

SHE-REP-212

UK Operations Environmental Performance

Annual Report 2014



CNR International



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UK Operations Environmental Performance Annual Report 2014

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1 BACKGROUND TO THIS REPORT

The 1992 OSPAR Convention is the current instrument guiding international cooperation on the protection of the marine environment of the North-East Atlantic. It combined and up-dated the 1972 Oslo Convention on dumping waste at sea and the 1974 Paris Convention on land-based sources of marine pollution.

Work under the Convention is managed by the OSPAR Commission, made up of representatives of the Governments of fifteen Contracting Parties (including the United Kingdom) and the European Commission, representing the European Community.

The Offshore Oil and Gas Industry Strategy of the OSPAR Commission sets the objectives of preventing and eliminating pollution and taking the necessary measures to protect the maritime area against the adverse effects of offshore activities so as to safeguard human health, and conserving marine ecosystems and, when practicable, restoring marine areas which have been adversely affected.

To implement this Strategy, the OSPAR Commission has adopted Recommendation 2003/5 to Promote the Use and Implementation of Environmental Management Systems by the Offshore Industry. The UK Government has fully adopted this Recommendation, and therefore requires that all operators controlling the operation of offshore installations on the UK Continental Shelf should have in place an Environmental Management System (EMS) that is designed to achieve:

- the environmental goals of the prevention and elimination of pollution from offshore sources and of the protection and conservation of the maritime area against other adverse effects of offshore activities; and
- continual improvement in environmental performance; and
- more generally, to achieve the objectives of the OSPAR Offshore Strategy.

The OSPAR Recommendation states that Contracting Parties should also encourage operators to make publicly available an annual statement setting out:

- a brief description of the Environmental Management System;
- the environmental policy of the operator including environmental goals, objectives and targets set for significant environmental aspects and impacts; and
- a summary of performance in relation to that environmental policy, those goals, objectives and targets, and any relevant legislative requirements.

This report is CNR International's sixth publicly-available statement describing the EMS and company environmental performance against targets and legislative requirements. We welcome any comments and suggestions from members of the public and regulators in relation to this document; these should be sent to:

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CNR International (UK) Ltd
St Magnus House
Guild Street
Aberdeen
AB11 6NJ
or by email to CNRI.EnvironmentTeam@cnrl.com

2 CNRI'S OPERATIONS

Canadian Natural Resources Limited (CNRL) is an independent oil and gas exploration and production company with continuing operations in core areas located in Western Canada, the U.K. sector of the North Sea and offshore West Africa. CNRL's headquarters are in Calgary, Canada, with international operations based in Aberdeen, Scotland.

During 2014, CNR International UK (CNRI) North Sea operations were focused in four areas: Ninians, Murchison, T-Block, and Banff and Kyle. CNRI operates its fields with a majority working interest, which provides a strong basis for future exploitation and exploration in reserves close to existing reservoirs.

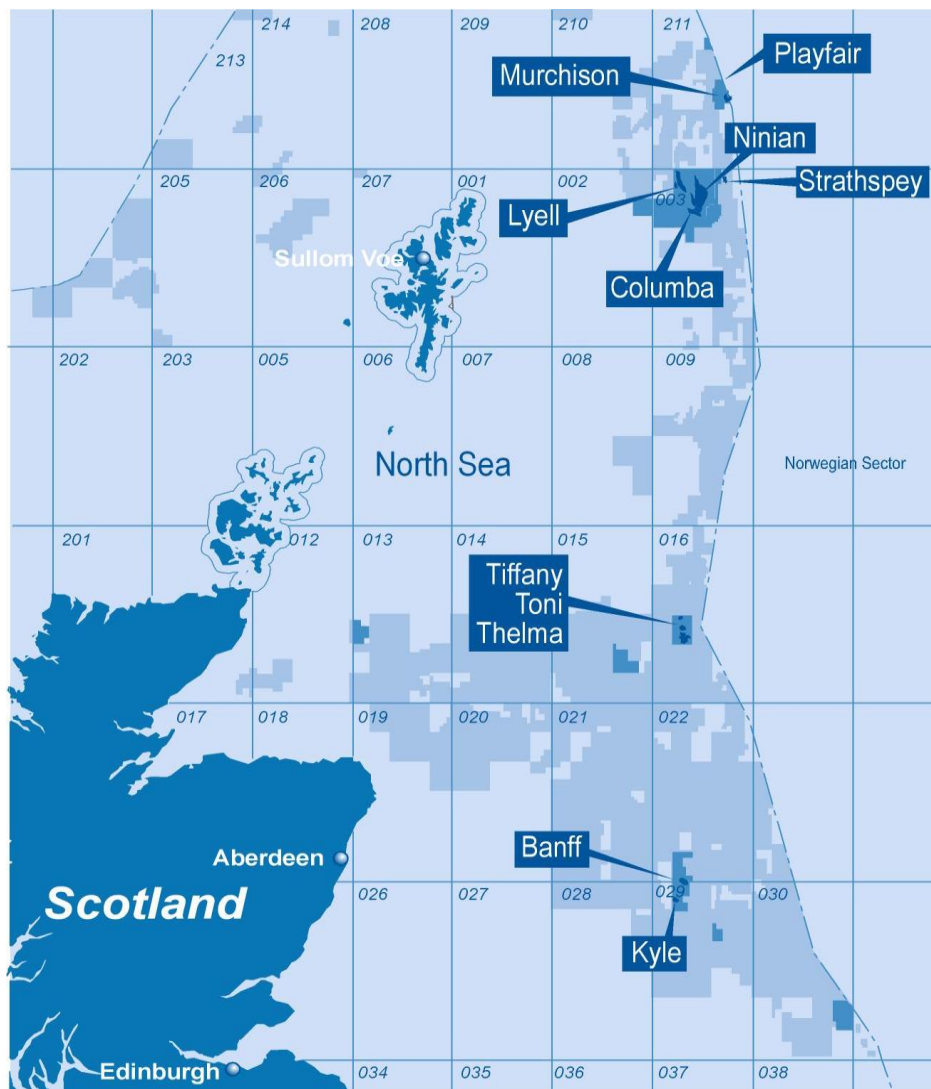


Figure 1 Location of CNRI's operations in the North Sea

The **Ninian** Field hub consists of three fixed platforms (Ninians Northern, Central and Southern) in the Northern North Sea, with the **Lyell** and the **Columba** fields also produced via the Ninian platforms as subsea tie-backs and extended reach wells. The subsea **Strathspey** field lies some distance away and is also tied into the Ninian Hub. Crude oil from the Ninian and associated fields is exported to the Sullom Voe Terminal where CNRI has a 22% working interest.

The **Murchison** Field is located in the Northern North Sea, close to the UK/Norway boundary. As a prudent and responsible operator, CNRI initiated the planning for the decommissioning of the Murchison field in the UK sector of the North Sea in 2010. In September 2013, Draft Decommissioning Programmes supported by an Environmental Statement were submitted to the Department of Energy and Climate Change (DECC). A Stakeholder Engagement Report was also submitted detailing the statutory and public consultation activities, submissions and responses. CNRI submitted its final Decommissioning Programmes in April 2014 and approval was granted by DECC in July 2014. Production from the platform was shut down according to plan on 28 February and formal cessation of production was declared on 31 March 2014. Decommissioning of the platform and associated infrastructure is expected to take several years.

The **T-Block** in the Central North Sea consists of three oil and gas fields, **Tiffany, Toni** and **Thelma**. The Tiffany Field is developed from a traditional fixed steel jacket platform. Toni and Thelma are developed from subsea templates tied-back to the Tiffany Platform. Oil from the fields is exported via the Brae/Forties pipeline through the Forties Pipeline System to the BP operated terminal facilities at Cruden Bay.

