



Eni UK Ltd. Liverpool Bay

2016 Environmental Statement



Eni UK HSE Policy



Policy
Health, safety and the environment

"THE INTEGRITY OF OUR OPERATIONS"

The safety and health of Eni's people, of the community and of its partners, and the protection of the environment are top priorities for Eni in all its activities.

<p>Eni UK conducts its activities in accordance with all compliance obligations in the countries where it works and with all other applicable requirements and standards concerning the safeguarding of the health and safety of workers and of the environment.</p> <p>Eni UK manages HSE protection and risk in an integrated and systematic manner, in accordance with the principles of precaution, prevention, protection and continual improvement.</p> <p>Eni UK maintains and implements its HSE Management System, assigning clear responsibilities to all levels of personnel in the company and ensuring that required competencies and resources are available. Eni UK's top management performs an active role in setting direction and improvement objectives, fostering trust and promoting a positive HSE culture, with the active involvement from the entire workforce.</p> <p>Eni UK considers the protection of health a fundamental requisite and promotes the psychological and physical well-being of its people.</p>	<p>Eni UK adopts good practices in relation to HSE matters and supports active engagement with relevant industry associations, with the aim of developing and improving standards of HSE management and performance.</p> <p>Eni UK designs, develops, manages and decommissions its tangible assets ensuring the safeguarding of workforce health and safety, the minimisation of environmental impacts, the prevention of pollution and the optimisation of natural resources and energy use.</p> <p>Eni UK selects and manages its contractors to ensure that they have the necessary capability and competence to meet its expectations in relation to HSE management and protection.</p> <p>Eni UK communicates to its stakeholders, in a transparent manner, the objectives and results that have been achieved in relation to HSE management and promotes long term cooperation, with the aim of achieving mutual sustainable development.</p>
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January 2017



Claudio De Marco
Managing Director Eni UK

Eni UK ISO14001 Certificate of Registration



Certificate of Approval

This is to certify that the Management System of:

Eni UK Ltd
Liverpool Bay Asset, Lianeurgain House, Northop Country Park, Mold, CH7 6WD, United Kingdom
has been approved by LRQA to the following standards:
ISO 14001:2004



David Derrick
Issued by: Lloyd's Register Quality Assurance Ltd

Current Issue Date: 12 January 2017 Original Approval: ISO 14001 13 December 2000
Expiry Date: 14 September 2018
Certificate Identity Number: 10011771

Approval Numbers: ISO 14001 – 0002135

The scope of this approval is applicable to:

The management of environmental aspects associated with oil and gas operations at the following Liverpool Bay offshore facilities: Douglas, Oil Storage Installation (OSI), Lennox, Hamilton, Hamilton North and Hamilton East. Also, onshore at the Point of Ayr Gas Terminal and associated support services at Lianeurgain House.



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Lloyd's Register Quality Assurance Ltd, 1 Trinity Place, Haverhill Lane, Birmingham B37 7YU, United Kingdom

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Introduction

This is the 2016 Environmental Statement for Eni UK Liverpool Bay, for the period 1st January to 31st December 2016, hereafter called the reporting period. This statement reports the environmental performance of both offshore and onshore operations to our stakeholders, and to the public, in accordance with the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) Guidance and Reporting Requirements, in relation to OSPAR Recommendation 2003/5.

1.0 Liverpool Bay Operations

Oil and Gas Production

Process plant on the offshore platforms separates oil, gas and water produced from the oil and gas reservoirs. Once the oil has been separated from the water, it is pumped to the Oil Storage Installation (OSI) via pipeline. Oil is periodically transferred from the OSI to export tankers, for shipment to customers. Oil from EOG's Conwy field also flows to Eni's offshore facilities for processing.

Produced gas is treated onshore at the Point of Ayr (POA) Gas Terminal, where it is dried and sweetened. A small portion of the gas produced is used to generate power, some of which is then exported to the national grid. The remaining gas processed is exported via onshore pipeline to Connah's Quay Power Station.

1.1 Offshore Facilities

Douglas

The Douglas field contains low sulphur, 44° American Petroleum Institute (API) black oil. The oil has a low gas to oil ratio. The Douglas Complex is located approximately 23km off the North Wales and English coastlines. It consists of an accommodation unit, a processing platform and a wellhead tower, all bridge linked (Photo 1).

Photo 1 – Douglas Complex



The layout of the Douglas Complex is designed with the objective of separating the potentially hazardous production plant and well facilities from the living quarters and control centre. The three platforms are orientated to provide the smallest target to passing ship movements. Water depth at the location is 29 metres.

