Environmental Values 2015

Public Environmental Report

Chevron North Sea Limited

Contents

Introduction

This environmental report covers Chevron North Sea Limited's (CNSL) operations and activities in the United Kingdom (UK). It shares our offshore environmental performance data for 2015, highlights how we demonstrate our values and reinforces our mission to continually improve our performance and reduce any potential impacts from our operations.

Ingrained in The Chevron Way is our commitment to protecting people and the environment, which includes developing energy safely, reliably and responsibly. We strive to develop a culture in which everyone believes that all incidents are preventable and that "zero incidents" is achievable. Our priorities every day are to ensure the safety of our employees and contractors and to protect the environment.

We have four environmental principles that define our commitment to operating in an environmentally responsible manner: these are 1) to include environmental considerations in decision making, 2) to minimise our environmental footprint, 3) to operate responsibly and 4) to steward our sites. We incorporate these principles into our business through our Operational Excellence Management System (OEMS). This process includes provision to identify and manage potentially significant environmental impacts and assess our activities, with the aim of improving performance. At Chevron, Operational Excellence (OE) is integral to how we run our business to achieve our vision of success.

During 2015, we made progress with a number of our environmental management activities across our assets, including improvements to both the water treatment and flaring processes in the Alba field, enhanced energy efficiency of waste management in the Erskine field and in the Captain field, improvements to spill defence systems. In addition, we successfully tested our emergency response arrangements to incorporate SOSREP (Secretary of State Representative) requirements, and rolled out our new OE policy to incorporate the Corporate Major Accident Prevention Policy (CMAPP) in line with the Offshore Safety Directive Regulations.[1]

At Chevron, we are committed to achieving our goal of zero incidents and will continue to focus on achieving world-class performance in all measures of safety and environmental stewardship. We hope you find the information in this report to be informative and useful.

1 The Offshore Installations (Offshore Safety Directive) (Safety Case etc.) Regulations 2015

About Chevron

Chevron is one of the world's leading integrated energy companies. Our success is driven by our people and their commitment to get results the right way—by operating responsibly, executing with excellence, applying innovative technologies and capturing new opportunities for profitable growth.

We are involved in virtually every facet of the energy industry. We explore for, produce and transport crude oil and natural gas; refine, market and distribute transportation fuels and lubricants; manufacture and sell petrochemical products; generate power and produce geothermal energy; invest in profitable renewable energy and energy efficiency solutions; and develop the energy resources of the future, including researching advanced biofuels.

At Chevron, we conduct our business in a socially responsible and ethical manner. We respect the law, support universal human rights, protect the environment and benefit the communities in which we work. Our 2015 Corporate Responsibility Report Highlights summarises some of these focus areas, which include environmental management, climate change and energy efficiency.

Chevron's 2015 Activities - UK

Existing Assets

Chevron has working interests in 10 offshore producing fields, including three operated fields (Alba, 23.4 percent; Captain, 85 percent; and Erskine, 50 percent) and seven non-operated fields (Britannia, 32.4 percent; Brodgar, 25 percent; Callanish, 16.5 percent; Clair, 19.4 percent; Elgin/Franklin, 3.9 percent; Enochdhu, 50 percent; and Jade, 19.9 percent). Net daily production in 2015 from the fields averaged 40,000 barrels of liquids and 115 million cubic feet of natural gas.

Ongoing / Future Projects

Chevron continues to implement projects designed to sustain production and increase recovery of hydrocarbons. The following provides an overview of our current main projects in the UK.

Alder

The 73.7 percent-owned and operated Alder high-pressure, high-temperature gas condensate discovery is located 17 miles (27 km) west of the Britannia field in the North Sea. The field is being developed via a single subsea well tied back to existing Britannia facilities. Installation of the flowline was completed in first quarter 2015, and installation of topsides was completed mid-year. Drilling of the development well commenced in third quarter 2015. First production is expected in second-half 2016. The project has a design capacity of 14,000 barrels of condensate and 110 million cubic feet of natural gas per day. Proved reserves have been recognised for this project.

Captain Enhanced Oil Recovery (EOR)

The Captain EOR project is the next development phase of the Captain field and designed to increase field recovery by injecting polymerized water into the Captain reservoir. Front End Engineering and Design (FEED) activities continued to progress in 2015 and are planned to continue in 2016 as polymer performance is evaluated. At the end of 2015, proved reserves had not been recognised for this project.

Rosebank

The Rosebank field is 80 miles (129 km) northwest of the Shetland Islands in 3,700 feet (1,115m) of water. Chevron operates and holds a 40 percent interest in the project. FEED activities continued to progress in 2015 and are planned to continue in 2016. The selected design is a 17 well subsea development tied back to a Floating Production Storage and Offloading (FPSO) vessel, with natural gas exported via pipeline. The design capacity of the project is 100,000 barrels of crude oil and 80 million cubic feet of natural gas per day. At the end of 2015, proved reserves had not been recognised for this project.

Operational Excellence

OE is the systematic management of safety, health, environment, reliability and efficiency to achieve world class performance. CNSL and Chevron globally place the highest importance on OE – it is fundamental to the company's success and supports our commitment to protecting people and the environment.

Chevron's OE objectives are to:

- Achieve an incident and injury-free work place;
- Promote a healthy workforce and mitigate significant workplace health risks;
- Identify and mitigate environmental and process safety risks;
- Operate incident-free with industry leading asset integrity and reliability; and
- Efficiently use natural resources and assets.

The OEMS is Chevron's standard approach for achieving world-class performance and is applied by CNSL. The OEMS consists of three parts:

Leadership Accountability – Leadership is the single largest factor for success in OE. Leaders establish the vision and set objectives that challenge the organisation to achieve world-class results. They direct the Management System Process (MSP), setting priorities and monitoring progress on plans that focus on the highest-impact items. Leaders visibly demonstrate their commitment through personal engagement with the workforce, showing concern and care for the health and safety of every individual.

Management System Process – is a systematic approach that is used to drive progress toward world-class performance. The MSP is linked to the business planning process, and begins with defining a vision of success and setting objectives. Gaps between current performance and these objectives are uncovered during the assessment phase, then plans are developed to close the gaps, the plan is implemented and a review of plan implementation and performance is completed.

OE Expectations – Corporate expectations for OE are detailed under 13 Elements. The expectations are met through processes and programmes put in place by local management. Many expectations are supported by corporate standard OE processes. Environmental issues are covered under Element 7: Environmental Stewardship, the objective of which is to strive to continually improve environmental performance and reduce impacts from our operations.

Operational Excellence Policy (CMAPP)

Chevron Upstream Europe
Operational Excellence Policy

Chevron Upstream Europe's (CUE) Operational Excellence (OE) vision is to be recognised and admired by the industry and the communities in which we operate as world-class performers in process safety, personal safety and health, environment, reliability and efficiency. CUE recognises the need to operate in a safe and responsible manner.

