U.K. Environmental Performance Review **2016**



Contents

- 1. Introduction
- 2. Achievements
- 3. Environmental Management
- 4. Sustainable Development
- 5. U.K. Operations
- 6. Environmental Aspects and Performance
- 7. Goals and Performance 2016
- 8. Objectives for 2017

CAUTIONARY STATEMENT

This report contains forward-looking statements. We based the forward-looking statements on our current expectations, estimates and projections about ourselves and the industries in which we operate in general. We caution you these statements are not guarantees of future performance as they involve assumptions that, while made in good faith, may prove to be incorrect and involve risks and uncertainties we cannot predict. In addition, we based many of these forward-looking statements on assumptions about future events that may prove to be inaccurate. Accordingly, our actual outcomes and results may differ materially from what we have expressed or forecast in the forward-looking statements. Economic, business, competitive and other regulatory factors that may affect ConocoPhillips' business are set forth in ConocoPhillips' filings with the Securities and Exchange Commission (including in Item 1A of our Form 10-K), which may be accessed at the SEC's website at www.sec.gov.

Cover Picture: The Viking B Complex: In January 2016, production ceased in the Viking fields after a 43-year field life.

1. Introduction

The purpose of this report is to provide stakeholders and the public with an overview of ConocoPhillips operations and environmental performance in the U.K. for 2016.

This report aims to:

- Describe our main assets and activities
- . Provide a brief overview of environmental management within the company
- Provide details on key environmental aspects and their impact
- Summarise the environmental performance of our U.K. business and progress against objectives for the year

ConocoPhillips

ConocoPhillips is the world's largest independent exploration and production (E&P) company based on proved reserves and production of liquids and natural gas. We explore for, produce, transport and market crude oil, bitumen, natural gas, natural gas liquids and liquefied natural gas on a worldwide basis. As of Dec. 31, 2016, we had operations and activities in 17 countries. Operations are managed through six segments, which are defined by geographic region: Alaska, Lower 48, Canada, Europe and North Africa, Asia Pacific and Middle East, and Other International.

ConocoPhillips' operating segments generally include a strong base of legacy production and an inventory of low cost of supply investment opportunities. The company also pursues focused conventional and unconventional exploration that can add to the company's low cost of supply resource over time.

ConocoPhillips has operated in Europe for more than 45 years, with significant developments in the U.K. and Norwegian sectors of the North Sea. These include the Greater Britannia, J-Area and Southern North Sea (SNS) fields in the U.K. and the Greater Ekofisk Area in Norway. The company also has some exploration activity in both Norway and the U.K.

ConocoPhillips, through its entities: ConocoPhillips (U.K.) Limited, ConocoPhillips Petroleum Company U.K. Limited, ConocoPhillips (U.K.) Britannia Limited and Burlington Resources (Irish Sea) Limited together operate as the ConocoPhillips U.K. business unit (UKBU).

Offshore in the U.K. ConocoPhillips is operator of, or has interests in, the following producing fields: Britannia, Britannia Satellites, Judy/Joanne, Jade, Jasmine, CMS, LOGGS, Saturn Unit, V-Fields, Calder, Millom, Dalton, Clair, Galleon and Nicol.

The company also has an obligation in the following decommissioning fields: Victor, Viking, Jupiter, MacCulloch, Don and Miller.

Onshore in the U.K. the company has interests in the Rivers Terminal at Barrow-in-Furness, the Teesside Oil Terminal at Seal Sands, Middlesbrough and the Theddlethorpe Gas Terminal at Mablethorpe in Lincolnshire.

At ConocoPhillips, keeping people and assets safe, and being good stewards of the environment are critical to running our business well. Our SPIRIT Values — Safety, People, Integrity, Responsibility, Innovation and Teamwork — inspire our actions, they unify our organisation and we stake our reputation on being accountable to our stakeholders, communities and each other.



2. Achievements

Some of the key accomplishments of the UKBU during 2016 were:



In our J-Area, an integrated ConocoPhillips team led a crosscompany group of Operator personnel to safely execute the fast-track and complex Southern Wye subsea tie-in project. The success of this activity was recognised with a Maximising Economic Recovery (MER)-UK Award from the Oil and Gas Authority (OGA).



The UKBU held a successful exercise to test their oil pollution emergency response procedures, with the involvement of the Secretary of State's Representative (SOSREP) for the, then, Department of Energy and Climate Change. The scenario also tested the establishment of a Marine Response Centre and invoking of the Norbrit Agreement.



Britannia processes and procedures were integrated into the UKBU Operating Management System. A revision of the ConocoPhillips Oil **Pollution Emergency Plan to** include the Greater Britannia Area was approved by the **Offshore Safety Directive (OSD) Regulator: this supported** the submission of the revised **Britannia Safety Case for review** under the requirements of OSD.

First production from the Chevron-operated Alder field was achieved through the Britannia facilities in November 2016.





ConocoPhillips deployed a mobile accommodation unit to complete a 77-day fabric maintenance campaign on the normally unmanned Millom West platform in the East Irish Sea.



Production from the Viking fields ceased in January 2016 after a 43-year field life. The main complex of Viking B achieved 'hydrocarbon gas-free' status by the end of the year.

Innovative adaptation of drilling technology enabled the Viking BD platform wells to be abandoned without requiring a Mobile Offshore Drilling Unit (MODU).



In the Southern North Sea (SNS), all the Viking B satellite platforms were transitioned to the 'cold suspension' phase in our decommissioning programme.

The gas processing module was removed from Viking B by a heavylift vessel, for dismantlement onshore: 98% of the recovered materials were recycled.

The Viking B to LOGGS pipeline was the first export pipeline in the SNS decommissioning programme to be flushed to remove residual inventory.

Decommissioning operations commenced on platforms in the LOGGS area, where a MODU was used to undertake both the well plug and abandon and the installation final clean and disconnect workscopes.

ConocoPhillips

U.K. HSE Policy

Policy Statement Commitment

ConocoPhillips (U.K.) Limited is committed to protecting the health and safety of everybody who plays a part in our operations or lives in the communities in which we operate. Wherever we operate, we will conduct our business with respect and care for both the local and global environment and will systematically manage risks to drive sustainable business growth.

We will not be satisfied until we succeed in eliminating all injuries, occupational illnesses, unsafe practices and incidents of environmental harm from our activities.

Organisation and Responsibilities

The ConocoPhillips U.K. President has overall accountability for the Health, Safety and Environmental (HSE) performance of our U.K. operations.

Health, Safety and Environmental staff with reporting lines to senior management are appointed at various locations throughout the Company. These personnel are responsible for providing advice and guidance on matters relating to the health, safety and welfare of employees and on environmental matters.

All managers and supervisors at ConocoPhillips are responsible and accountable for the health and safety of their staff by:

- Ensuring that all applicable Health, Safety and Environment legislation and codes are adhered to and that appropriate actions are ٠ taken to ensure a safe working environment.
- The active participation of all employees in the achievement of Health, Safety and Environmental objectives.
- Conducting all activities in accordance with the requirements of the Operating Management System (OMS).