The **Banff** and **Kyle** Fields are located in the Central North Sea and produce via subsea templates to the Petrojarl Banff Floating Production Storage and Offtake vessel (FPSO), which is operated by Teekay Petrojarl Production. Crude oil from the Banff and Kyle fields is exported via shuttle tanker. During 2012 and 2013, the Petrojarl Banff FPSO and the Apollo Spirit Floating Storage Unit (FSU) were off station following storm damage received during December 2011. During 2014, production restarted from the Banff and Kyle Fields following a major redevelopment and re-instatement project.



3 CNRI'S SHE MANAGEMENT SYSTEM

CNRI's integrated Safety, Health and Environmental Management System (SHEMS) helps the company to:

- comply with Safety, Health and Environmental (SHE) legislation and industry standards;
- manage SHE risks in the business; and
- deliver continuous improvement in SHE performance.

The scope of SHEMS is offshore oil and gas exploration and development activities, and associated onshore support. The system structure conforms to the broad principles of the HSE publication Successful Health and Safety Management HS(G)65 and meets the requirements of general and offshore installation-related regulations.

In the North Sea, all of CNRI's directly operated platforms, Murchison, Ninians Central, Northern and Southern, and Tiffany, are certified to ISO14001:2004 by ERM CVS, who are UKAS accredited verifiers of management systems. The Petrojarl Banff FPSO is owned and operated by Teekay Petrojarl ASA, who also have certification to ISO14001 for their EMS.

3.1 SHE MANAGEMENT SYSTEM STRUCTURE



The SHE Management System implemented on CNRI's offshore installations and within the onshore support organisation can be represented as a pyramid consisting of four levels:

- Policy;
- Management Standards;
- General Procedures;
- Installation/Location Specific Procedures.

3.2 SHE POLICY

CNRI takes all reasonable precautions to achieve the goal of harm-free operations. Our SHE Policy is a public commitment to conducting business in a manner that protects the health and safety of people and preserves the integrity of the environment within which CNRI operates. CNRI's SHE Policy is enshrined in CNRI's Statements on Environmental Protection (see below), Health and Safety, and Asset Integrity Management.



Canadian Natural

CORPORATE STATEMENT ON ENVIRONMENTAL PROTECTION

Environmental protection is a fundamental value of Canadian Natural Resources Limited (Canadian Natural). The Corporation recognizes that every employee and contractor has a vital role to play in identifying, minimizing and mitigating environmental impacts from our operations. Canadian Natural's commitment to environmental management will be incorporated into business activities through the following guiding principles:

- Ensure all employees and others engaged on Canadian Natural's behalf are aware of the commitment to minimizing and managing environmental impacts resulting from Canadian Natural's operations;
- Provide strong leadership to the identification, assessment and management of environmental risks at all levels of the organization and promote a participative culture;
- Proactively identify, evaluate, minimize and mitigate the environmental impacts of Canadian Natural's business throughout all aspects of our operations;
- Identify significant changes affecting environmental management systems, respond appropriately to issues and concerns and provide a mechanism for feedback;
- Ensure appropriate processes are developed and implemented to prevent pollution, including waste and emission management programs;
- Ensure that effective emergency response measures are in place and provide prompt and effective response to any emergency situation;
- Investigate environmental incidents effectively to prevent recurrence and communicate and implement lessons learned across all parts of the organization, including those from the experiences of others;
- Communicate with the public regarding Canadian Natural activities;
- Ensure that Canadian Natural operations comply with government regulations, industry guidelines and company policies and procedures concerning environmental management; and
- Use energy and other resources efficiently at Canadian Natural operations.

Canadian Natural's management will be responsible for developing specific operational procedures and standards that are consistent with this policy and are accountable for the maintenance, regular review and interpretation of this policy. Canadian Natural expects its suppliers, partners and business associates to have compatible environmental procedures and values.

Canadian Natural's management is committed to achieving continual improvement in environmental performance through annual environmental objectives and targets. Performance is reviewed and corporate status reports are presented regularly to management and the Board of Directors.



 Steve Laut
 President



 Tim McKay
 Chief Operating Officer


Next Review Date: June 16, 2017

3.3 SHE MANAGEMENT STANDARDS

Ten Management Standards support CNRI's SHE Policy statements. These describe the expectations and requirements for performance in relation to key aspects of SHE management. They allow for some flexibility in terms of SHEMS implementation, so that different parts of the company can meet these expectations in different ways, depending on their particular legal and other business drivers.

The ten Management Standards are:

1. Leadership and Commitment
2. Performance Management
3. Managing SHE Risks
4. Competence and Personal Development
5. Communication and involvement
6. Working with Third Parties
7. Change Management
8. Information and Documentation
9. Emergency Preparedness
10. Incident Reporting, Investigation and Analysis

3.4 GENERAL AND INSTALLATION SPECIFIC PROCEDURES

General Procedures support specific Management Standards and, where a documented procedure is needed, they describe the arrangements in place to meet the appropriate standard, for example incident investigation or oil spill response. These procedures are intended to provide consistency across the organisation: they are applicable to any operation and are generally not specific to any one location or installation.

Installation and location specific procedures are particular to an operation or activity; they define the arrangements that CNRI has determined are needed to conform to General Procedures and thus meet the spirit and intent of the Management Standards.

4 CNRI'S SIGNIFICANT ENVIRONMENTAL ASPECTS

CNRI's SHE Management System requires identification of the elements of activities that can interact with and therefore have an effect on the environment (co-called 'aspects' in ISO14001 standard terminology). This is done so that a means to control or minimise any potential negative environmental effects can be put in place.

In common with most offshore oil and gas operators, CNRI has identified the following significant environmental aspects of its operations:

- Atmospheric emissions, in particular of carbon dioxide;
- Oil discharged in produced water;
- Solid waste generation and disposal;
- Chemical use and discharge; and
- Oil and chemical spills.

CNRI regularly monitors and reports its performance in terms of environmental emissions and discharges as required by UK legislation and the internal SHE Management System. This information is reported via the Environmental Emissions Monitoring System or EEMS, which is a database of environmental information that is accessible by oil and gas operators and by the regulator DECC (Department of Energy & Climate Change). We also regularly report our SHE performance via monthly and quarterly internal reports and contribute to Canadian Natural's annual Stewardship Report to Stakeholders (available via www.cnrl.com).



5 ENVIRONMENTAL PERFORMANCE

The environmental performance charts below have been compiled using EEMS data to ensure consistency of reporting.

5.1 ATMOSPHERIC EMISSIONS

The majority of power generated on CNRI's offshore installations is from gas-fired turbines, with a smaller amount of diesel also used in generators when fuel gas is not available. CNRI continues to look at emissions reduction opportunities identified in installation specific energy assessments, as well as emissions reduction opportunities identified by both on and offshore personnel, including the optimisation of flare rates through flare purge studies and the re-trimming of valves.

CNRI is a member of the EU Emissions Trading Scheme, which seeks to reduce CO₂ emissions using a 'cap and trade' scheme. During 2014, CNRI installations emitted 0.89 million tonnes of CO₂, compared with 0.96 million tonnes in 2013 and 1.04 million tonnes in 2012. The reduction in 2014 reflected cessation of production operations on Murchison, although the platform has continued to use diesel for power generation, and a significant reduction in power generation emissions on the Tiffany platform, due to its being shut down for prolonged periods. These reductions more than offset the impact of the return of the Banff FPSO (note the Apollo Spirit is outwith the scope of the EUETS as it falls below the minimum installed power generation capacity threshold).