We will systematically manage OE with the aim of:

- Identifying and reducing the risk of major accident hazards including environmental and process safety risks.
- Achieving an incident and injury free workplace.
- Promoting a healthy workplace and mitigating significant health risks.
- Operating incident free with industry leading asset integrity and reliability.
- Efficiently using natural resources and assets.
- Ensuring continual improvement in all aspects of our business.

Through consistent application of OE, this policy and our Safety and Environmental Management System (SEMS), we aim to address the following:

Leadership

Our leaders are accountable for:

- Providing clear and consistent leadership in accordance with this policy and our Tenets of Operation.
- Ensuring clear roles, responsibilities and communications.
- Trusting and empowering their teams to apply a risk based approach to decision making in accordance with this policy.
- Creating a culture that is built on our values and behaviours, enabling safe, reliable and secure operations and environmental protection.
- Engaging with the community and other stakeholders.
- Ensuring that we comply with all applicable policies, codes and in regard to proposed legislation and regulation.

Organisation

Our organisation is fit-for-purpose and is designed to:

- Achieve results in accordance with the Chevron way.
- Ensure suitable and sufficient control of Major Accident Hazards.
- Ensure that staff and contractors are competent for the roles they perform.
- Encourage structured and timely decision making.
- Ensure the management of safe work.

A Strong Safety Culture

Based on:

- The Chevron way and our Tenets of Operation.
- Compliance with the provisions of our safety cases and this policy.
- The identification and management of major accident hazards.
- The involvement of and consultation with our staff and contractors.
- The reporting and investigation of incidents and near misses.
- The use of stop work authority.
- The recognition and reward of desired behaviours.

Risk Management

Our people, at all levels of the organisation will:

- Systematically assess, prioritise and manage risk in accordance with the Chevron way.
- Regularly review and re-evaluate risks.
- Maintain the integrity of dedicated systems through fit-for-purpose design and operating practices.
- Ensure that there are multiple, independent barriers in place to prevent major accident hazards including, but not limited to, unplanned releases of hydrocarbons.

Asset Integrity Management

Our facilities, reservoirs and wells are designed and maintained to be fit-for-purpose throughout their lifecycles. This includes:

- Designing, constructing modifying, operating and maintaining our facilities and wells, ensuring that there are no unplanned releases of hazardous substances and to prevent injury to people or harm to the environment.
- Minimising the potential for human error through the design and operation of our facilities.
- Maintaining the integrity of Safety and Environmental Critical Elements.
- Ensuring that risks are managed on a whole of life-cycle basis.
- Managing change in accordance with our Management of Change process.
- Compliance with all applicable codes and regulations.

Monitoring and Audit

We continually monitor and audit our processes and operations to ensure:

- That we review and revaluate our goals and our organisational capability.
- That our plans and processes are being correctly implemented.
- That we continually improve the effectiveness of our management system including our verification and well examination schemes.
- The suitability and effective implementation of this policy.

Emergency Management

While prevention is the first priority, we are prepared for an emergency and will mitigate any incident quickly and effectively:

- We maintain a fit-for-purpose emergency response system, based on defined scenarios and meeting all UK legal requirements.
- We regularly test the effectiveness of the system through audits and exercises.
- We aim to prevent future incidents by identifying and eliminating their root causes.

This policy applies to all offices and facilities operated by Chevron North Sea Limited, Chevron Denmark Inc and Chevron Norge AS.

Every individual has a duty to ensure that they always comply with, and hold others accountable for compliance with this policy, and prevent harm to themselves and others, and to the environment. This policy is applicable without distinction between Chevron employees and contractors working for Chevron.

Craig May, President and Managing Director
Chevron Upstream Europe, 2016

Results | Accountability | Fit-for-Purpose | Trust & Empower

Environmental Stewardship

The expectation of Chevron's Environmental Stewardship (ES) process is to strive to continually improve environmental performance and reduce impacts from our operations. It is applied across the life cycle of an asset and is used to identify, assess and manage potential environmental impacts and benefits. To achieve this, Chevron has implemented a step-wise process to be followed on an annual basis. First, an inventory of all emissions, releases, wastes and potentially impacted natural resources is prepared. This is followed by a procedure to identify, assess, mitigate and manage any significant risks and impacts to the environment associated with operations, emissions, releases and wastes. The outcome is an annually updated ES plan. CNSL have been preparing plans using the ES process since 2010. The management system is independently certified to the international standard (ISO) 14001 and requires CNSL to engage independent auditors who verify that our onshore and offshore operations meet requirements.

The ES plan includes objectives and targets for environmental performance, details of improvement implementation programmes and the process for tracking progress in meeting environmental objectives. The ES plan is approved by senior management and is aligned with other business and OE plans.

All of CNSL operations and projects have the potential to impact on the environment and they are all subject to strict environmental regulatory controls which require CNSL to prepare and submit regulatory applications to gain approval before activities begin and during the ongoing operational activities. We monitor and report our ongoing emissions, discharges and waste streams to ensure we meet regulatory requirements and do not cause significant impact on the environment. In the event of an unplanned release/spill to sea, or a non-compliance with regulatory requirements, notification would be made to the appropriate regulatory authorities and action taken to respond to any threat of or actual pollution. Investigations of incidents are conducted to gain any learnings or actions to prevent recurrence.

The ES process is used to help provide assurance that we are protecting the environment and meeting our internal and regulatory requirements and obligations.

Green Teams

CNSL's Green Teams have made a significant contribution to our continued environmental performance since 2005, when the first Green Team was formed offshore in the Captain Field. The teams' objectives are simple: to improve awareness of environmental issues both at work and home, to identify areas for improvement in environmental performance, to provide a focal point for environmental issues in the workplace and to create a network for sharing information.

Green Team activities in 2015 included ongoing improvements in waste reduction and recycling assisted by analysing data from general waste 'skip audits' (see Wastes section below for further information). Various offshore Green weekends were held on the main installations aimed at improving awareness of environmental issues amongst all staff and contractors.

2015 Environmental Performance Summary

Performance Metrics

CNSL is committed to continually improving environmental performance. This is achieved by integrating environmental objectives and targets into the ES plan and regularly evaluating progress to make adjustments if needed. CNSL set performance targets annually for key environmental aspects (produced water, oil releases/spills, waste and air emissions) to achieve our OE objectives.

CNSL's performance against targets for key 2015 environmental focus areas is summarised in the table below:

Table 1 - CNSL 2015 Performance Metrics

		CNSL	
	Units	**Result**	Target
Oil spill volume rate	bbls/mmbbls produced	0	**1**
Energy efficiency	Chevron energy intensity[1]	289	**360**
Greenhouse gas emission rate	tonnes CO_2 equivalent (tCO_2e)/MBOE	20.6	**31**
CO_2 emissions	tonnes	374,401.92[2]	**N/A**
Oil-in-produced water mass	tonnes	120.29	**N/A**
ISO 14001 certification maintained	yes/no	Yes	**Maintain**
Environmental audits completed	percent	100[3]	**90**
Production operations waste recycling/reuse	percent	73[4]	**70**

[1] The Chevron Energy Intensity metric is the ratio of current energy use (MMBTU/D) per unit of production (MBOE/D). Lower actual figures are better.