Employees are responsible for ensuring they comply with relevant legislation and the OMS, to ensure prevention of harm to themselves, their colleagues and the environment.

Arrangements

To meet our Policy Statement, ConocoPhillips (U.K.) Limited will:

- Demonstrate active Health, Safety and Environmental leadership and communication of this policy. ۰
- Comply with relevant laws and regulations.
- Maintain "stop work policies" that establish the responsibility and authority for all employees and contractors to stop work they believe to be unsafe.
- Provide medical services to give advice, guidance, support and monitoring on health-related matters.
- Include environmental considerations in our business decisions and minimise the impacts of our activities on the environment.
- Implement procedures to ensure that integrity and reliability issues, which have the potential to cause an HSE impact, are properly considered at all stages in the asset life cycle.
- Ensure that all employees and contractors understand that working safely is a condition of employment, and that everyone is responsible for their own safety and for minimising environmental impacts of our operations.
- Manage all projects and processes through their life cycles in a way that protects health and safety, prevents pollution and manages wastes
- Develop safe systems of work for all potentially hazardous situations; identify and assess major accident hazards.
- Provide employees, contractors and suppliers with the training, knowledge and resources necessary to achieve our Health, Safety and Environmental commitments.
- Provide effective emergency response systems allowing onshore and offshore personnel to deal effectively with emergency situations
- Measure, audit and publicly report Health, Safety and Environmental performance and maintain open dialogue with stakeholder groups
- Promote and adhere to the ConocoPhillips Life Saving Rules.
- Work with the regulator and other stakeholders to continuously improve Health, Safety and Environmental performance.

"Nothing is so urgent or important, that we cannot take time to do it safely and in an environmentally prudent manner'

January 2017

UK-00655

As a company ConocoPhillips is committed to conducting our business with respect and care for both the local and global environment.

The ConocoPhillips U.K. Health, Safety and Environmental (HSE) Policy provides a framework for the integrated management of environmental issues related to the UKBU activities. It commits the company to comply with environmental legislation and strive for continuous improvement in environmental performance.

3.1 Environmental Management Process

The UKBU has implemented a dedicated environmental management process that is fully integrated within its Deming Cycle-based Operating Management System (OMS): the OMS provides the governance by which the company's HSE Policy is implemented throughout our operations.

The environmental management process has been designed to meet the requirements of the corporate and global HSE Management System Standard, utilising the requirements and principles contained in the internationally recognised environmental management systems standard ISO 14001:2004.



3. Environmental Management

3.2 Environmental Management System Certification

Our Environmental Management System (EMS) applies to all activities onshore and offshore carried out by the UKBU and is certified to the ISO 14001:2004 standard. In March 2016, an auditor from an accredited, independent certification body, approved merging the ConocoPhillips UKBU EMS and Britannia Operator EMS into a single UKBU certification: there were no 'open' non-conformities prior to the audit and no new non-conformities were raised.

In 2016, we conducted a desktop review of UKBU documentation against the requirements of the ISO 14001:2015 standard. The findings of this review have been developed into a change management plan, which is being used to progress our EMS to meet the requirements of the revised standard by our next certification renewal in 2018.

4. Sustainable Development

For ConocoPhillips, Sustainable Development is about conducting our business to promote economic growth, a healthy environment and vibrant communities, now and into the future.

Our sustainable development approach integrates principles, commitments, positions, action plans, performance indicators, engagement results and reporting. Our 10 energy principles also describe how we protect and respect people and the environment. Each of our various businesses are responsible for integrating sustainability issues into day-to-day operations, project development and decision-making, and are held accountable for doing so. In 2016, we made strong progress on our multiyear action plans for climate change, water, biodiversity and stakeholder issues. Our objective is to prepare the company to succeed in a world challenged by complex environmental, social and economic issues and increasing stakeholder expectations.

Further information is available in the ConocoPhillips Sustainability Report: www.conocophillips.com/sustainability

4.1 Viking and LOGGS Area Decommissioning

Marine Protected Areas (MPA) are a key part of the European biodiversity strategy; their purpose is to protect and conserve species, habitats, ecosystems or ecological processes of the marine environment and to strike a balance between this and economic activity to ensure the sustainable use of marine resources.

The UKBU is working to address the challenge of decommissioning the infrastructure associated with the Viking and LOGGS offshore gas production and export facilities, installed in the Southern North Sea (SNS) more than 30 years ago. Since that time, the offshore location where the Viking and the LOGGS infrastructure are situated has been designated as an offshore MPA. The 'North Norfolk Sandbanks and Saturn Reef Site of Community Importance (SCI)' is the most extensive example of the sandbank habitat type in U.K. waters, supporting communities of invertebrates typical of sandy sediments; areas of biogenic reef are also present in the form of large accumulations of sand-tubes made by Sabellaria spinulosa (a polychaete worm).



The seabed around the LOGGS platform, showing Sand Ripples and a Brittle Star.

The UKBU has applied the principles of the ConocoPhillips Biodiversity Position and Stakeholder

To understand the environmental and social impacts of our decommissioning options, we have undertaken the following seabed surveys and technical studies in 2016.

- Final reports were issued for the baseline environment surveys and habitat assessments, conducted in 2015 across the LOGGS and CMS areas. The information will be used to establish an environmental baseline for environmental impact assessment.
- Materials inventories of the LOGGS and CMS infrastructure have been completed and these will inform both the safe-handling during deconstruction workscopes and waste management decisions.
- Pipeline burial and stabilisation studies of the LOGGS and CMS transportation systems have beer commissioned, to understand the potential risks posed to other sea users.
- A fisheries baseline and impact study was commissioned to assess the impact of UKBU decommissioning activities in the LOGGS and CMS areas on the fishing industry.

Working in a designated MPA has influenced the design of UKBU Decommissioning Programmes, promoting opportunities to reduce the environmental impact of our activities. These include:

- Adoption of the practice of internal cutting of platfor jackets and piles, which limits the excavation of the seabed required to position the cutting tool;
- Downhole reinjection or onshore containment and • recovery of pipeline flushing contents, wherever practicable, to minimise discharges to sea;
- Combining of well operations and clean and disconnect workscopes to minimise the number of vessels required to jack-down on the seabed at each location in the programme;
- Adaptation of drilling techniques and equipment to allow platform wells to be abandoned without the use of a mobile offshore drilling unit (MODU), reducing disturbance of the seabed from both the jackingdown of a MODU and from the need to excavate infield pipelines to allow a MODU full access to the platform well bay area.