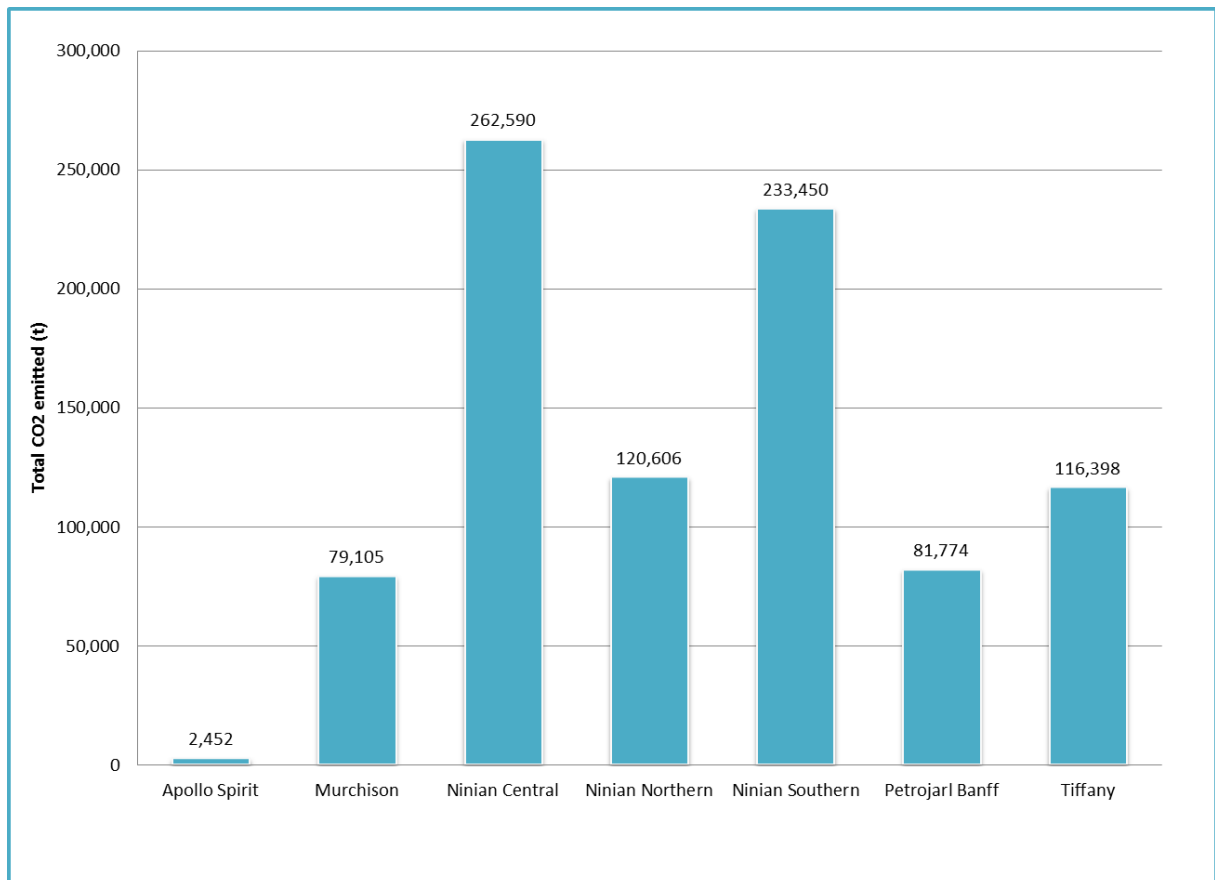


Figure 2 Total carbon dioxide emissions in 2014

CNRI restricts the flaring of gas wherever possible by using it in a variety of ways: produced gas is used for fuel, re-injected to provide reservoir support, used for artificial lift to production wells, and ideally, exported as sales gas. In some cases, however, an installation might not have a gas export route and would have no option but to flare its excess gas. Installations also need to maintain a minimum level of flaring for safety reasons. The amount of gas flared in 2014 (258 thousand tonnes) was slightly higher than in 2013 (204 thousand tonnes) generally reflecting higher flaring at the Ninian platforms (due to issues with gas compression availability).

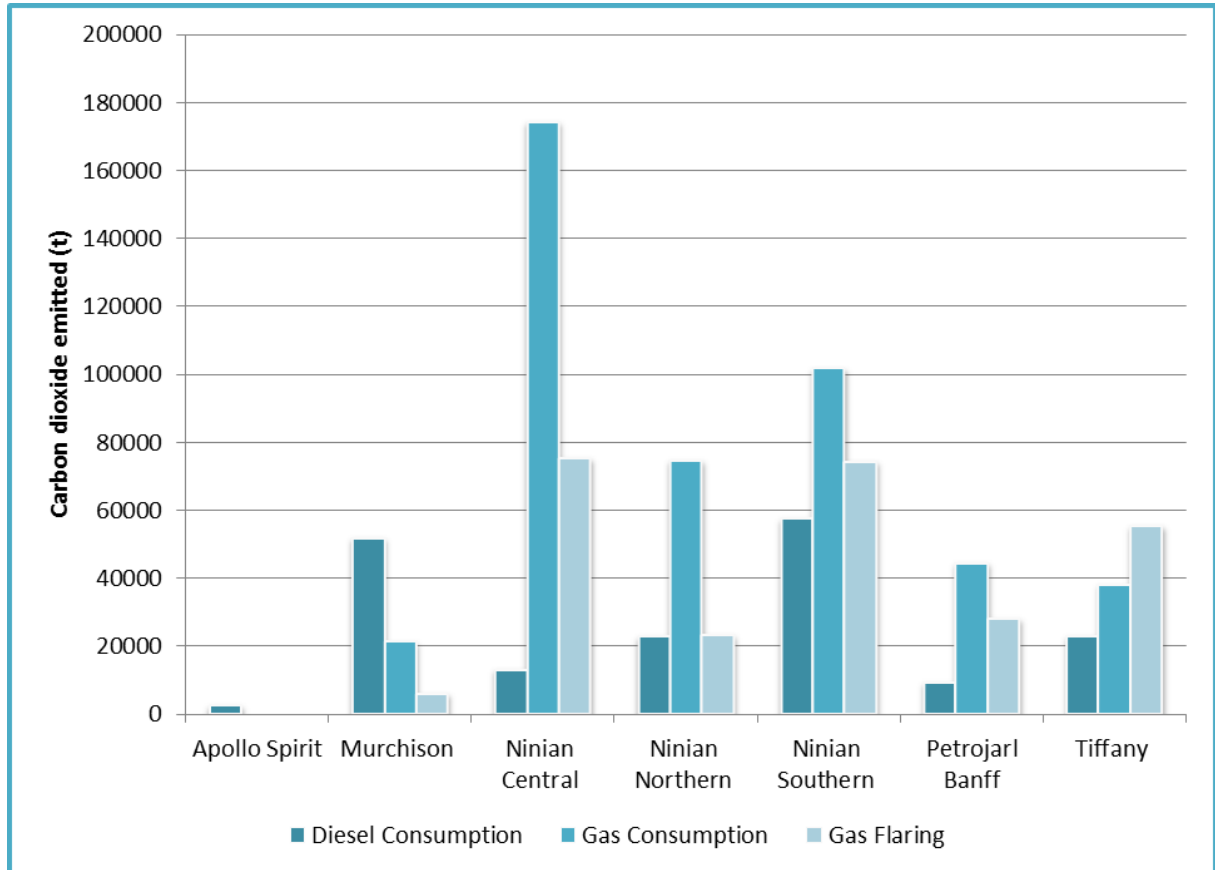


Figure 3 Sources of carbon dioxide emitted during 2014

In addition to CO₂, a range of other atmospheric emissions are regulated under the Pollution Prevention and Control (PPC) Regulations. Figure 4 shows our performance in 2014. The majority of these emissions are derived from power generation on the installations.