[2] For the 2015 period, CNSL surrendered a total of 368,787.79 tonnes of CO_2 in allowances and credits under the EU Emission Trading System (ETS). The total represented here includes relatively small additional emissions from Erskine and fugitive, oil loading and venting emissions from Alba and Captain, all of which are out of scope for the EU ETS.

[3] 4 of 4 UK environmental audits completed.

[4] This metric relates to the proportion of waste from UK production operations for which waste recycling is possible, and also includes CNSL office waste streams. The offshore component therefore excludes drilling-related wastes and waste generated from occasional operations for which there is no current alternative but disposal in accordance with applicable law. Such disposed waste streams are tracked and reported. The metric is set this way to allow meaningful comparison of year on year performance in managing our routine waste streams.

Environmental Stewardship Improvement Program

As part of the preparation of the annual Environmental Stewardship plan, improvement opportunities were identified by CNSL. These actions were grouped into improvement plans for the UK assets (Alba, Captain, and Erskine) and for mobile offshore drilling unit (MODU) activity.

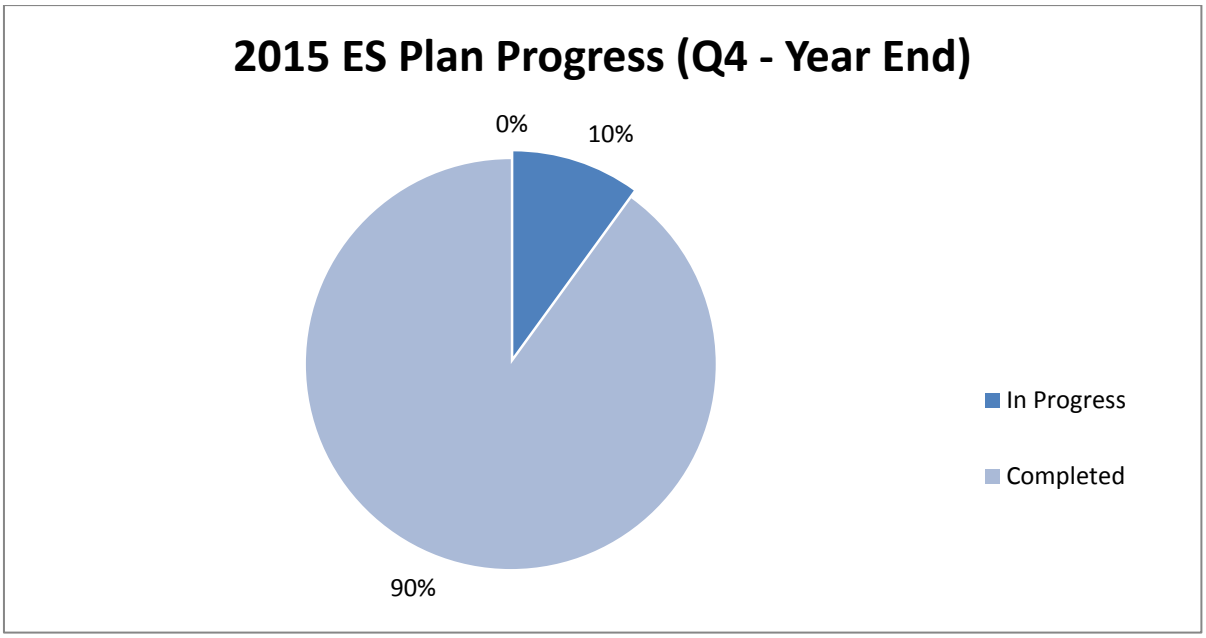
The improvement opportunities centred around strengthening arrangements associated with prevention of, and response to, incidents and releases; produced water management; reduction of air emissions and management of waste. Progress in completing these actions was tracked throughout the year and was used as a leading measure of continual environmental performance improvement.

A summary of the year-end status 2015 priority items of these actions is provided in **table 2** and **figure 2** below.