Engagement practices to guide their approach to the Southern North Sea (SNS) decommissioning strategy.

tal I	The U.K. Government Department for Business Energy and Industrial Strategy (BEIS) must determine the implications of a proposed offshore Decommissioning Programme for the conservation objectives of a MPA and whether there is the likelihood of significant environmental impact occurring, either from an individual programme or in combination with other plans or projects proposed in the area. The decision-making procedure applied by the regulator to make this determination is known as a Habitats Regulations Assessment (HRA).
n	Following comprehensive risk assessment, our preferred option for the decommissioning of infield pipelines located within a MPA is to flush the pipelines to remove
n	the inventory and then leave them on the seabed with minimum intervention. The efficacy of this approach over time would be demonstrated by post-decommissioning monitoring surveys. The UKBU has developed a decommissioning activity matrix that identifies all activities proposed to be undertaken within the marine protected
	habitat, it also quantifies their potential area of impact. This assists BEIS in understanding the cumulative impacts to the MPA. The activity matrix is a living document that will be updated as plans and engineering solutions mature and detailed methodologies are defined, which, in turn, may require re-evaluation of the HRA.
rm	In September 2016, approval was granted by BEIS for the first Decommissioning Programme submitted to them by the UKBU (VDP1). This approval was for the abandonment of five Viking field Satellite installations (CD, DD, ED, GD and HD) only; the Decommissioning Programme for the infield pipelines associated with these platforms has now been presented in a separate case, termed VDP1b. The approval of VDP1b is subject to BEIS completing a strategic HRA of the proposed decommissioning activities within the North Norfolk Sandbanks and Saturn Reef SCI. We anticipate a decision from BEIS on VDP1b in 2017, and this will facilitate
	the UKBU in the planning of subsequent Decommissioning

Programmes in the SNS area.

4.2 The St Andrews Prize for the Environment

The St Andrews Prize for the Environment was set up by the University of St Andrews and ConocoPhillips in 1998. The Prize rewards innovative, practical solutions to environmental problems, which can be replicated in different regions of the world, taking account of their social and economic implications. Each year it attracts multiple entries on wide-ranging topics including: sustainable development, urban regeneration, waste and recycling, water, biodiversity, environmental health and sanitation issues, renewable energy, wildlife conservation, reducing human with animal conflict, food supply, and land use and maintenance.

www.thestandrewsprize.com

The St Andrews Prize for the Environment winner in 2016 was:

Liter of Light Brazil – Ecologically Sustainable Lighting A project that empowers disadvantaged communities without electricity by teaching local people electrical skills that enable them to make sustainable light sources using basic equipment. The DIY system provides light to homes, schools and public centres for less than two U.S. Dollars per unit.

The runners-up in 2016 were:

SPOUTS of Water – Ceramic Water Filters in East Africa SPOUTS of Water provides clean drinking water to people in East Africa by manufacturing and distributing affordable ceramic water filters as an alternative to boiling water. The project installs filters in schools, prisons, refugee camps, police and army barracks and other public places. SPOUTS of Water aim to create a profitable product that provides a sustainable solution to the clean water crisis.

Mamirauá Institute – Bringing Back an Amazon Giant

The Mamirauá Institute's Fishing Management Programme is focused on increasing the population of an endangered species of fish called Giant Arapaima. The project helps to improve the prospects of isolated riverine communities in the Amazon, where fishing is essential to the local people's survival and income.



5. U.K. Operations



ConocoPhillips UKBU Average Daily Net Production - 2016

Area	Interest	Operator	Crude Oil (thousand barrels per day)	NGL (thousand barrels per day)	Natural Gas (million cubic feet per day)	Total (thousand barrels of oil equivalent per day)
Britannia	58.7 %	ConocoPhillips	3	1	77	17
Britannia Satellites	26.3 %-83.5 %	ConocoPhillips ¹	11	11	72	24
J-Area	32.5%-36.5%	ConocoPhillips	8	2	60	20
Southern North Sea	Various	ConocoPhillips			49	8
East Irish Sea	100%	HRL		<u> </u>	42	7
Other	Various	Various	5		5	6
U.K. Total			27	4 —	-305	82

¹ Includes Chevron operated Alder field.

13

5.1 J-Area

Judy/Joanne

Commercial oil production and gas sales from the J-Area's Judy/Joanne fields began in 1997. The Judy platform and bridge-linked Judy riser platform (JRP) are in Block 30/07a of the Central North Sea, approximately 260 kilometres south-east of Aberdeen. Joanne is a single subsea manifold tied back to the Judy platform. The Judy facilities provide full processing and conditioning of gas and condensate from the Judy, Joanne, Jade and Jasmine fields.

Gas processed on the Judy platform is transported through the Central Area Transmission System (CATS) pipeline, and liquids are transported to Teesside through the Norpipe system.

Jade

The Jade field came on stream in 2002 and consists of a normally unmanned platform tied back to Judy.

Jasmine

The Jasmine development lies approximately 8.5 kilometres west of the Judy production facility. It comprises a Jasmine Wellhead Platform (JWHP) and an accommodation and utility platform bridge-linked to the JWHP and a multiphase pipeline from the JWHP to the JRP. The Jasmine field began production in 2013.



The COSL Rival mobile accommodation unit, with an average number of 220 people on board, was stationed at the Judy platform from April and remained on location until the first quarter of 2017. It supported a comprehensive campaign of fabric maintenance, asset integrity and project workscopes, which included: modifications to the two Judy gas export compressors to optimise J-Area production efficiency; and the modification of the Judy fuel gas meter to increase the accuracy of flow measurement to the highest monitoring tier specified by Phase III of the EU Emissions Trading System.

In 2016, all safety cases for the J-Area platforms were transitioned to and accepted under the requirements of the Safety Case Regulations 2015. This required an assessment of whether the major accident hazard scenarios identified could cause 'environmental damage' to aid in the identification of Safety and Environmentally Critical Elements.

5.1 J-Area continued

Southern Wye Project

The Southern Wye is a subsea pipeline connecting structure associated with the Judy oil export pipeline. The Judy pipeline runs for a further 28 kilometres from the Southern Wye before it joins the main Norpipe oil export pipeline, which in turn runs 305 kilometres to the ConocoPhillipsoperated Teesside Oil Terminal.

During planning for decommissioning of the Maerskoperated Janice field, an opportunity was identified to disconnect the Janice pipeline from the Southern Wye and to simultaneously prepare the facilities for the future connection of the Ithaca-operated Stella field. This would allow the Stella facilities to switch from tanker loading to pipeline offtake for their oil exports. The engineering approach taken was to depressurise the entire Norpipe system and conduct all offshore operations during the 18-day window for the planned summer maintenance period of the Norpipe system and the fields that tie into it. Between March and June 2016, a Cross-Company Steering Committee staffed by experienced senior personnel from each of the operators supported by an experienced multidisciplinary group, followed a Project Execution Plan drafted by ConocoPhillips and agreed amongst all operators. The Plan was clear and thorough, describing roles and responsibilities for the seven individual phases of the project. Oil pollution emergency planning was central to the plan and onshore readiness reviews and desktop exercises were undertaken prior to starting the workscope.

The safe execution of the Southern Wye Project demonstrated that collaboration on a regional scale can maximise economic recovery (MER) for the UK, which was recognised with an MER UK Award from the Oil and Gas Authority (OGA) at the annual Oil and Gas UK Awards in 2016.