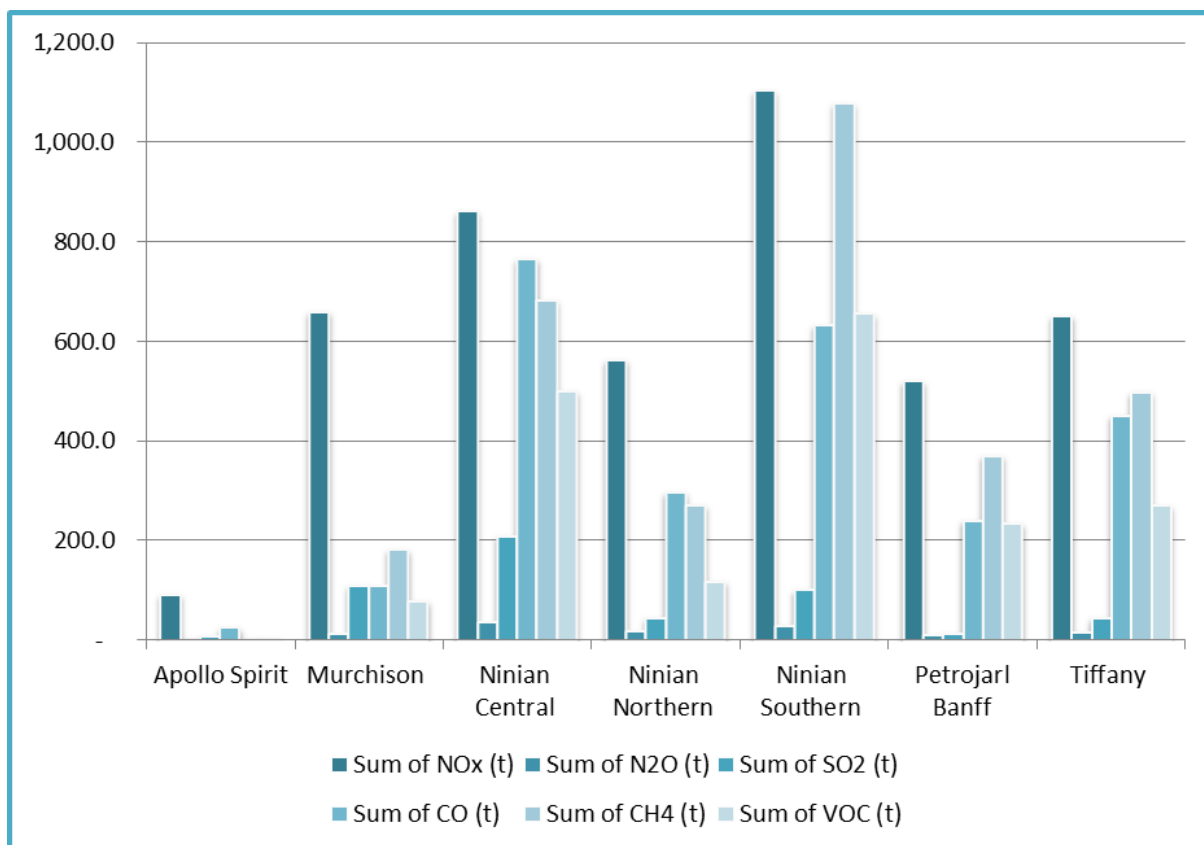


Figure 4 Other atmospheric emissions during 2014

5.2 OIL DISCHARGED IN PRODUCED WATER

Oil and gas reservoirs have a natural water layer (called formation water) that, being denser, lies under the hydrocarbons. As reservoirs become depleted of oil and gas, seawater is usually injected into the reservoirs to support hydrocarbon recovery. Both formation and injected waters are eventually produced along with the hydrocarbons and, as an oil field matures, the volume of produced water tends to increase as the reservoir fills with injected seawater. The ‘water cut’ or amount of water in produced fluids from wells on mature assets can be >95% by weight compared with the oil content.

On CNRI’s offshore installations, produced water is separated from hydrocarbons in gravity separators and treated to remove as much oil as possible before it is discharged to sea. Because produced water inevitably contains traces of oil, its discharge to sea is strictly controlled by the Offshore Petroleum Activities (Oil Pollution Prevention and Control) Regulations 2005, which define the average oil content of the water that may be discharged and place other limits on the amounts of oil that may be discharged (for example).

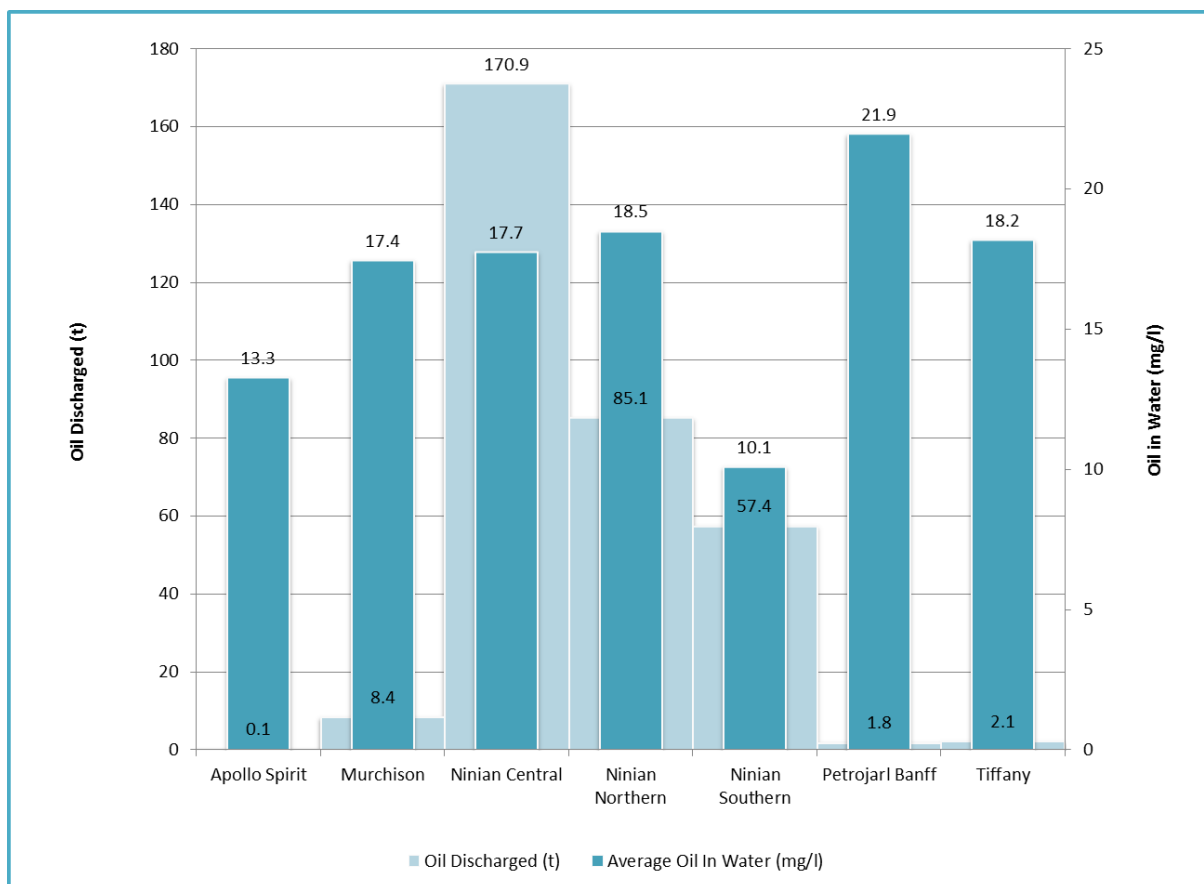


Figure 5 Average oil in water quality and oil discharged in 2014

In 2014, the amount of oil discharged in produced water from CNRI platforms (326 tonnes) was almost 100 tonnes less than in 2013 (427 tonnes). Average quality of produced water discharged reduced slightly since 2013, but was still significantly below the levels achieved in previous years (for example 19.7 mg/l in 2010). Volumes of produced water discharged were significantly lower however, reflecting issues with water injection (21 million cubic metres in 2014 compared with 29 million in 2013 and 32 million in 2012). Produced water quality on each platform over the year was below the legal limit of 30 mg/l for the monthly average set by the Regulator and all except the Petrojarl Banff were below CNRI’s internal target of 20 mg/l: the FPSO historically averaged slightly above 20 mg/l, however, and its performance since start-up is in line with previous years.