Lennox

Lennox is a satellite platform (Photo 2). The Lennox Field consists of a thin layer of oil underlying a normally pressured gas cap.

Photo 2 – Lennox Platform



Lennox produces both gas and condensate, together with formation water. These reservoir fluids are routed to the Douglas Complex for separation. Lennox lies approximately 8 km off the Sefton coast. The Lennox Platform is a two level, 12 well slot structure with an underdeck. Water depth at the location is 7m.

Hamilton Fields

There are two (almost identical) producing Hamilton gas platforms; Hamilton and Hamilton North (Photo 3). The connected Hamilton East subsea gas well is no longer in production.

Photo 3 - Hamilton Platform



These platforms are two-level, normally unmanned structures with an underdeck. Produced gas, together with condensate and formation water, is transported via subsea pipeline to Douglas for further processing.

Oil Storage Installation (OSI)

The stabilised export crude oil from the Douglas Complex is piped 17km north to the OSI (Photo 4). The OSI is a purpose-built barge that is permanently moored. Its location was chosen to avoid shipping lanes.

The OSI is 207 metres long, 44.5 metres wide and has three deck levels and a helipad. The vessel has 10 oil compartments (plus two slop tanks) surrounded by 4.8 metre wide seawater ballast tanks. The cargo tanks have a total storage capacity of 146,290m³ (approximately 860,000 bbls usable volume).

Photo 4 - Oil Storage Installation



1.2 Onshore Facilities

Point of Ayr (POA) Gas Terminal

The onshore gas processing terminal (Photo 5) is located at Point of Ayr in Flintshire, North Wales. It treats all of the gas produced from Liverpool Bay offshore facilities.

Photo 5 - POA Gas Terminal



The POA location is bound to the east by the sea wall and the Dee Estuary, and to the southeast and south by the site of the former Point of Ayr Colliery and the Chester to Holyhead railway line.

The POA Gas Terminal site covers an area of approximately 37 hectares. Eni UK also owns a further approximate 110 hectares of dunes, warren and farmland adjacent to the Gas Terminal, designated as a Site of Special Scientific Interest (SSSI). It is managed for conservation benefit under land management agreements regulated by Natural Resources Wales (NRW).

2.0 Environmental Management

Eni UK Liverpool Bay's Environmental Management System (EMS) is certified to ISO 14001:2004 by Lloyds Register Quality Assurance (LRQA), see certificate on Page 2. This certification involves six monthly surveillance audits.

2.1 Objectives and Targets

Eni UK Liverpool Bay maintains environmental improvement objectives, progress against which is monitored by the Health, Safety and Environment Team. These objectives are linked to the significant environmental aspects, 2016 focus areas were:

- Chemical substitution to OSPAR schedule.
- Improve environmental awareness of staff.
- Improve effectiveness of internal audits.
- Update EMS to meet revised ISO14001 requirements.

2.2 Permits and Consents

Oil and gas production operations are regulated by a variety of onshore and offshore environmental permits and consents namely:

- Pollution Prevention Control (PPC) permits for Douglas and POA Gas Terminal.
- Oil discharge permits for Douglas, OSI, Hamilton and Hamilton North.
- Consolidated Oil Pollution Emergency Plan.
- Consents to Vent and Flare Gas for offshore installations and onshore Gas Terminal.
- Douglas and OSI production chemical permits and annual chemical permits for well intervention operations.

- European Union Emissions Trading Scheme (EUETS) permits for Douglas, OSI and POA Gas Terminal.
- Consents to Locate for offshore permanent installations and support jack-up vessels.

2.3 Compliance

Certification to ISO14001 requires external audits to be conducted, during which a small number of minor issues requiring corrective action were identified during 2016. These have been closed in a manner acceptable to management.

Regulatory environmental inspections, conducted by the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED, the offshore environmental regulator) and by Natural Resources Wales (NRW, the onshore environmental regulator) also identified items requiring attention. Corrective actions for these were set by management and communicated to these environmental regulators in action plans.

3.0 Offshore Performance

3.1 Production

Offshore oil and gas production during the reporting period is presented in Figures 3.1 and 3.2.