5.2 Greater Britannia Area

Britannia

Britannia is one of the largest natural gas and condensate fields in the North Sea. It lies approximately 210 kilometres north-east of Aberdeen, primarily in Block 16/26 in the Central North Sea. The Britannia field is produced through the Britannia platform and a subsea centre located to the west. The Britannia Bridge Linked platform (BLP) is connected to the Britannia platform by a 92-metre bridge. It receives gas condensate and oil from the Britannia Satellite fields, which are passed through to the Britannia platform for further processing, compression and export.

Condensate is delivered through the Forties Pipeline to the oil stabilisation and processing plant, Kerse of Kinneil, near the Grangemouth Refinery in Scotland, and natural gas is transported through a dedicated Britannia pipeline to the Scottish Area Gas Evacuation (SAGE) facility at St. Fergus, in Scotland. A fabric maintenance campaign on the Britannia facilities continued throughout the first quarter of 2016, supported by the *COSL Rival* mobile accommodation unit, which was on location until March.

Following the successful integration of the Britannia Operator Limited organisation into the ConocoPhillips organisation, the Britannia facilities have been managed through the entity ConocoPhillips (U.K.) Britannia Limited since November 2015. This is the first year that Britannia environmental data is presented within the ConocoPhillips U.K. Environmental Performance Review.

Britannia Satellites – Brodgar, Callanish and Enochdhu

The Brodgar field is located in Block 21/3 and the Callanish field in Blocks 15/29b and 21/4a. Production from both fields started in 2008. The fields produce via subsea manifolds and pipelines linked to the Britannia facilities. A third Brodgar well was completed and brought on stream in 2015.

Enochdhu is a single well tie-back to Callanish located in Block 21/5a, approximately 8 kilometres southeast of the Callanish subsea manifold. First production from the Enochdhu field was achieved in 2015. Enochdhu production fluids are commingled with Callanish fluids and flow to the Britannia BLP via the existing Callanish facilities.

Alder

Alder is a high-pressure, high-temperature gas condensate reservoir located in in Block 15/29a, 27 kilometres west of the Britannia facilities. The Alder development comprises a single subsea well tied back to the Britannia BLP. It is remotely operated by ConocoPhillips on behalf of Chevron. Following the installation of the Alder topsides module on the Britannia platform facilities in 2015, construction, hook-up and commissioning was completed in 2016. First production from the Alder field through the Britannia facilities was achieved in November 2016.





5.3 East Irish Sea

ConocoPhillips' interests in the East Irish Sea include the Rivers Terminal at Barrow-in-Furness and six gas fields: Millom, Dalton, Calder, Darwen, Crossens and Asland. ConocoPhillips' assets in the East Irish Sea are operated by Hydrocarbon Resources Limited (a subsidiary of Centrica Plc). Environmental data is reported under the public statement for Centrica Energy.

Calder produces sour gas. It was developed with an unmanned platform and three development wells feeding to a producing platform and then through a pipeline to the Rivers Terminal. Options for developing the additional sour gas fields of Darwen, Crossens and Asland will be considered once the Calder Field begins to decline.

5.4 Southern North Sea

ConocoPhillips has various interests in producing gas fields in the Rotliegendes and Carboniferous areas of the Southern North Sea (SNS).

CMS

The Caister Murdoch System (CMS) in the SNS consists of the Murdoch complex, the Caister satellite platform and the gas trunk line to the Theddlethorpe Gas Terminal. CMS acts as a hub for Caister, Boulton, CMS III, Katy, Kelvin, Munro and the Murdoch Fields as well as providing third-party transportation. The Caister Field ceased production in 2016.

LOGGS

The Lincolnshire Offshore Gas Gathering System (LOGGS) complex started operating in 1988. This facility in the SNS receives natural gas from the V-fields (North Valiant, South Valiant, Vanguard and Vulcan), the Saturn Unit (Saturn, Mimas and Tethys), as well as third-party fields. The gas is then forwarded on to the Theddlethorpe Gas Terminal via pipeline.

Sweet natural gas from the Millom and Dalton fields is produced through a platform and two subsea manifolds. The natural gas is fed through to the Morecambe Bay North Terminal via the North Morecambe platform.

The Rivers Terminal processes sour gas from the Calder Field, providing compression and removing hydrogen sulphide before piping the sweetened gas to the thirdparty North Morecambe Terminal for further processing, including nitrogen removal.

Between August and October 2016, a 77-day fabric maintenance campaign was carried out on the normally unmanned Millom West platform using the Seajacks Hydra mobile accommodation unit. The completion of this workscope allows for the continued safe operation of Millom West through to 2020.

Vikina

In January 2016, production from the Viking fields ceased after a 43-year field life. Gas was first discovered in the Viking A reservoir in 1965 and production commenced in July 1972. A total of 24 exploration and appraisal wells and 58 development wells were drilled in the Viking fields, which produced 3.26 trillion cubic feet of gas over 43 years. At its peak in 1977, Viking contributed 10% of the total U.K. gas production.

Theddlethorpe Gas Terminal

Located in Lincolnshire, the Theddlethorpe Gas Terminal (TGT) receives and processes natural gas produced through the LOGGS and CMS systems, as well as natural gas produced through the third-party operated Pickerill and Saltfleetby systems.

5.5 Decommissioning

MacCulloch

The MacCulloch field ceased production in 2015. The field is located in Block 15/24b. The wells were tied back via two subsea drilling centres to a floating production, storage and offloading (FPSO) vessel, which was removed from location during the first phase of MacCulloch field decommissioning also completed in 2015.

The MacCulloch production wells remained suspended throughout 2016, whilst planning for a MacCulloch wells abandonment campaign was progressed. The two MacCulloch drill centres both have statutory 500 metre exclusion zones around them that provide protection from over-trawling by fishing vessels in the vicinity. A guard vessel was also stationed in the field to warn fishing vessels of snag hazards and to provide an oil spill monitoring and response capability.

SNS Decommissioning Operations

The SNS decommissioning 'final clean and disconnect' workscope has been developed by the UKBU to reduce the requirements for re-boarding satellite installations until the platform removal phase. It comprises purging the platform topsides and flushing and cleaning the infield pipelines: a state termed 'cold suspension' in which there are no hydrocarbons present and the facility is ready for removal from the field. This workscope includes the removal of diesel fuel tanks and power generation facilities, giving rise to the need for alternative aids to navigation to signal the presence of the suspended platforms to other users of the sea. Self-contained solar powered packages have been deployed, consisting of a main and standby navigation light, fog-horn and battery pack placed on the installation in an unobscured position prior to departure.

All eight Viking B satellite platforms were transitioned to the cold suspension phase in 2016. A diving campaign undertook the cutting of the infield pipelines associated with the five Viking satellite platforms in the VDP1 Decommissioning Programme (CD, DD, ED, GD and HD). This disconnected the pipelines from the platforms, making these platforms ready to be removed from the field and transported to shore for dismantlement (planned for 2018). The *GMS Endurance* accommodation work vessel (AWV) was moved between platforms to provide accommodation facilities for the team undertaking the final clean and disconnect workscopes for the Viking Decommissioning Programme. The AWV was located at the Viking HD, DD, CD, ED, LD and KD platforms. At three of these locations, placement of stabilisation material (in the form of rock/ gravel) was required to position the AWV safely on the seabed. The AWV was also deployed to the Caister CM and Viking AR platform locations before going off hire to ConocoPhillips in early 2017.