Table 2 – CNSL 2015 ES Priority Plan Items Status, Year End

	UK
Completed	9
In Progress	1
Total	10

Figure 2 – CNSL 2015 ES Priority Plan Status, Year End

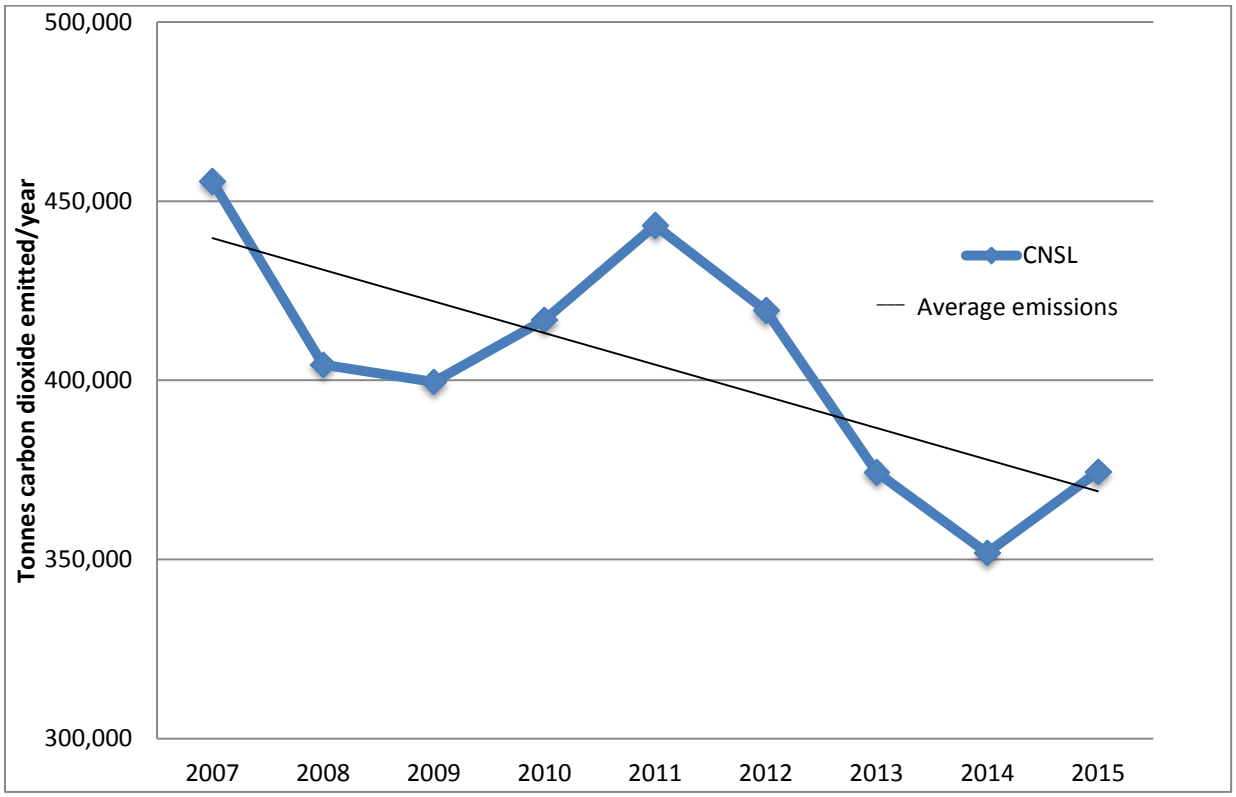


In progress or open actions are reviewed and included within the 2016 plan where applicable. In addition to improvement opportunities raised directly via the ES process there are also arrangements in place to drive continual improvement in response to compliance audits; regulatory inspections/changes; and/or ongoing OE and asset work scopes.

Emissions

The potential environmental impacts of atmospheric emissions from oil and gas exploration and production operations include acid rain formation from oxides of nitrogen and sulphur, photochemical smog from the reaction of sunlight with nitrogen oxides and volatile organic compounds (VOCs), and the potential for climate change associated with greenhouse gases from combustion of fossil fuels.

Figure 3 – CNSL Annual CO_2 Emissions 2007 – 2015



Note: Includes emissions from Chevron operated fields (Alba, Captain and Erskine) with atmospheric emissions only.

In the UK, CNSL monitor and measure the atmospheric emissions arising from all our major sources and report these annually either as part of our engagement in the European Union (EU) Emissions Trading System (ETS) or in our detailed annual atmospheric reports submitted to the regulator each year. Atmospheric emissions from UK assets during 2015 are shown in **Table 3** below.

Emissions of carbon dioxide (CO2) from CNSL activities are mainly as a result of hydrocarbon combustion in power generation and some gas flaring from our Captain and Alba installations. In 2015, CNSL continued to strive to reduce the CO2 emissions arising from our operations (**figure 3**), with improvements in flaring activity where possible and better fuel utilisation. For example, on Captain an increased percentage of our emissions came from gas consumption during 2015 compared with 2014. Gas fuel is a cleaner energy source compared with diesel (reduced emissions per kWh of generation).

Table 3 – CNSL 2015 Atmospheric Emissions Data

Asset	Source	CO_2 (tonnes)	NO_x (tonnes)	N_2O (tonnes)	SO_2 (tonnes)	CO (tonnes)	CH_4 (tonnes)	VOC (tonnes)	HFC[1] (tonnes)
Alba Northern Platform (ANP)	Diesel Consumption	21,770.93	117.66	1.50	13.65	6.29	0.22	2.01	0.00
	Fugitives	0.28	0.00	0.00	0.00	0.00	10.47	1.06	0.00
	Gas Consumption	96,901.40	220.21	7.86	37.00	214.63	32.90	1.30	0.00
	Gas Flaring	50,154.76	22.65	1.55	19.44	126.49	455.82	34.54	0.00
	Gas Venting	21.37	0.00	0.00	0.00	0.00	811.25	82.33	0.00
	HVAC[2] Systems	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alba Floating Storage Unit (FSU)	Diesel Consumption	6,707.72	82.52	0.48	4.20	21.79	0.24	2.73	0.00
	Oil Loading	191.93	0.00	0.00	0.00	0.00	66.38	44.78	0.00
	HVAC[2] Systems	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
Captain Wellhead Protector Platform (WPP)	Diesel Consumption	7,224.90	39.04	0.51	4.54	2.08	0.09	0.65	0.00
	Fugitives	0.22	0.00	0.00	0.00	0.00	5.54	0.01	0.00
	Gas Consumption	73,891.50	541.29	6.20	0.08	169.03	25.92	1.02	0.00
	Gas Flaring	31,478.60	14.54	0.99	0.02	81.18	316.10	0.39	0.00
	Gas Venting	0.35	0.00	0.00	0.00	0.00	8.88	0.02	0.00
	HVAC[2] Systems	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
Captain Floating Production Storage & Offloading (FPSO)	Diesel Consumption	70,265.32	949.22	4.84	44.07	250.69	2.88	31.54	0.00
	Gas Consumption	4,586.80	4.21	0.39	0.00	1.05	0.17	0.00	0.00
	Gas Flaring	9,612.05	4.49	0.29	0.00	24.92	80.52	9.85	0.00
	Oil Loading	378.61	0.00	0.00	0.00	0.00	233.90	3.08	0.00
	HVAC[2] Systems	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Erskine Platform	Diesel Consumption	1,215.19	22.56	0.08	0.76	5.96	0.07	0.76	0.00
Total	-	**374,401.92**	**2,018.40**	**24.68**	**123.76**	**904.11**	**2,051.34**	**216.07**	**0.15**

Notes:

1 HFC = Hydrofluorocarbon. No halogenated compounds emitted other than HFCs.

2 HVAC = Heating, Ventilation and Air Conditioning.

Energy Efficiency

Chevron global operations require a significant amount of energy and result in various atmospheric emissions, therefore improving energy efficiency is good environmental and business practice. The Chevron Upstream Energy Intensity (UEI) metric is a measure of total actual energy used (MMBTU/D) divided by actual gross operated production (MBOE/D).

Continuous improvement requires constant focus on energy efficiency opportunities, such as designing energy efficiency into capital projects, keeping existing equipment efficient through proper maintenance and upgrading and auditing and benchmarking progress. Energy efficiency and conservation are the most immediate and cost-effective sources of 'new' greenhouse gas-free energy.