5.3 SOLID WASTE GENERATION AND DISPOSAL

CNRI has to ensure that the segregation, transportation and eventual disposal of wastes generated during their offshore operations are managed in accordance with legislative requirements. The Environmental Protection Act 1990 introduced the ‘Duty of Care’ with which all waste producers must comply. Hazardous waste that might be harmful to human health or the environment (also known as Special Waste) is governed by specific legislation, which includes strict handling and disposal requirements.

The offshore industry as a whole recycles a large fraction of its waste and CNRI works closely with its waste management contractor to identify recycling routes for as much of its waste as possible. CNRI currently recycles metal, wood, paper and cardboard, glass, plastics, aluminium cans and

empty oil/chemical drums. CNRI is also working to reduce the volume of waste generated offshore, especially of hazardous wastes such as oil-contaminated rags and other similar items.

CNRI's waste management contractor conducts regular random skip audits and provides monthly lists of 'observations' which allow focus on improvements in offshore waste management.

Operational waste excludes all drilling-related waste (i.e. drill cuttings and tank washings). Total solid operational waste generated in 2014 increased to 2,414 tonnes compared with 1,657 tonnes in 2013. The amount of waste sent to landfill was 611 tonnes compared with 571 tonnes in 2013 but as a proportion of wastes generated (25%), this was a significant improvement (35% in 2013). In total, 1,702 tonnes of waste were routed either for reuse, recycling or waste to energy in 2014, accounting for 71% of the total waste generated. This included a substantial amount from Murchison decommissioning activities: CNRI is committed to reusing or recycling as much as possible of the installation (topsides and jacket) and in 2014 we achieved a recycling rate of over 86%.

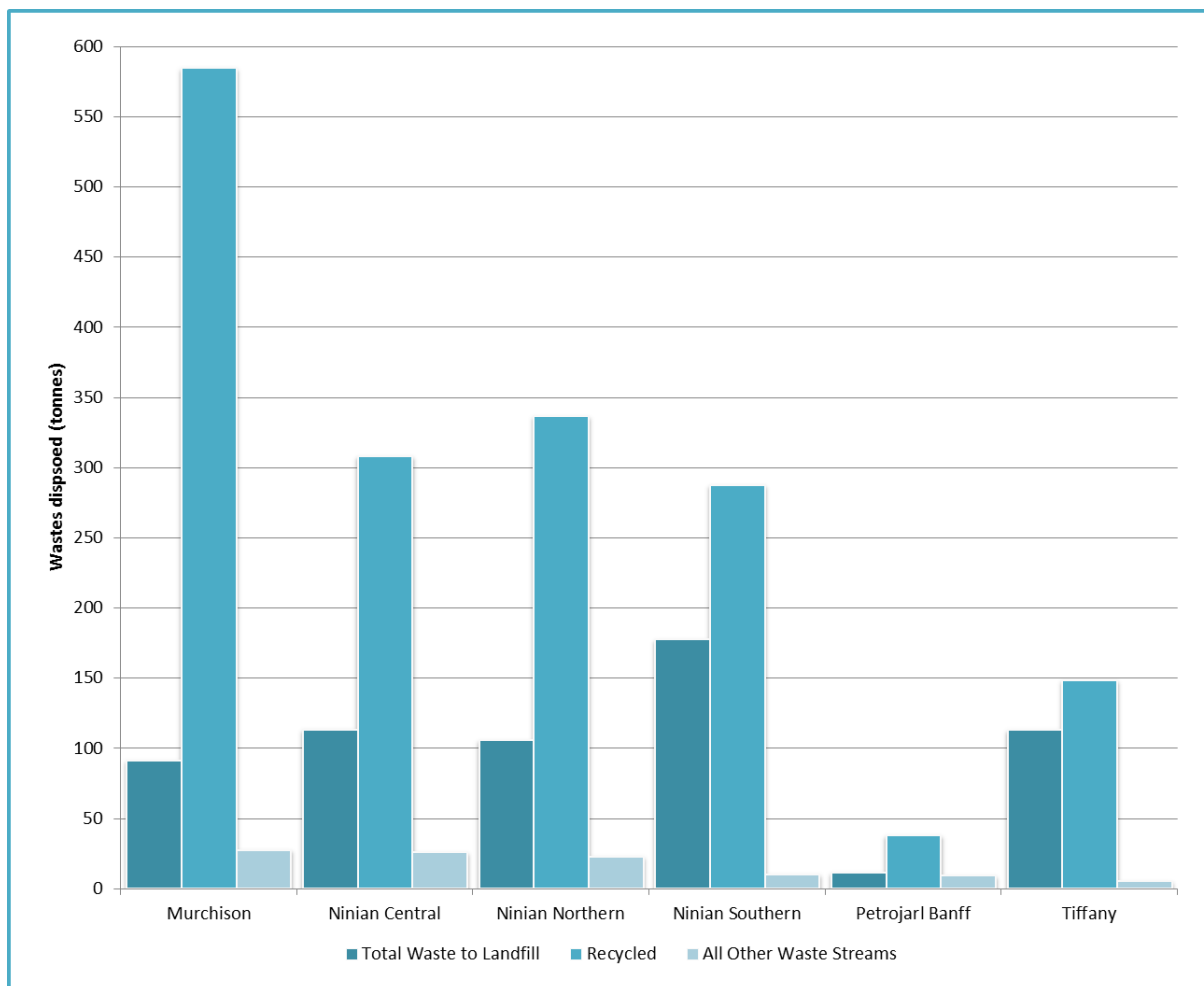


Figure 6 Operational waste disposed of during 2014

Drilling waste is primarily made up of drill cuttings and tank washings. In 2014, drilling operations were conducted on each Ninian platform with a small amount (<7 tonnes) of drilling-related waste also generated on Murchison during the well decommissioning. In total 1,564 tonnes of non-

hazardous drilling waste was sent onshore for treatment and disposal: 1,051 tonnes of treated cuttings were sent to landfill with 514 tonnes of recovered oil and water being recycled/ re-used.

5.4 CHEMICAL USE AND DISCHARGE INTO THE MARINE ENVIRONMENT

All chemicals used offshore during oil and gas production must be approved by the Centre for Environment, Fisheries and Aquaculture Science (CEFAS), and their use and discharge is controlled under the Offshore Chemicals Regulations 2002. Each chemical used must be risk assessed by the operator as part of the permitting process, and any chemical which has particular hazardous properties (such as low biodegradability or high toxicity) requires additional justification for its use.

A wide range of chemical products are used during drilling operations, including complex fluids known as drilling muds, which are used to cool and lubricate the drill bit, to remove rock cuttings from the well bore, to prevent the hole from collapsing, to cement casings and clean wells. Chemicals are also used during intervention and workover operations, as well as during emergencies, for example to prevent losses of drilling fluids to the formation.

The amount of chemicals used and discharged during drilling and intervention operations is a reflection of the number of operations undertaken during the year. The vast majority of these chemicals were not discharged to sea, however, as seen in Figure 7.