From June 2016, 'single vessel operations' were evaluated by using the *Ensco 92* drilling rig to accommodate both the well abandonment programme and the final clean and disconnect scope at the Victor JD Platform. The *Ensco 92* went on to complete a further single vessel operations programme at the Europa EZ platform (a LOGGS satellite). The successful outcome of this approach has introduced additional efficiencies to the time taken to complete our decommissioning programmes and has also reduced our impact on the seabed in the marine protected area in which our activities are taking place.

Workscopes were also focused on the transition of the main Viking B complex and remaining Viking AR platform to cold suspension. In July, the first heavy lift of our decommissioning operations took place. The gas processing module (approximate weight, 700 tonnes) was removed from Viking BD by a heavy lift vessel and then transferred to a barge for transport to a specialist U.K. shore-based facility for dismantlement and recovery of the waste generated. The removal of this module was essential to allow access to the well bay area on the Viking BD platform to enable to the abandonment of the wells.



5.5 Decommissioning continued

The original gas export was routed directly from the Viking B complex to the Theddlethorpe Gas Terminal (TGT) via Viking AR. Separate pipelines to supply methanol from TGT to Viking B were laid alongside the gas export line. The Viking A complex was decommissioned in 1996; however, the Viking AR platform was left in place as it formed an integral part of the Viking Transportation System (VTS). This export pipeline was taken out of service in 2009 following the installation of a new VTS export pipeline running from Viking BP to LOGGS, where Viking gas was comingled with LOGGS gas and exported on to TGT.

In June 2016, the 'new' VTS pipelines were the first export lines of the SNS Decommissioning Programme to be flushed; fluids were pumped from LOGGS to Viking BP and reinjected into a Viking reinjection well. Pipeline flushing of the original VTS pipelines commenced in November 2016, using a combination of pipeline pigs and cleaning

chemicals to form pigging trains propelled by nitrogen and seawater. Fluids were pumped from Viking BP to Viking AR (11 kilometres) and onwards to TGT (a further 138 kilometres). Plans were in place at TGT to manage the large volume of fluids arriving on site, these included holding tanks to control the feed stream into the TGT process, water filtration packages, and road tankers arranged to transport surplus methanol for offsite treatment and disposal. The hydrocarbon degassing of the gas export pipeline was completed at the end of December and Viking B was declared hydrocarbon gas-free. Due to problems encountered when flushing the methanol supply pipelines, the flushing programme was revised and work on the original VTS pipelines was not completed until February 2017.

5.6 Well Operations

The SNS well abandonment programme with the Ensco 92 jack-up drilling rig continued throughout the year. Over 20 wells were abandoned in the LOGGS and Viking fields during 2016, including platform wells at Vulcan UR, Victor JD, and Europa EZ and a subsea well at Vixen VM. A well consent must be issued to allow well abandonments to be undertaken and for the rig to move to the next location in the schedule: each well consent is supported by a suite of environmental applications for a chemical permit; oil discharge permit; marine licence; and consent to locate the rig.

The UKBU Well Operations team developed a method to abandon wells without requiring a mobile offshore drilling unit (MODU), which was proved on the Viking B complex in 2016. There were nine wells located on the Viking BD platform: downhole abandonment barriers were set in three of the wells using a combination of coiled tubing, wireline and through-tubing abandonments.



Schematic of the Viking Transportation System.



Well abandonment activity on the Viking B complex.



the casings and conductors on all nine well slots. By applying new technology and adapting existing technology this technique has provided an alternative option for well abandonment on main processing platform complexes, where there is sufficient space to accommodate the equipment required. In addition, defining a direction of approach for a MODU to gain full access to the well slots would have required the excavation of infield pipelines to allow the MODU to locate safely on the seabed at Viking BD.

A casing jacking unit was then brought on board to recover

5.6 Well Operations continued

Drilling operations on the Temple Wood exploration well 15/29c-16 commenced in October 2016 with the Transocean-operated *Sedco 712* semi-submersible drilling rig. The licence was a 100% ConocoPhillips interest. Drilling operations continued into 2017, when the well was subsequently expensed as "dry hole".

5.7 Business Development

ConocoPhillips was awarded a new licence in 2016 from an Out of Round opportunity for acreage in the Central North Sea.

Licence	Interest	Operator	Recent Activity
P1773 (15/30c)	100%	ConocoPhillips	2016 Out of Round licensing award



6. Environmental Aspects and Performance

6.1 Atmospheric Emissions

The main combustion processes giving rise to atmospheric emissions that are undertaken at our facilities in the U.K. are the generation of electrical power, the compression of gas and the pumping of oil for transportation along export pipelines to the shore. A small amount of reservoir gas provides the primary fuel source with diesel used as a back-up. Emissions from well operations are primarily from running diesel-driven engines used for power generation by rigs. Flaring and venting are used to safely dispose of excess produced gas released as a result of pressure control within the process system during oil and gas production and during unplanned events. Flaring and venting is restricted to the minimum required for the safe operation of the installations; flaring is also used to remove hydrocarbons produced during well testing and clean-up following drilling.

Atmospheric pollution is implicated as one of the causes of global warming, ozone depletion and acid deposition in soil and water. As atmospheric pollutants can be carried long distances to an area where they may have an adverse effect, it is not possible to distinguish the precise origin and contribution of any individual emission source.

Greenhouse Gas Emissions

The European Union Greenhouse Gas Emissions Trading System (EU ETS) governs all Carbon Dioxide (CO₂) emissions from qualifying facilities. The third trading period (EU ETS Phase III) runs from 2013 to 2020 and is designed to deliver greater emissions reductions; it includes a centralised, EUwide cap on emissions, which declines annually with the aim of delivering an overall 21% reduction of Greenhouse Gas (GHG) emissions by 2020 (compared to a 2005 baseline).

The Paris Agreement was adopted at the United Nations Climate Change Conference (COP-21) in December 2015: this set a new global emissions reduction framework starting from 2020. IPIECA, the global oil and gas industry association for environmental and social issues, developed the Paris Puzzle in light of the new global agreement, describing the challenges and responses needed by the oil and natural gas industry to meet future energy needs whilst also reducing emissions to address the risks of climate change. IPIECA has continued to explore the common elements and critical enablers of a transition to a low emissions future.

http://www.ipieca.org/our-work/climate-energy/apathway-to-a-low-emissions-future/

As part of the EU ETS, our UKBU offshore installations and onshore terminals with a total rated thermal input exceeding 20 mega Watts hold GHG emissions permits, which authorises them to emit CO₂ from the combustion of fuels. Permit holders are subject to a number of conditions, including the monitoring and reporting of such emissions, the surrender of allowances and notification requirements.