Chevron undertakes a variety of actions to reduce emissions and improve the energy efficiency of its operations. In the UK during 2015, our improvement projects focused on continuing to maximise

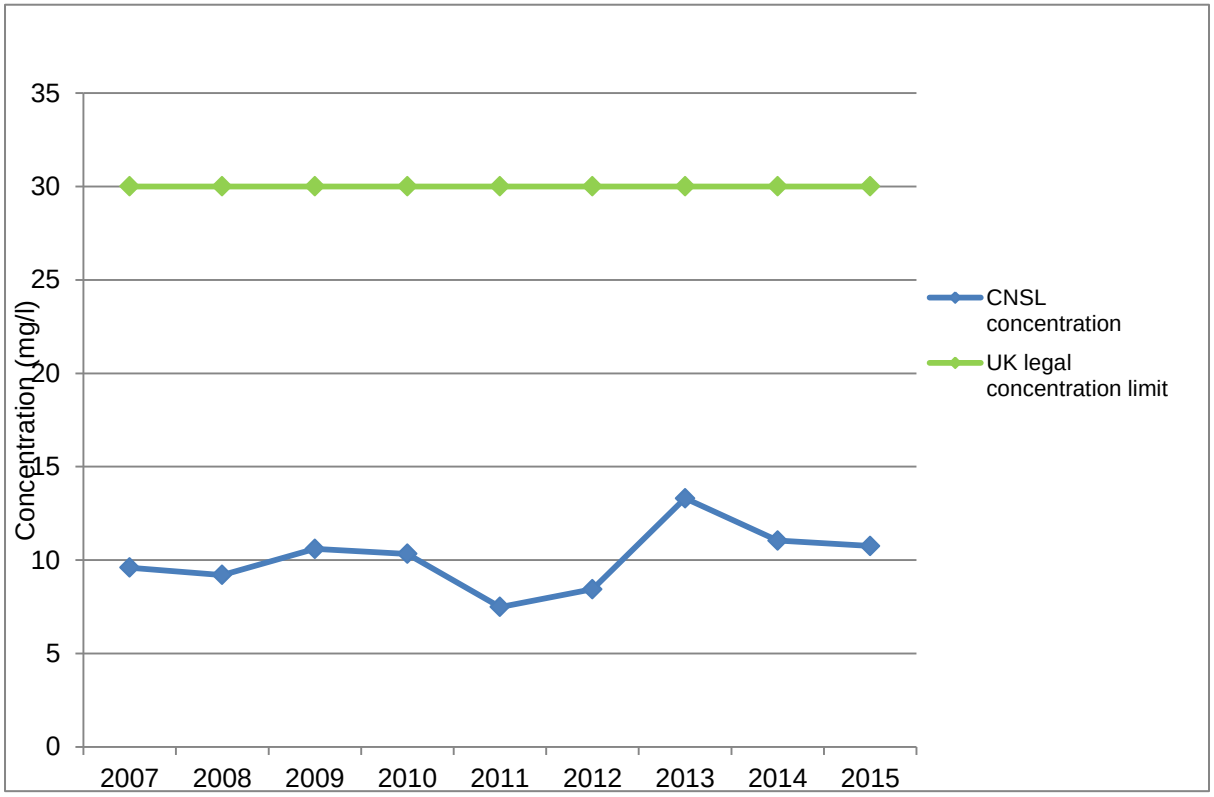
facility uptime, increase compressor reliability and maximise use of gas turbines for power generation, thus reducing our diesel consumption. The focus areas continue to be those installations regulated under the EU ETS.

In 2015, the CNSL UEI was 289 against a target value of 360. This value reflects improved compressor performance at Captain and ongoing optimisation of the import gas system at Alba to reduce diesel use.

CNSL are committed to optimising energy efficiency across our UK operations. CNSL included turbine, fuel gas and flare management as discussion topics in daily operational calls with our assets and are revisiting a suite of potential efficiency improvement projects to establish the potential for CO_2 reduction and viability. During 2015 CNSL conducted energy saving opportunity workshops to identify potential energy saving projects. At the end of 2015 required documentation on compliance with the Energy Saving Opportunity Scheme 2014 was submitted to the regulatory authority.

Oil in Produced Water

Figure 4 – CNSL Annual Average Oil-in-Water Concentration 2007 – 2015



Oil extraction results in the co-production of produced water containing hydrocarbons, some naturally-occurring materials and other substances and residues of the chemicals used in the offshore production process.

In the Captain field, all produced water is re-injected back into the reservoir with none being discharged to sea. In the Alba field, produced water is treated to remove residual oil before being discharged to sea. Both these activities are regulated under the provisions of a permit issued by the environmental regulator the Department of Energy and Climate Change (DECC). Erskine produced fluids are exported and processed on the Lomond installation (operated by BG/Shell) and produced

water is discharged and reported from this location under the provisions of a discharge permit issued to BG/Shell.

In 2015, CNSL re-injected in excess of 50 percent (12 million tonnes) of total produced water. A total of 120.29 tonnes of oil in produced water was discharged into the sea at an average oil-in-water concentration of 10.75 mg/l from the Alba field. See **Table 4** below for more information.

Produced water handling remains a key challenge at Alba because the volume of water co-produced with the oil is rising as the field matures. During 2015, several engineering projects were identified and progressed to help maintain and improve oil-in-produced water management and treatment. Further initiatives and projects are being pursued through the 2016 ES plan.

In addition to the oil-in-water challenge, increasing quantities of sand are also produced with the water at Alba. A consequence is that Alba oil and water separators fill with sand which in turn compromises oil-in-produced water quality. To help manage this in 2015, during the scheduled turnaround the 3 primary separators and other vessels were cleaned removing 784 tonnes of sand from offline washing and another 577 tonnes from regular online washing.

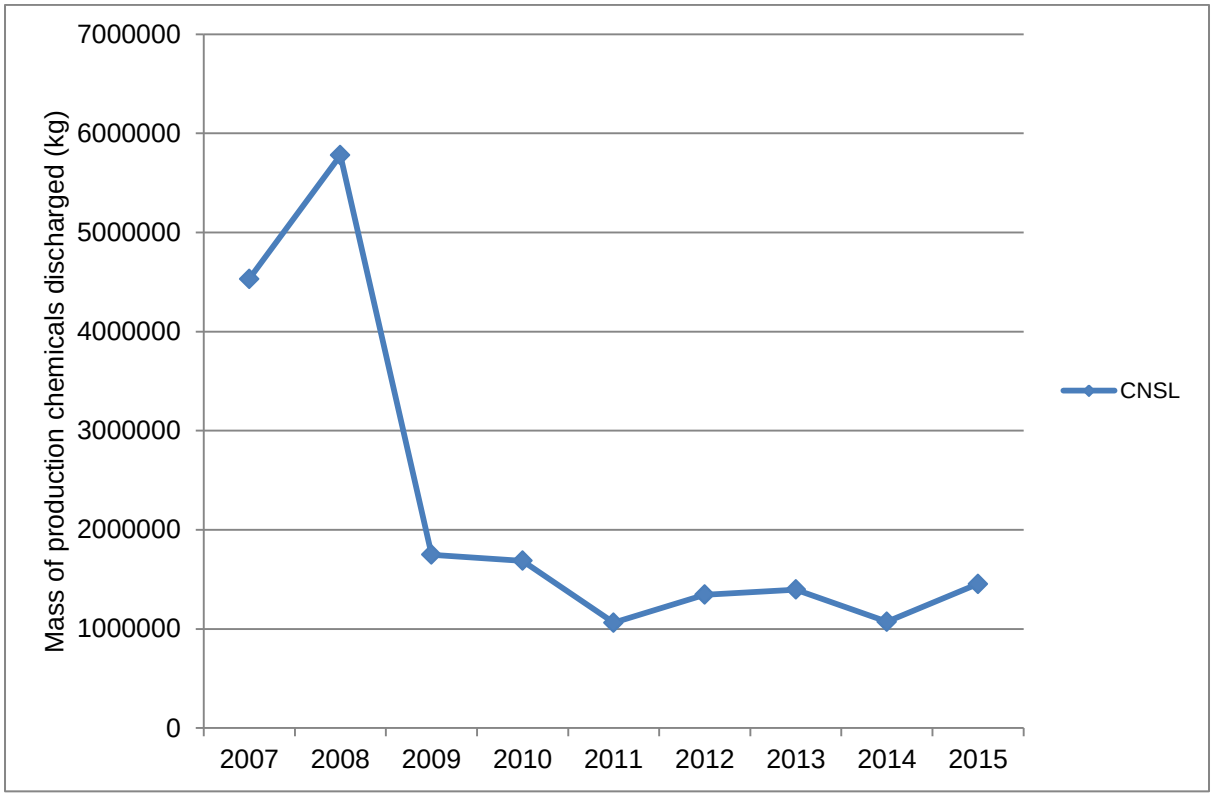
Table 4 – CNSL 2015 Oil-in-Produced Water Data