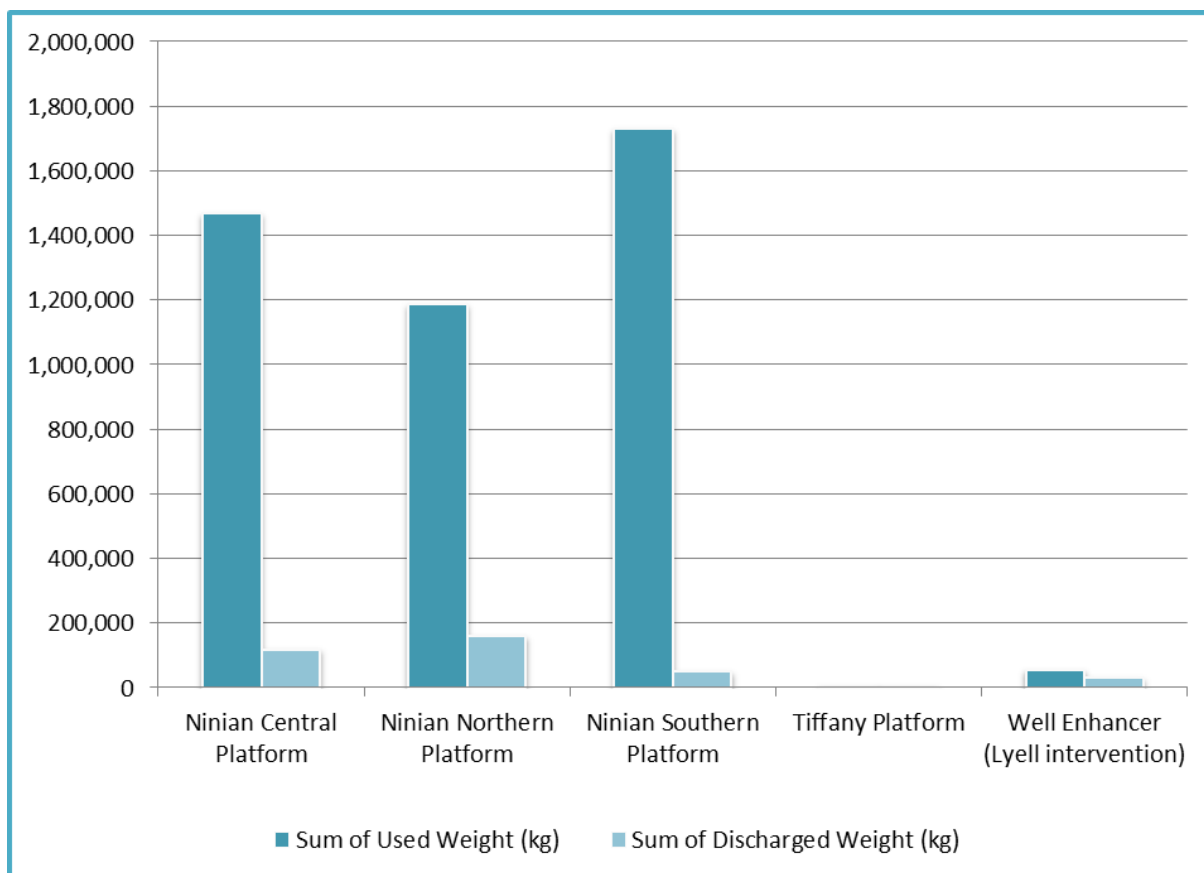


Figure 7 Drilling and well intervention chemical usage during 2014

Production chemicals have a number of functions, including corrosion, scale and hydrogen sulphide inhibitors and biocides to prevent microbial souring of reservoirs. Also deoilers and demulsifiers to help to separate oil from produced water.

The amounts of production chemicals used and discharged during 2014 were similar to 2013 and 2012, (within 10%) with the return of the Banff FPSO balanced by a reduction in chemical use on Murchison following cessation of production (Figure 8).

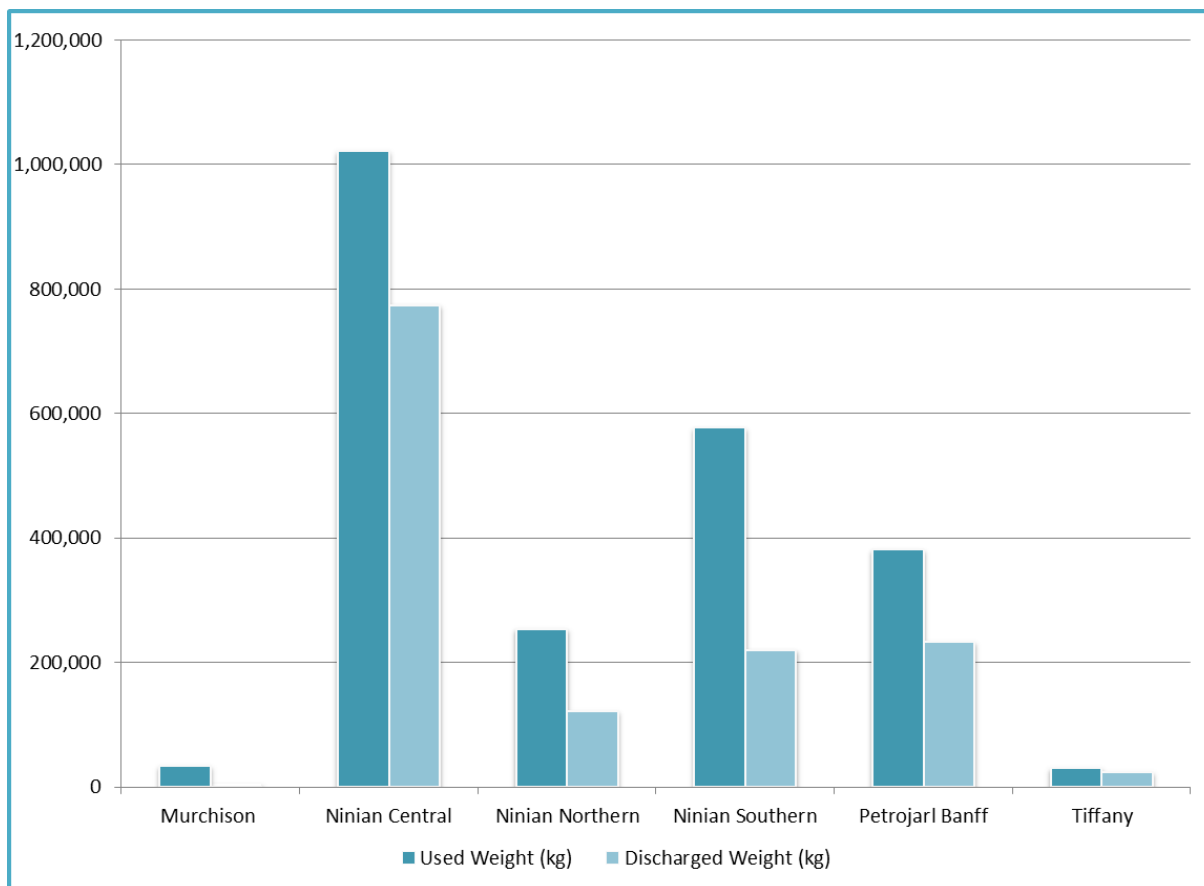


Figure 8 Production chemical usage and discharge during 2014

During 2014, six chemicals with components marked for substitution¹ were used by CNRI. The vast majority of the production chemicals used had no substitution warning associated with their use (Figure 8); over 70% of the amount of chemicals discharged during CNRI’s operations were classed as Posing Little or No Risk to the marine environment (PLO in Figure 9) or had no warning label associated with them (‘others’ in Figure 9).

¹ *An offshore chemical carries a substitution for a number of reasons including (but not limited to):

- The chemical is listed in Annex 2 of the OSPAR Strategy with regard to Hazardous Substances; or
- The chemical is inorganic and has a LC50 or EC50 < 1 mg l-1; or
- The chemical has a biodegradation result < 20% during 28 days.

One chemical with a substitution warning was removed from the Production Chemical Permits during 2014. This was a rig/deck wash. CNRI continues to work with its chemical suppliers to phase out the use of the most hazardous chemicals in their products. During late 2014/early 2015, a new turbine wash chemical without a substitution warning came onto the market place and conversion to this will go ahead during 2015. Further testing of alternative 'greener' hydrogen sulphide scavengers, deoilers and corrosion inhibitors continued during 2014. Compatibility testing for replacement of hydraulic fluids by those without substitution warnings also took place. It is intended that most CNRI hydraulic fluids will be replaced with non-sub warning products during 2015/2016.