The calculation of the amount of CO₂ emissions made in the previous year must be verified by an external, accredited verifier. All qualifying UKBU facilities completed the 2016 EU ETS verification process and reported their verified CO₂ emissions within the required timeframe. The Britannia and Judy platforms emitted the greatest amount of CO₂. This is due to their safety flaring requirements and their greater compression capacity compared with the Southern North Sea facilities. The GHG emissions permit for Viking B was surrendered following the cessation of production in January: the 3,600 tonnes of CO₂ emissions attributed to Viking in 2016 are calculated from fuel gas and diesel consumption up until the main platform power generators were removed from service in February.

Atmospheric emissions from satellite platforms, decommissioning and rig-based activities are not reportable under EU ETS but are included in ConocoPhillips' company environmental metrics reporting and are shown here as 'Other CO, emissions'.



In 2016, the ConocoPhillips UKBU emitted 901,500 tonnes of CO₂ from its operations.

CO₂ Emissions from ConocoPhillips UKBU Locations 2016



6.1 Atmospheric Emissions continued

Methane is the main component of natural gas. The majority of the methane that is released to the atmosphere from our UKBU operations is through venting, which is the controlled release of uncombusted gas, with smaller amounts released due to the incomplete combustion during flaring, power generation and compression.

Most attention surrounding climate change has focused on CO₂ emissions, although there is growing interest in the role of methane and other short-lived GHG. Despite its short lifetime in the atmosphere (approximately 12 years), methane has a global warming potential 25 times greater than that of CO₂ on a 100-year timescale.

Although relatively small amounts of Nitrous Oxide are released, it is the third most significant GHG emission in the U.K and it has a global warming potential 298 times greater than that of CO₂.

Methane and Nitrous Oxide Emissions from ConocoPhillips UKBU Locations 2016

1.600 1.200 800 400 TGT LOGGS VIKING MURDOCH JUDY BRITANNIA WELL OPERATIONS SNS DECOM Methan Nitrous Oxide



The amount of methane released from ConocoPhillips **UKBU locations in 2016** ranged from 1 to 1,280 tonnes.

A total of 69 tonnes of nitrous oxide was released from all of the UKBU locations combined.

Other Atmospheric Emissions

The Offshore Combustion Installations (Pollution Prevention Nitrogen oxides (NOx) are produced by chemical reactions and Control) Regulations 2013 (PPC) regulate atmospheric between oxygen and nitrogen present in air during emissions (with the exception of CO₂) from offshore oil combustion, and are generated in the gas compression and gas facilities that have combustion equipment with a and power generation turbines as well as smaller diesel combined thermal capacity that exceeds 50 mega Watts. engines. NOx includes NO and NO₂, note that Nitrous Oxide The Judy, Britannia, LOGGS and Murdoch platforms each (N₂O) is considered separately. NOx contributes to acid hold a PPC permit that specifies maximum annual amounts of emissions of the gases: nitrogen oxides; sulphur oxides; organic compounds in the presence of sunlight forming a carbon monoxide; methane; and non-methane volatile photochemical smog. organic compounds. The quantity of gases emitted to air are calculated based on fuel consumption and composition ConocoPhillips was the first operator in the U.K. offshore sector to install a low NOx emissions gas turbine (on the data and industry-agreed emission factors. The emissions Murdoch platform) and also utilises this technology at the generated from the combustion of fuels at our UKBU facilities, reported in 2016, were within the maximum permitted limits Theddlethorpe Gas Terminal (TGT), on the Judy Riser Platform for each asset. The Viking PPC Permit was surrendered as, and on the Britannia Long Term Compression (LTC) facility. from February 2016, the facility no longer operated any The amount of NOx emitted in 2016 from our UKBU offshore PPC-qualifying combustion equipment.

locations ranged from 61 to 1,300 tonnes, with the amount Industrial or business facilities (including offshore oil and gas depending on turbine type, fuel type and individual installations and onshore terminals) must report pollutant operating profile. The greatest contribution to our NOx releases to the air which exceed 10 kg per annum, to the emissions was from the Britannia platform, which, in addition UK and EU Pollutant Release and Transfer Registers (PRTR). to running two gas export compressors, operates a booster A PRTR is a national or regional environmental inventory of compressor for the LTC facility. There was a reduction in the potentially hazardous chemical substances or pollutants NOx emissions from the Judy platform, compared to 2015, released to each environmental medium (air, water, soil) or which was due to operating on a single compressor from May transferred off-site for waste management. onwards while work on compressor optimisation progressed.

Nitrogen Oxides Emissions from ConocoPhillips UKBU Locations 2016



deposition and also affects air quality by reacting with volatile

6.2 Discharges to Sea

Oil Discharges

The Offshore Petroleum Activities (Oil Pollution Prevention and Control) Regulations 2005 (as amended) (OPPC) regulate oil discharges to sea via a permit system.

Water from oil and gas reservoirs (more commonly called produced water) is one of the largest sources of discharges to sea from the offshore oil and gas industry; the UKBU produces only a small percentage of the total produced water generated by the industry. Although there are treatment systems in place offshore to separate oil from the produced water, the discharge still has some residual oil content. Water separated from process fluids derived from the Britannia and Alder fields is treated and discharged from a discharge point on the Britannia platform, whereas water derived from processing the fluids from the Britannia Satellite fields is treated and discharged from the Britannia Bridge linked platform (BLP). In accordance with the requirements of the Britannia OPPC permit, these two discharge points are monitored and reported separately.

There were three occasions on Judy and two on Britannia in 2016, during disturbed process conditions, where the concentration of oil in the produced water discharges measured more than the 100 milligrammes of oil per litre of water (mg/l) OPPC permit limit. Throughout 2016, all UKBU produced water discharges maintained OPPC compliance with respect to the OPPC maximum monthly average concentration of 30 mg/l. Non-compliances with the platform OPPC permits were notified to the Department for Business, Energy and Industrial Strategy (BEIS). Produced fluids from our Southern North Sea (SNS) offshore facilities flow to Theddlethorpe Gas Terminal (TGT) with the export gas. There is no offshore discharge of produced water from these locations.

The oil concentration in drainage discharges from offshore facilities is also regulated under OPPC. The Britannia, Judy, Jade, Jasmine and LOGGS platforms all have OPPC permits for their drainage discharges. The LOGGS OPPC permit also contains a schedule to allow periodic discharges to sea of sand and scale with entrained condensate: in 2016, 106 kilogrammes of hydrocarbons were discharged to sea from LOGGS.

Short-duration (term) OPPC permits were in place to support pipeline flushing and cleaning operations for decommissioning operations in the SNS.



The annual average concentration of oil discharged with produced water in 2016, from each UKBU permitted discharge point was:

Britannia	15.9 mg/l
Britannia BLP	21.2 mg/l
Judy	14.3 mg/l

Oil in Produced Water Discharges 2016







Cumulative Mass of Oil Discharged (te)

Judy

Britannia BLP

Chemical Use and Discharge from **ConocoPhillips UKBU Facilities in 2016**

Chemical Discharges

Chemicals used for offshore oil and gas operations are regulated under the Offshore Chemicals Regulations 2002 (as amended) - a key objective of these regulations is to minimise discharges to the marine environment and 'identify chemicals that might be considered hazardous and to ensure wherever possible their substitution by less hazardous or non-hazardous chemicals'.

