sea on ONE UK operated assets
- Continue the phasing out of chemicals listed or registered substances with a substitution warning