Figure 3.1 - Oil/Condensate Production

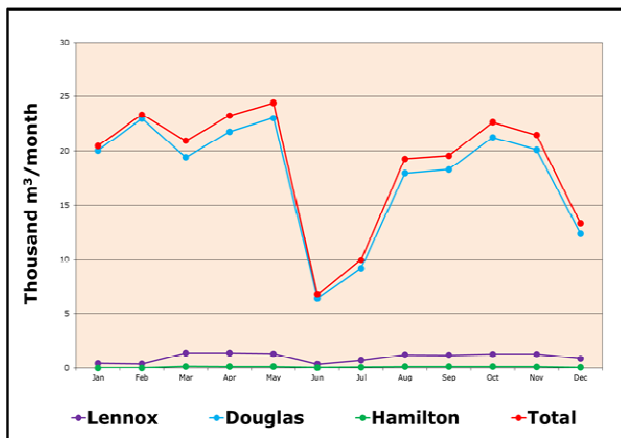
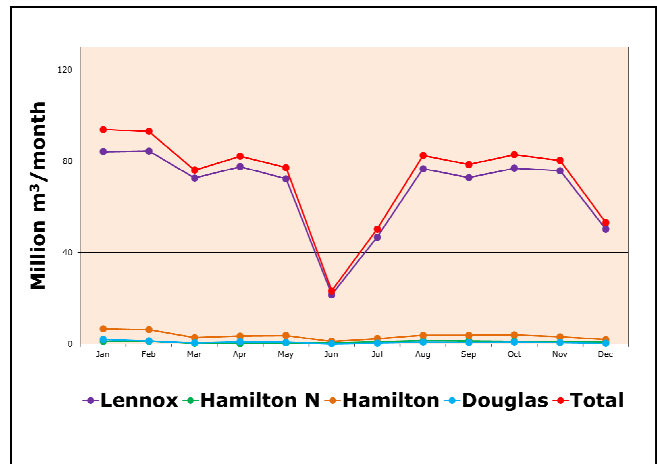


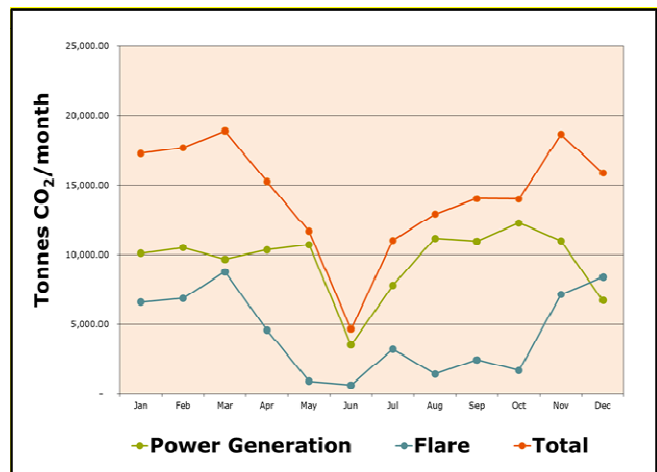
Figure 3.2 - Gas Production



3.2 Emissions and Energy Use

CO₂ emissions arise from power generation and flaring, demand for which is governed by production levels. Figure 3.3 shows CO₂ emissions arising from offshore power generation and flaring during the reporting period.

Figure 3.3 - Offshore CO₂ Emissions

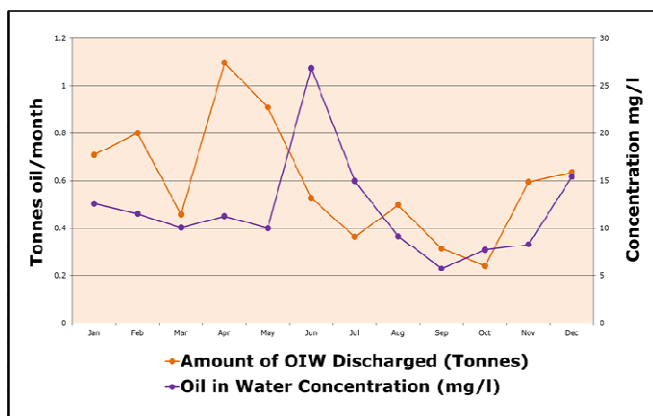


3.3 Water Discharges

Permitted discharges of produced water containing low concentrations of oil and chemicals occur from offshore installations. These have the potential to affect sea water and sediment quality.

Figure 3.4 shows the amount of oil entrained in produced water discharged from Douglas and OSI during the reporting period.

Figure 3.4 – Oil in Produced Water



3.4 Chemical Use and Discharge

Chemicals are used in production and well workover operations, and chemical permits for the offshore use/discharge of process chemicals are in place.