A substitution warning is assigned to an offshore chemical if a component appears on the OSPAR prescribed lists for priority action, or if the component fails to meet set criteria with respect to persistence, bioaccumulation potential or toxicity (PBT). The U.K. National Plan for the prioritisation of phaseout of substances identified as candidates for substitution is based on three criteria:

- Perceived difficulty of phase-out
- Securing the replacement of candidates for • substitution, in preference to eliminating operational discharges to the marine environment
- The PBT properties of the chemical •

Each production platform within the UKBU that holds a chemical permit has a Chemical Substitution Plan that monitors where chemicals that carry a substitution warning are being used, justifies why these chemicals are required in the operation and identifies opportunities for their replacement with less hazardous alternatives. Typical production chemicals include; hydrate inhibitors, corrosion inhibitors, biocides, de-oilers and utility chemicals such as turbine wash and deck-cleaning agents.

For J-Area and Britannia, methanol, ethylene glycol, corrosion inhibitor, wax inhibitor, scale inhibitor, demulsifier and deoiler are used in the largest quantities. Britannia also requires water-based hydraulic fluid to supply its subsea satellite facilities. For SNS installations methanol, corrosion inhibitor and water-based hydraulic fluid make up most offshore chemical use, whereas the discharge comprises deck and turbine-wash chemicals and hydraulic fluid.

Short-duration chemical permits were in place in 2016 to support well operations, pipeline operations and SNS decommissioning activities.

Well operations represent the largest chemical use and discharge within the ConocoPhillips UKBU, which comprises drilling mud, cement, completion and additive chemicals. The data presented includes chemical requirements for the Temple Wood exploration well to the end of December 2016.

The chemicals used for pipeline flushing for SNS decommissioning are presented under the chart for 'Decommissioning': chemicals varied dependent upon whether the original function of the pipeline was to transport hydrocarbons or to supply methanol or hydraulic fluid, the programmes typically used cleaning chemicals and ethylene glycol or methanol diluted in seawater. Discharges were minimised by using downhole reinjection or containment for onshore treatment and disposal wherever practicable.



Of the chemicals used offshore by the ConocoPhillips UKBU in 2016, 58% were discharged to sea, 1.9% of which carried a substitution warning.



Amount of chemicals used

Amount of chemicals discharged

Amount within total that carry a substitution warning



In 2016, 77% of ConocoPhillips UKBU waste generated offshore was recycled.

6.3 Waste

Directive waste is the term applied to waste types included in the scope of the EU revised Waste Framework Directive (WFD, Directive 2008/98/EC) and is divided into two main categories: non-hazardous and hazardous waste, the latter being determined by whether the waste has one or more of the fifteen specified hazardous properties listed in Annex III to the WFD, using the methodology set out in the List of Wastes Decision (LoWD, 2000/532/EC).

In addition to the requirement to record and report all waste transfers to the Department for Business, Energy and Industrial Strategy (BEIS), offshore oil and gas installations must report transfers of hazardous chemical substances for the purposes of off-site waste management, which exceed 1 kg per annum, to the UK and EU PRTR.

Our offshore activities inevitably generate waste materials. Non-hazardous wastes include packaging, galley and accommodation wastes, scrap metal and wood. Examples of hazardous waste include, bulk liquid wastes from mobile accommodation or drilling units on hire, process sludges, oily rags, used chemicals, paint, batteries, fluorescent light tubes and electrical and electronic equipment. The UKBU ensures that waste is managed and disposed of responsibly and in accordance with statutory obligations: offshore and onshore facilities work with waste management contractor companies to reduce waste, and to recycle and reuse items wherever possible.

A total of 4,900 tonnes of waste was generated in 2016 from our UKBU offshore operations. Waste generated from well operations includes the domestic and operational wastes from two drilling rigs: the *Ensco 92* throughout the year and the *Sedco 712* from October to December. The waste produced by the *COSL Rival* mobile accommodation unit and the associated additional personnel on board is included with the J-Area and Britannia data in the graph below.

Waste attributed to decommissioning is that generated from dismantlement of platforms in the decommissioning offshore workscopes and the waste produced by the *GMS Endurance* accommodation work vessel when supporting some of these activities.

The gas processing module removed from Viking BD was handled at a specialist onshore facility permitted to receive and dismantle large marine structures. Of the 700 tonnes of material received, 98% was recovered for reuse or recycling.



Waste Disposed from ConocoPhillips UKBU Locations in 2016

33



6.4 Spills to the Sea

Non-permitted releases of oil or chemicals to the sea are reported using a Petroleum Operations Notice 1 (PON1), which is submitted via the Department for Business Energy and Industrial Strategy (BEIS) UK Oil Portal; the PON1 provides details of the spill and actions taken to prevent reoccurrence. All spills to sea are reported and investigated, regardless of size.

There were 35 spills from our UKBU offshore operations in 2016, 24 of which were spills of oil and 11 of which were spills of chemicals.

Oil Spills to the Sea from **ConocoPhillips UKBU Facilities in 2016**

Oil Spills

In October 2016, during the well abandonment campaign on the Viking B complex, two separate events led to the loss of 0.41 tonnes of hydraulic oil in total from a submersible pump system on hire for the workscope. A further loss of 0.06 tonnes of hydraulic oil occurred from a leaking actuator on the North Valiant SP satellite platform in the Southern North Sea. Individual releases from the remaining 22 spills did not exceed 5 kilogrammes in size, 10 of these each released less than 0.5 kilogrammes of oil; oil types comprised diesel and process oils.



Chemical Spills

In March, 1.37 tonnes of water-based hydraulic fluid was Prior to continuing with the flushing operation on the AR to released subsea from the Britannia satellite Callanish. This was TGT section of the methanol pipeline, an integrity leak test noticed as an abnormal rate of loss from the Britannia BLP was carried out by pumping seawater through the pipeline. The pressure response indicated a further blockage or leak Hydraulic Power Unit tank reservoir: the system was isolated point to sea. A second PON1 was submitted, which reported until a dive support vessel could be mobilised to investigate the release of the displaced inventory of methanol and further. The cause of this event was determined to be a misalignment of an actuator valve allowing small amounts of corrosion inhibitor (0.9 tonnes). hydraulic fluid to vent from the subsea control system. Regular updates were provided to BEIS of all measures being As part of the pipeline flushing programme on the Viking

Transportation system (VTS) in November 2016, operations commenced to pump fluids through the disused methanol discharges to sea were permitted under the Offshore Chemicals Regulations. pipeline from Viking BP, via Viking AR to the Theddlethorpe Gas Terminal (TGT). The pressure response observed at BP was not as expected, and no flow was observed at the TGT In total, 1.6 tonnes of chemicals were released from the other eight chemical spills combined, the types of chemicals end: it was subsequently confirmed that a leak point existed in the section of pipeline between the BP and AR platforms. released were water-based hydraulic fluids, methanol, A PON1 was submitted for the unintended release to sea of ethylene glycols and corrosion inhibitor. the pigging chemicals, and of the original pipeline contents (methanol and corrosion inhibitor), the quantity of chemicals reported as released (23.7 tonnes) was primarily methanol and based on the pipeline volume from BP to the potential point of damage on the pipeline. The methanol would have been released prior to the spill report date and dissipated at the time that the damage to the pipeline occurred.