Facility	Oil-in produced water discharge concentration (mg/l)	Oil discharged (tonnes)	Water discharged (tonnes)	Water injected (tonnes)
Captain Wellhead Protector Platform (WPP)	N/A	N/A	N/A	12,278,105
Alba Floating Storage Unit (FSU)	21.18	0.441	18,489	N/A
Alba Northern Platform (ANP)	10.73	119.853	10,852,673	N/A
Total	**10.75**[1]	**120.29**	**10,871,162**	**12,278,105**

[1] This figure is not the direct average of the FSU and ANP discharge concentrations, but is weighted to capture the fact that there is relatively much more produced water discharge on ANP than on the FSU. Hence, the overall figure closely matches that of the ANP individually.

Chemicals

Figure 5 – CNSL Annual Mass of Production Chemicals Discharged 2007 – 2015



Note: Graph shows production chemicals discharged only. Drilling activity varies considerably from year to year so inclusion of this data does not allow meaningful comparison of data.

The chemicals used in drilling and production processes may result in effluent discharges to sea. Many different types of chemical are used in drilling and production operations – primarily to control corrosion, inhibit bacterial growth, assist with the production process, and assist with the drilling process. Chemical use and discharge is regulated and a permit is required before any use or discharge of a production or drilling chemical can take place.

In 2015, approximately 22 percent of the production chemicals used were discharged to sea, most of which were low hazard - that is chemicals classed E or banded Gold under the regulated Offshore Chemical Notification Scheme. A breakdown of CNSL chemical use by operation is provided in **Table 5** below, with a breakdown of discharge by chemical type provided in **Table 6** below.

CNSL continues to focus on replacement of higher hazard chemicals with less hazardous substitutes where this is technically feasible. Discharge of chemicals is affected significantly by increased water production at CNSL's Alba field as it matures. Since 1998, all water produced from CNSL's Captain Field reservoir has been used either as reinjection water for reservoir pressure maintenance or as power water for downhole hydraulic pumps; chemical discharges at this field are therefore already minimal.

CNSL discharged 2,129 tonnes of chemicals from our drilling operations during 2015, approximately 37 percent of the total chemicals used in these activities. Most of these chemicals were low hazard chemicals.

All chemical use and discharge are subject to strict regulatory controls and are managed in accordance with internal procedures and processes.

Table 5 – CNSL 2015 Chemical Use & Discharge

Facility/operation	Mass Used (kg)	Mass Discharged (kg)
Alba Floating Storage Unit (FSU) Production Operations[1]	285	15,037
Alba Northern Platform (ANP) Production Operations	2,127,270	1,324,492
ANP Drilling Operations	0	0
Alder Field Drilling Operations[2]	1,093,719	15,479
Captain Floating Production Storage & Offloading (FPSO) Production Operations	2,992,641	113,681
Captain Wellhead Protection Platform (WPP) Drilling Operations	2,473,832	2,113,321
Erskine Production Operations[3]	132,854	61
Pipeline Works	4,945	4,160
Total	**8,825,546**	**3,586,231**

[1] No processing occurs at the FSU, therefore little chemical is used there. The apparent discrepancy in FSU chemical use and discharge figures is as a result of the FSU receiving processed crude from the ANP, from which water which requires discharging settles out, therefore some chemicals applied at the ANP get discharged at the FSU.

[2] Alder Field drilling involved the Blackford Dolphin MODU, which commenced operations during the summer of 2015.

[3] Erskine production fluids are processed at Lomond (operated by BG/Shell), therefore discharge of chemicals used at Erskine occurs there. These chemical discharges are covered on, and reported against, BG/Shell's chemical permit for Lomond.

Table 6 – 2015 Chemical Use & Discharge (Detailed)

Facility/operation	(kg)	A	B	C	D	E	Orange	Blue	White	Silver	Gold	Total
Alba Floating Storage Unit (FSU) production operations	**Used**	0	0	0	0	0	0	0	0	0	285	285
	Discharged	0	0	0	0	0	0	0	0	216	14,821	15,037
Alba Northern Platform (ANP) production operations	**Used**	0	0	15,285	0	236,910	0	0	0	3,623	1,871,452	2,127,270
	Discharged	0	0	15,285	0	67,715	0	0	0	1,770	1,239,722	1,324,492
ANP drilling operations	**Used**	0	0	0	0	0	0	0	0	0	0	0
	Discharged	0	0	0	0	0	0	0	0	0	0	0
Alder Field drilling operations	**Used**	0	10,390	5,523	384,967	685,599	0	0	0	0	7,240	1,093,719
	Discharged	0	0	0	12,270	3,209	0	0	0	0	0	15,479
Captain Floating Production Storage & Offloading (FPSO) production operations	**Used**	0	0	42,748	0	82,612	71,925	0	1,057,790	144,660	1,592,906	2,992,641
	Discharged	0	0	42,748	0	66,701	0	0	0	0	4,232	113,681
Captain Wellhead Protection Platform (WPP) drilling operations	**Used**	2	0	0	0	2,287,278	0	0	0	0	186,552	2,473,832
	Discharged	0	0	0	0	1,952,966	0	0	0	0	160,355	2,113,321
Erskine production operations	**Used**	0	0	0	0	22,847	0	0	0	4,654	105,353	132,854
	Discharged	0	0	0	0	0	0	0	0	0	61	61
Pipeline works	**Used**	0	0	0	0	3,978	0	0	0	0	967	4,945
	Discharged	0	0	0	0	3,978	0	0	0	0	182	4,160
Total	**Used**	**2**	**10,390**	**6,356**	**384,967**	**3,319,224**	**71,925**	**0**	**1,057,790**	**152,937**	**3,764,755**	**8,825,546**
	Discharged	**0**	**0**	**58,033**	**12,270**	**2,094,569**	**0**	**0**	**0**	**1,986**	**1,419,373**	**3,586,231**

Notes: The Offshore Chemical Notification Scheme (UK) (OCNS) conducts Chemical Hazard and Risk Management (CHARM) assessments on chemical products that are used offshore. They use colour banding to risk rank each product, with Gold products posing the lowest potential hazard and, on the table above, Orange being the highest risk. Products not applicable to the CHARM model (i.e. inorganic substances, hydraulic fluids or chemicals used only in pipelines) are assigned an OCNS grouping, A - E. Group A includes products considered to have the greatest potential environmental hazard and Group E the least.