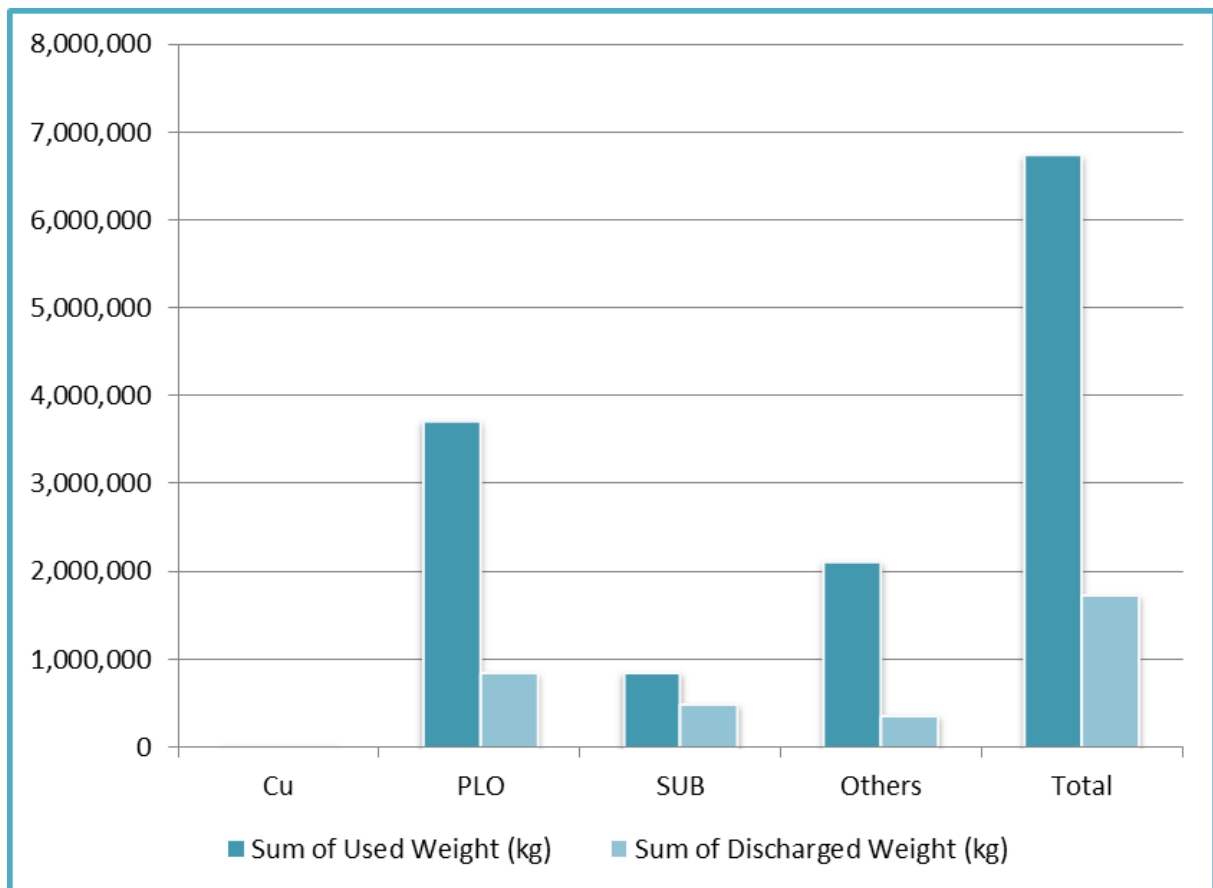


Figure 9 CNRI's operational chemical usage by CEFAS label during 2014

5.5 ACCIDENTAL RELEASES AND PERMIT NON-CONFORMANCES

All discharges of oil to sea, other than those regulated under an OPPC Permit, must be reported to the relevant authorities, regardless of volume. These reports are made on a PON1 (Petroleum Operations Notice 1) form, and include notification of accidental discharges of oils and chemicals to sea, as well as permitted discharge notifications, where a notification is required to report higher concentrations of oil in the sea (discharged under an OPPC permit), with the potential to cause environmental impact or affect other users of the sea (e.g. unusual sheens).

CNRI takes its responsibility to prevent accidental discharges of oil and chemicals to sea very seriously. Procedures are in place to prevent spills (e.g. during bunkering of diesel) and an Integrity Management System to ensure that hydrocarbons stay where they belong, namely within the process system on all installations.

CNRI investigates all accidental releases to sea and permit non-conformances to ensure that lessons are learned and actions are identified and carried out to prevent similar incidents in the future. Finally, government approved Oil Pollution Emergency Plans (OPEPs) are in place for all offshore installations and CNRI is a full member of Oil Spill Response Limited, the world’s largest spill response organisation.

The number of accidental releases during 2014 was 27, up from 17 in 2013, comprising 14 oil spills and 13 chemical spills. In total, 0.26 tonnes of oil were spilled to sea during 2014, a substantial improvement on 2013 when 1.28 tonnes were lost to sea. In Figure 10, ‘others’ were releases from third party vessels contracted to CNRI. In addition, we submitted 11 permitted discharged notifications.

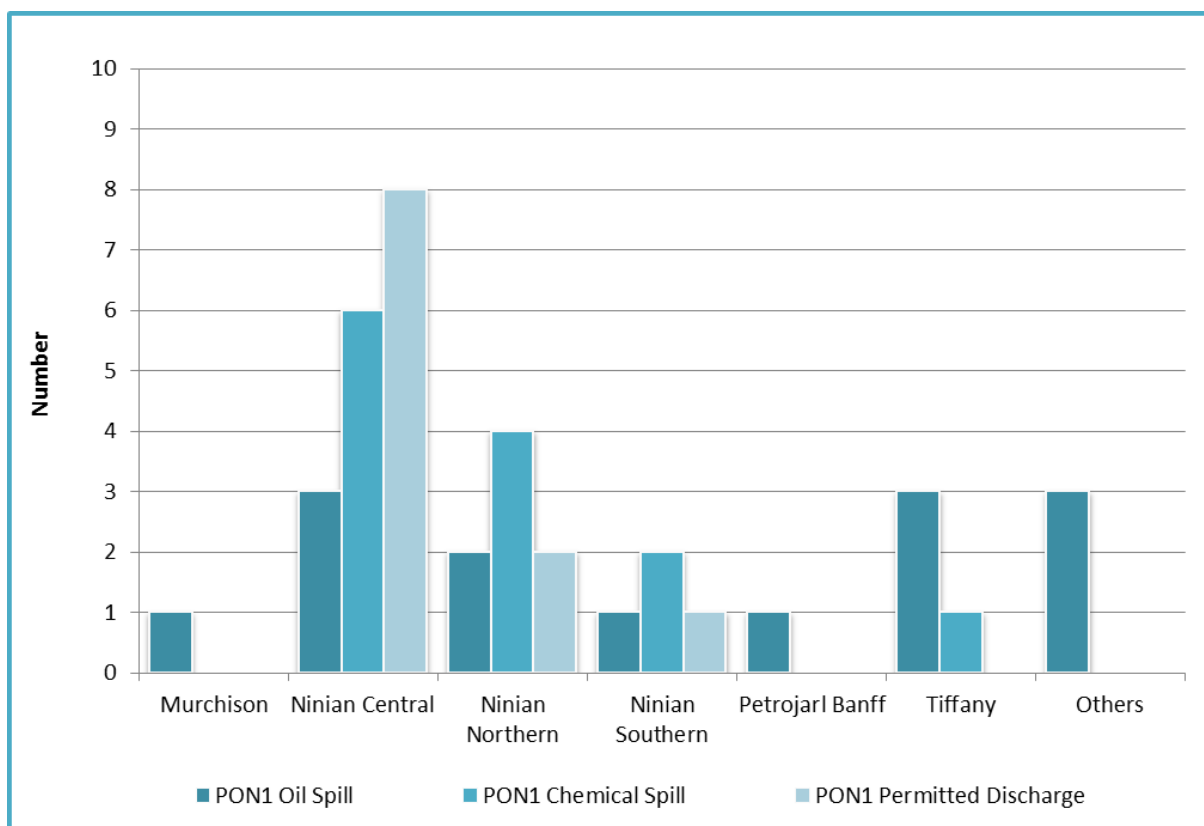


Figure 10 PON1 notifications during 2014

During 2014, approximately 50 tonnes of chemicals were accidentally released, the most significant incidents being associated with two subsea leaks of water-based hydraulic fluids.