Chemical Spills to the Sea from ConocoPhillips UKBU Facilities in 2016



taken to address the situation. The programme for flushing the VTS methanol pipelines was redesigned and subsequent

> Viking VTS (Decommissioning) BritSats Subsea Manifolds Britannia Platform Munro MH Platform Britannia Subsea Manifold Boulton BM Platform

7. Goals and Performance 2016

Merge the Britannia and ConocoPhillips Environmental Management systems (EMS) into one ISO 14001:2004 Certified EMS.

Update key procedures, including the Oil Pollution Emergency Plan (OPEP), to fully integrate Britannia into the UKBU EMS and to enable the Britannia platform safety case to transition and be accepted under the requirements of the Safety Case Regulations 2015 (SCR). In March, an auditor from an accredited, independent certification body, recommended the merging of the ConocoPhillips UKBU EMS and Britannia Operator EMS into a single UKBU ISO 14001:2004 certified EMS.

UKBU Operating Management System processes and procedures were systematically revised to incorporate Britannia requirements. The revision of the ConocoPhillips OPEP to include oil spill response arrangements for the Greater Britannia Area was approved by the Offshore Safety Directive Regulator. This supported the submission of the revised Britannia Safety Case for review under SCR, which ensured UKBU compliance with the requirements to manage the Health, Safety and Environmental risks of our offshore activities.

Evaluate and implement a 'one team, one vessel' approach for SNS decommissioning operations by co-ordinating well abandonment and final clean and disconnect workscopes from a single rig at each satellite platform location, to deliver further efficiencies and reduce our footprint in Marine Protected Areas.

Deliver a successful oil spill emergency response exercise involving the Secretary of State's Representative (SOSREP) for the Department of Energy and Climate Change (DECC); in addition, testing the establishment of a Marine Response Centre and activation of the Norbrit Agreement. Single vessel operations were evaluated by using the *Ensco 92* drilling rig to accommodate both the well abandonment programme and the final clean and disconnect workscope at the Victor JD Platform. A further single vessel operations programme was completed at the Europa EZ platform.

The successful outcome of this approach has introduced additional efficiencies to our decommissioning programmes and has also reduced our impact on the seabed in the North Norfolk Sandbanks and Saturn Reef Site of Community Importance.

The UKBU SOSREP exercise was based on an uncontrolled release of hydrocarbons from the Enochdhu well. The scenario was set over a 48-hour period with the actual exercise starting on the second day, at which point the developing slick was travelling towards the U.K./Norway median line.

This provided an opportunity to involve key Government bodies from both countries in discussions on environmental sensitivities, dispersant efficacy and logistical arrangements for the deployment of oil spill response resource. The exercise met the acceptance criteria and DECC were complimentary of how it had been planned and conducted.

Review the current status and define the required changes to transition the UKBU Environmental Management System to the ISO 14001:2015 standard.

Determine whether the energy management provisions in the UKBU Operating Management System meet the requirements of Phase II of the Energy Savings Opportunities Scheme (ESOS) and plan to address any gaps identified.

Ensure that the Viking Area infrastructure is ready for the decommissioning removals phase by the end of 2016.

Cease production from Viking fields; all relevant permits and approvals in place; the remaining eight Viking satellite installations transitioned to 'cold suspension'; complete Viking B well abandonments on the main Viking B platform complex. A desktop review of UKBU documentation was conducted against the requirements of the ISO 14001:2015 standard. The findings of this review have been developed into a change management plan, which is being used to progress our EMS to meet the requirements of the revised ISO standard by our next certification renewal in 2018.

The UKBU does not intend to implement a dedicated Energy Management System (EnMS); however, current UKBU provisions were reviewed against the requirements of the ISO 50001:2011 EnMS standard and documented in a gap-analysis report to improve our understanding.

Planning for Phase II of ESOS was initiated in 2016, with ongoing monitoring of significant energy use through established processes; inclusion, where relevant, of energy usage questions in our vendor audit and procurement processes; and plans for assessment of UKBU 'Grey Fleet' energy usage.

Production from the Viking fields ceased in January. All eight Viking B satellite platforms were transitioned to the cold suspension phase in 2016. The infield pipelines associated with five of these satellites (CD, DD, ED, GD and HD) were cut: making these platforms ready to be removed from the field. The hydrocarbon degassing of the Viking Transportation System gas export pipeline was completed and Viking B was declared hydrocarbon gas-free at the end of the year. The customised UKBU Decommissioning Passport system provided information on the status of individual platforms in the programme, which included permit, licence and consent management. Work commenced to abandon the nine wells located on the Viking BD platform (part of the Viking B complex). By the innovative adaptation of well drilling and completion technology, this was achieved without requiring a mobile offshore drilling unit. This work continued into 2017.

8. Objectives for 2017

Complete the transition of the main Viking B platform complex and Viking AR platform to the cold suspension phase of decommissioning. Apply the 'single vessel operations' model to complete the transition to cold suspension of the infrastructure in the LOGGS area Jupiter fields. Prioritise consideration of impacts to the seabed in protected habitats when planning the approach to the final clean and disconnect workscopes for other LOGGS area satellites.

Execute a Light Well Intervention campaign in the MacCulloch field to optimise and reduce safety and environmental risk before the future well abandonment programme.

Manage activities during the J-Area drilling campaign and Britannia Platform Turnaround to minimise the amount of oil discharged with the produced water and remain compliant with our permit conditions.

Develop atmospheric emissions monitoring programmes for qualifying gas-driven turbines on the Judy and Britannia platforms, to determine whether the concentration of nitrogen oxides (NOx) and carbon monoxide in their exhaust streams are below the emission limit values specified in the European Commission Large Combustion Plant Best Available Techniques Reference Document.

Ensure effective change management for the consignment of UKBU decommissioning waste to specialist onshore handling facilities. Fulfil our responsibilities as a waste producer to exercise a duty of care over our waste, by evaluating all facilities used prior to initial waste transfers.

Support the Department for Business Energy and Industrial Strategy (BEIS) by providing information to assist in their strategic Habitats Regulations Assessment (HRA) of the proposed decommissioning activities within the North Norfolk Sandbanks and Saturn Reef Site of Community Importance. Obtain approval by BEIS of the first Decommissioning Programmes for the Viking infield pipelines (VDP1b) and LOGGS area infrastructure (LDP1).

Undertake a decommissioning Comparative Assessment for the LOGGS area pipelines to identify the preferred decommissioning option.





Rubislaw House Anderson Drive Aberdeen AB15 6FZ

www.conocophillips.co.uk www.conocophillips.com



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