Oil and Chemical Releases/Spills to Sea

Table 7 – CNSL 2015 Oil & Chemical Releases to Sea

Facility	Number of PON1s	Oil Released (tonnes)	Chemical Released (kg)
Captain Floating Production Storage & Offloading (FPSO)	2	0.00900	0
Captain Wellhead Protector Platform (WPP)	10	0.00997	44,554.93
Alba Northern Platform (ANP)	1	0.00225	0
Alba Floating Storage Unit (FSU)	1	0.05	0
Erskine	0	0	0
Blackford Dolphin (MODU)	6	0.00125	312
Hercules (vessel)	1	0	0.004
Total	**21**	**0.07247**	**44,866.934**

Notes: CNSL data only includes accidental releases of oil and chemicals to sea. No Permitted Oil Discharge notifications were submitted in 2015. Four third party oil release notifications were submitted to regulatory authorities but details are not included in table 7 as these events were not associated with CNSL operational activities.

A summary of 2015 oil and chemical releases to sea by asset is provided in **Table 7** above. **Figure 6** shows CNSL Annual Quantity of Oil Released to Sea 2007 – 2015.

During 2015 CNSL reported 9 oil release events to sea. The maximum oil release reported was 0.005 tonnes. 12 chemical release events were reported with the maximum reported release being 24512kgs. All incidents were reported and investigations conducted. The following provides summary of those release incidents where greater than 2 tonnes/2000kgs was released:

1) 2425 kgs of subsea hydraulic control fluid was reported by the WPP installation as an ongoing emission to sea as a result of a small weep from a subsea actuator valve. The chemical product is normally used in subsea control systems and is permitted for discharge to sea under normal operations. Chemical release modelling was undertaken which showed that the chemical would naturally dilute and disperse within the marine environment with no significant impact likely. Updates to the Department of Energy and Climate Change (DECC) were provided.

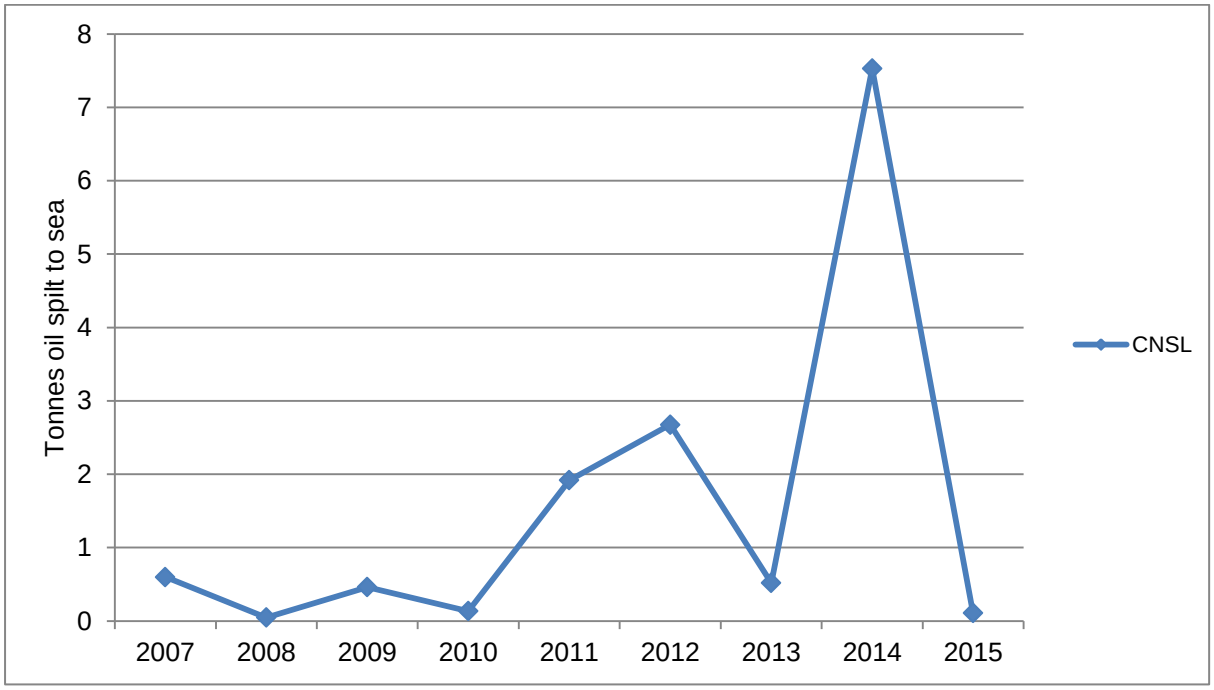
2) 13770 kgs of Potassium Chloride Brine was reported as being released as a result of loss of integrity from a section of the WPP installations hard line fluid transfer pipework during bunkering operations. The chemical is used during drilling operations and is classed as PLONAR (poses little or no risk) and is permitted for discharge to sea under normal operations. No significant impact on the environment was likely. The incident was fully investigated and findings presented to DECC on the actions taken to prevent recurrence. DECC subsequently closed out the incident on the 30 December 2015 with no further action taken.

3) 24512 kgs of water based mud (WBM) was released from the Captain WPP installation during well pressure testing due to external casing corrosion. Due to the circumstances it was unclear whether the WBM was released to the formation, to sea or partitioned to both. As a result CNSL reported the worst case release by assuming the full quantity of the casing was discharged to sea. WBM is used during drilling operations and is permitted for discharge to sea under normal operations. No significant impact on the environment was likely. The incident was fully investigated and communications made with DECC on the actions being taken to prevent recurrence. DECC subsequently closed out the incident on the 10 March 2015 with no further action taken.

Oil Spill Response Arrangements

CNSL has regulatory approved Oil Pollution Emergency Plans in place for each fixed asset and robust procedures in place for responding to any incidents which do occur. Personnel are trained and exercises take place to ensure effective response. On the 13 May 2015 an exercise was conducted and passed by DECC which confirmed that CNSL could implement their response arrangements in a manner that demonstrated compliance with the requirements of the Secretary of States Representative (SOSREP) and oil spill response regulations.