In June 2014, a leak was identified on the Strathspey subsea control module (SCM). A programme of investigation and survey work was initiated and the failed SCM was replaced, other interim rectification actions were also carried out to reduce the leakage rate. DECC were kept fully informed of our actions throughout and the PON1 was finally closed out in December 2014, by which time 38.9 tonnes of hydraulic fluid had been lost to sea. Another hydraulic fluid leak, which appears to be associated with the subsea isolation valves (SSIVs) on the oil export pipelines from Ninian Central, was first noted in May 2014. A programme of subsea investigation was planned and carried out but by the end of 2014, however, the leak had not been definitively identified and a total of 10.8 tonnes of fluid had been lost to sea. As this incident is still under review by the Regulator, no further details will be provided here but assuming successful completion of the planned rectification work, they will be provided in our 2015 annual report.

An Environmental Risk Assessment carried out on both the above leaks indicated that the discharges of the hydraulic fluid would have been dispersed rapidly in the deep waters of the area to no effect concentrations and thus were not expected to pose a significant risk to the marine environment.

The PON1 permitted discharge notifications were primarily submitted by Ninian Central and were mostly related to produced water separation issues resulting in abnormal sheens or out of spec water quality. In total, 3.6 tonnes of oil was estimated to have been discharged during these upset conditions.

CNRI also submitted 25 non-conformance reports associated with Oil Discharge Permits issued under the Oil Pollution Prevention and Control (OPPC) Regulations. These were mostly administrative due to (for example) drainage pump failures or late submission of EEMS reports: six related to short-term oil in water quality issues (>100 mg/l at any one time).



6 2014 ENVIRONMENTAL TARGETS

CNRI develops an annual SHE Improvement Programme for all of its operations. This programme includes targets for a series of leading and lagging performance indicators and sets out the means by which these are to be achieved, as well as improving company SHE performance in general. A copy of the 2014 SHE Improvement Programme for the UKCS is included in this report (Section 7).

For 2014, six specific environmental targets were set:

- To spill less than 5.64 tonnes of oil to sea across all assets;
- To accrue fewer than 12 permitted oil discharge (OPPC) non-conformances;
- To achieve an average oil in water concentration of < 20 mg/l across all assets;
- To accrue fewer than 9 chemical discharge non-conformances including spills;
- To emit less than 0.94 Mega tonnes of carbon dioxide for the year;
- To maintain ISO14001 certification across all assets.


How did we perform against these targets?

- ✓ 0.26 tonnes of oil was lost to sea;
- ✗ Total of 25 OPPC non-conformances were raised;
- ✓ UKCS average oil in water concentration was 15.82 mg/l;
- ✗ Total of 18 chemical non-conformances;
- ✓ 0.89 Mega-tonnes of carbon dioxide emitted;
- ✓ Continued ISO14001 certification achieved following re-certification visits offshore and onshore: scope also extended to include decommissioning operations.


The 2015 SHE Improvement Programme for the UKCS includes key performance indicators for oil discharged in produced water, number and volume of reportable spills and leaks, and greenhouse gas emissions. Performance against these targets will be reported in the 2015 Environmental Performance Annual Report.



7 2014 SHE IMPROVEMENT PROGRAMME



UKCS Production Operations 2014 SHE & Operational Improvement Targets



Production Operations have developed a Safety, Health & Environmental (SHE) Improvement Plan to identify key areas for improvement in SHE performance, and the means of achieving the performance by setting expectations to deliver Safety, Health & Environmental goals and objectives.

The elements listed below are the key areas identified for SHE improvement in 2014:

MANAGEMENT LEADERSHIP & COMMITMENT

- Demonstrate leadership & commitment through offshore visits inline with CORP-PRO-002.
- Onshore Operations Line Supervision to lead by example & fully support the delivery of the SHE Improvement Plan.
- Operations Management team to undertake scheduled Achieving Safety Excellence offshore visits.
- Embed "Doing It Right" across all offshore assets and SMH.

WORKFORCE ENGAGEMENT

- Deliver bi-annual SHEAC Forums in May and November
- Deliver bi-annual Safety Reps Forums in May and November
- Support offshore Behavioural Safety programme & onshore events
- Support Step Change Workforce Engagement Survey & Findings

PROCESS SAFETY

- Embed Process Safety KPIs in the monthly SHEAC process.
- Complete 2014 POSM revisions plan.
- Complete 2014 Procedure revisions plan.
- Complete Tiffany Safety Critical element verification review.
- Complete review of five PSM elements (1/6/12/19/20).

ASSURANCE & SELF REGULATION

- Support the SHEMS Audit process
- Deliver TA Audit programme & conduct annual review of findings
- Support specific SHE audit of contractors.

CONTRACTOR MANAGEMENT

- Joint SHE Improvement Plans with agreed KPIs with strategic contractors and key vendors.
- Conduct SHE Performance review meetings with key contractors. Minute QPR issues and actions.
- Joint Quarterly Safety themes by Strategic Contractors SHE Professionals and endorsed by Strategic Contractors Management.

COMPETENCY & TRAINING

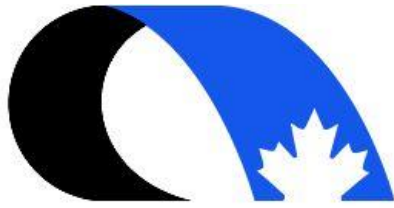
- Deliver Phase 1 of CNRI competency system programme
- Support team participation in relevant CNRI training courses (e.g. Advanced Safety Leadership, Incident Investigation, Operational Risk Assessment, Doing it Right, Root Cause Analysis, etc)
- Complete 50% of total competencies per job role
- Conduct an audit programme of key contractors' competence management systems proportionate with risk.

ENVIRONMENTAL MANAGEMENT & IMPROVEMENT

- In conjunction with Environmental team, continue assessment of environmentally-critical equipment.
- Continued support for ISO14001 certification

Leading Indicators	Measure	2014 Targets
Installation Annual SHE Plans	Completion against plan	100% completion
SHEMS Audits	Completion against plan	100% completion
Action Close-out	Open past due date on last day of each month	<8%
Safety Critical Elements (SCE)	% immediate repairs versus total failures	>60%
Remedial Action Requests (RAR)	New RARs raised by ICP across all installations	<41
ISO 14001 Implementation	All installations	Retain certification
Competence Management System Implementation	Completion against plan	>90% completion
Leading Indicators	Measure	2014 Targets
High Potential Incidents (HPI)	HPI per 200,000 man-hours	<0.11
RIDDOR Dangerous Occurrences (DO)	DO per 200,000 man-hours	<1.04
RIDDOR Hydrocarbon Releases	Occurrences in year	<3
RIDDOR Over 7 Day Injury LTI Frequency (LTIF)	LTIFR per 200,000 man-hours	<0.37
Total Recordable Injury Frequency (TRIF)	TRIFR per 200,000 man-hours	<1.32
Oil Spilled to Sea	Tonnes	<5.64
Oil Discharged in Produced Water	Annual average oil content (mg/L)	<20
Permitted Oil Discharge Non-conformances	Raised in year	<12
Chemical Discharge Non-conformances	Raised in year	<9
CO2 Emissions (Permitted under EU ETS)	All such emissions (million tonnes)	<0.940

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THE PREMIUM VALUE DEFINED GROWTH INDEPENDENT