Offshore production chemical consumption and discharge for Douglas and OSI for the reporting period are presented in Figure 3.5 below. Figure 3.6 shows well intervention chemical use.

There were a total of ten minor chemical/oil releases offshore (four from OSI, two from Hamilton North and one each from Hamilton, Douglas, Lennox and a jack-up vessel), the eventual fate of which were to sea (via platform processes). These losses, amounting to approximately 0.8 tonnes in total, were reported to OPRED (via the PON1 process) and none were assessed to have caused an appreciable impact on the environment, see Figure 3.7.

Figure 3.5 - Offshore Chemical Use and Discharge

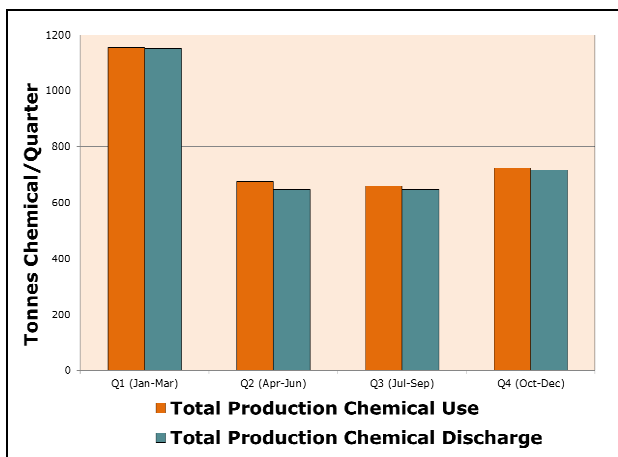


Figure 3.6 - Well Intervention Chemical Use and Discharge

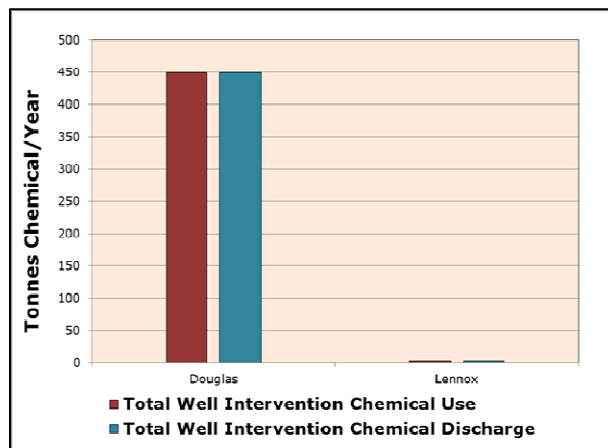
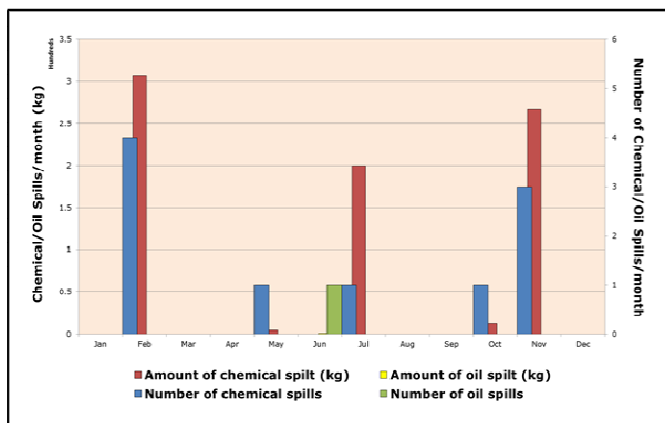


Figure 3.7 – Spills to Sea (PON1 Reports)



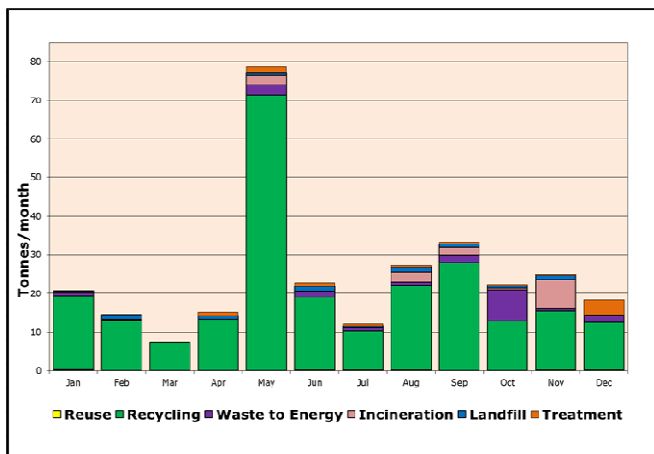
3.5 Chemical and Hydrocarbon Spill Prevention and Spill Contingency

In 2016 field support vessel services continued to be supplied by the VOS fleet. The tier 1 and 2 local oil spill responder continued to be Braemar Howells, with aerial surveillance/dispersant application services and tier 3 oil spill response being provided by Oil Spill Response Limited.