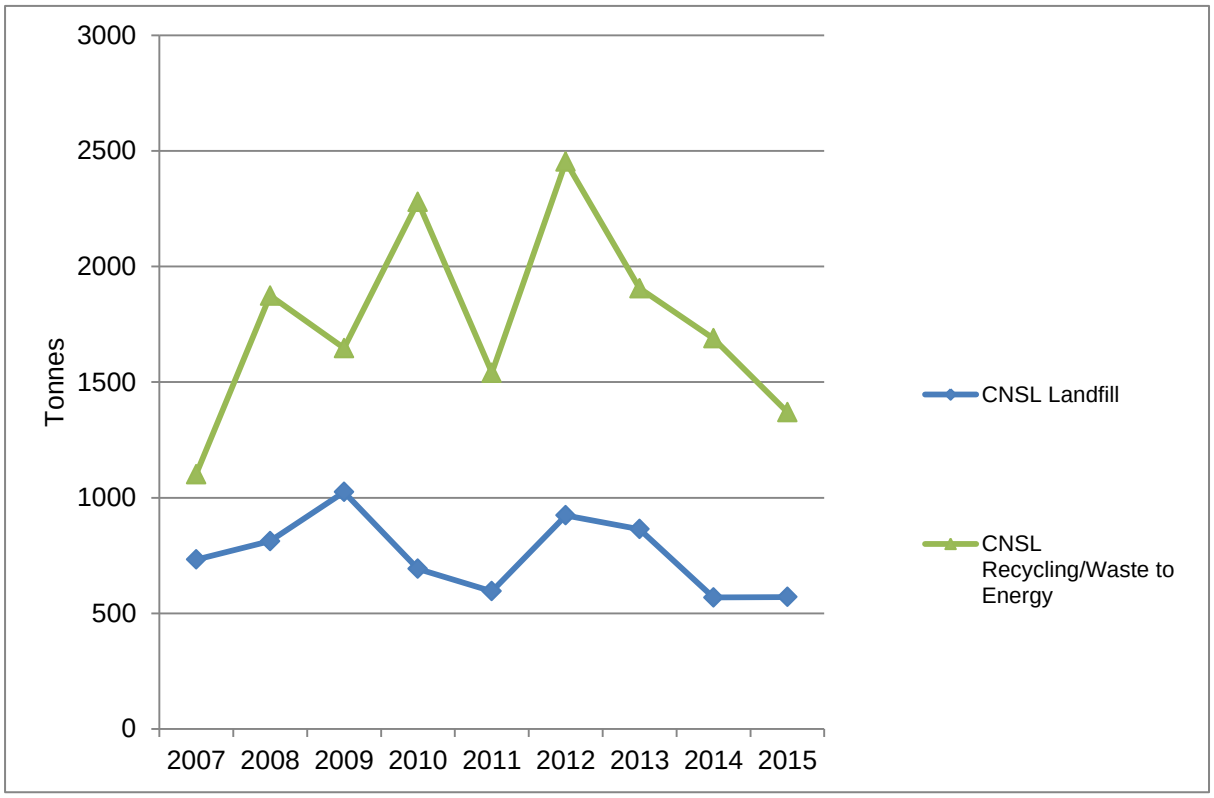
Figure 6 – CNSL Annual Quantity of Oil Released to Sea 2007 – 2015



Notes: 2007 – 2015 CNSL data includes the maximum reported quantity released, i.e. a worst case scenario. Since 2007, PON1 reports have required a maximum and minimum release quantity to be reported.

Wastes

Figure 7 – Annual Mass of Waste 2007 – 2015



Note: Excludes drilling related waste and tank washings which distort data from a relative performance assessment perspective.

Our offshore operations produce a variety of waste streams which include packaging, scrap metal and redundant chemicals. Chevron works actively both to reduce the amount of waste that it produces and to reuse or recycle what remains. Improvements in the proportion being recycled or reused have been identified – for example, wooden storage pallets are used for chipboard and plastic drums are shredded for recycling and reuse. Waste which isn't reused or recycled is mainly sent to landfill with small amounts being incinerated. **Figure 7** above provides details of the annual mass of waste produced together with disposal routes.

CNSL works with our waste management contractor to continuously improve waste management and minimise landfill volumes. CNSL's 2015 waste production by asset is shown in **Table 8** below.

In 2015, CNSL exceeded its target of recycling 70 percent of the recyclable waste in its production and office operations (see 2015 Performance Metrics in Table 1 above). This target was achieved through numerous initiatives at each of our installations and by the individual efforts of members of the offshore workforce, in particular, those involved in the installation Green Teams. During 2015, our waste contractors continued with quarterly 'skip audits' and documented opportunities for us to improve waste management. Skip audit reports include photographic evidence and are shared with the offshore Green Team community.

Table 8 – 2014 Reported Total Waste Data

Category	Recycle (tonnes)	Landfill (tonnes)	Waste to Energy/ Incinerate (tonnes)	Other (tonnes)	Total (tonnes)
Special/Hazardous Waste	120.26	163.75	12	230.22	**526.22**
Non-Hazardous Waste	1235.73	407.27	0	0	**1,643**
Other	0	0	2.387	0	**2.39**
Total	**1,355.99**	**571.02**	**14.38**	**230.22**	**2171.6**

For the purpose of relative annual performance tracking, we do not include the drilling-related and tank washings waste streams in our target as they are extremely variable and operationally dependent, meaning their inclusion would not allow for long-term performance tracking. These are often our biggest contributors to landfill volumes and as a result we are working to reduce the quantities and potential hazards of these wastes too. The use of non-aqueous (oily) drilling fluids can be necessary when drilling long horizontal wells. Tank washing disposals are being reduced through the application of two techniques to reduce the water used in the process: new nozzles for the water jetting cleaning system and recycling of the water being used in the process.

Glossary

ANP	Alba Northern Platform
bbl	Barrel
BOE	Barrels of oil equivalent
BTU	British Thermal Units
CEI	Chevron Energy Index
CH_4	Methane
CNSL	Chevron North Sea Limited
CO	Carbon monoxide
CO_2	Carbon dioxide
CPP	Central Processing Platform
CUE	Chevron Upstream Europe
DECC	Department of Energy & Climate Change
ECE	Environmentally Critical Element
ES	Environmental Stewardship
ETS	Emissions Trading System
EU	European Union
FID	Final Investment Decision
FPSO	Floating, Production, Storage and Offloading
FSU	Floating Storage Unit
HFC	Hydroflurocarbon
HVAC	Heating, Ventilation & Air Conditioning
MSP	Management System Process
N_2O	Nitrous oxide
NO_x	Oxides of nitrogen
OE	Operational Excellence
OEMS	Operational Excellence Management System
OSPRAG	Oil Spill Prevention and Response Advisory Group
SO_2	Sulphur dioxide
t	tonnes
UEI	Upstream Energy Intensity
UK	United Kingdom
VOCs	Volatile Organic Compounds
WPP	Wellhead Protector Platform