3.6 Wastes

Waste generated fluctuates depending on the activities ongoing at sites. Figure 3.8 shows offshore waste management.

Figure 3.8 - Offshore Waste Management

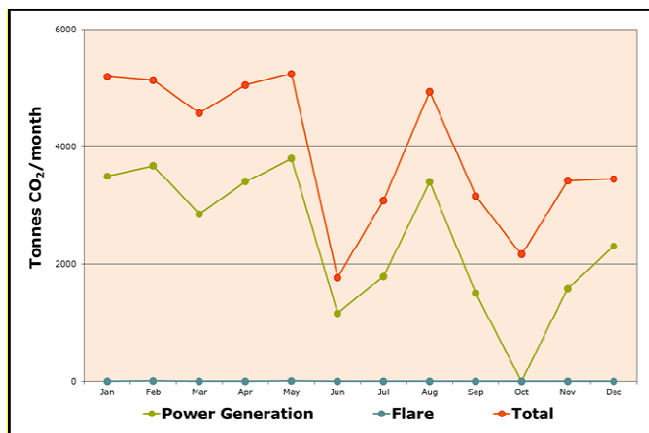


4.0 Onshore Performance

4.1 Emissions and Energy Use

CO₂ emissions mainly arise from flaring and power generation activities at POA, refer to Figure 4.1.

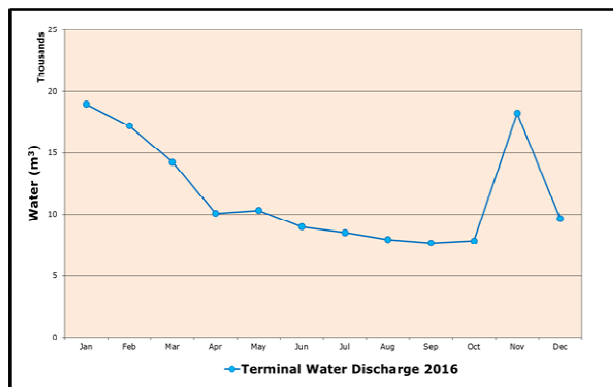
Figure 4.1 - Onshore CO₂ Emissions



4.2 Water Discharges

Water discharge from the POA Terminal site is largely dependent on rainfall, as almost all site waste water is generated by land drainage rather than from the plant processes. Water quality is monitored prior to discharge, to ensure that it meets prescribed standards. Figure 4.2 shows waste water generation during the reporting period.

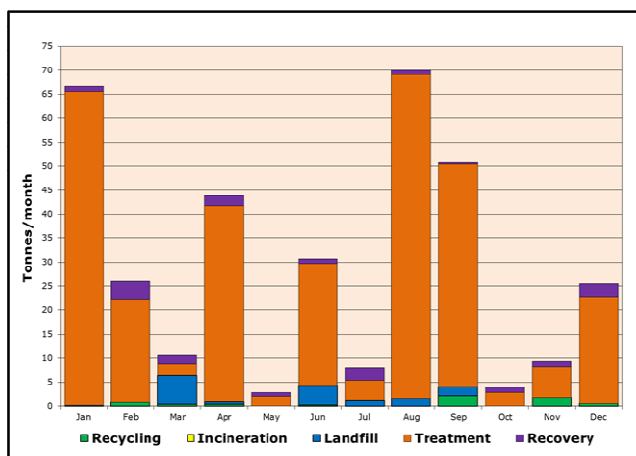
Figure 4.2 - Onshore Water Discharge



4.3 Onshore Waste

Waste generated fluctuates depending on the activities ongoing at POA site. Figure 4.3 shows onshore waste management.

Figure 4.3 - Onshore Waste Management



4.4 Onshore Land Management

Eni UK-owned land inside and outside the POA Terminal boundary continues to be managed in accordance with approved Land Management Plans as regulated by NRW. These plans form part of a legally binding Land Management Agreement between Eni UK and NRW that has been in place since 1996 when the license to operate was first granted and planning permission was obtained.



If further information is required please contact
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