



Health, Safety & Environment Report 2013-2014

Safety and health	1
Environmental management	6
Environmental regulation	8
APPEA Health and Safety Awards	9
Safety Excellence Award	10
Environment Excellence Award	11
APPEA safety events	12



Safety and health

APPEA programs support excellence in the Australian oil and gas industry's health and safety performance.

APPEA works with members and key stakeholders to improve the efficiency and effectiveness of regulation, share best practices in addressing health and safety risks, and develop new approaches to improving health and safety performance.

A strategic agenda to deliver a step-change in safety performance was established in 2007 with the inaugural CEO Safety Leadership Forum. Since then, industry lost time injury rates have been reduced to one-third of 2008 rates (from 1.64 to 0.54 in 2013) despite activity almost tripling (54.3 million hours in 2008 to 154.4 million in 2013), demonstrating the desired breakthrough in performance delivery.

2013 health and safety performance

In 2013, activity across industry continued to expand – worked hours increased by 29 per cent, from 119.4 million to 154.4 million. Despite this increase, data reported to APPEA in 2013 showed a significant improvement in injury frequency rates:

- Reported hours worked by both employees and contractors increased by 29 per cent from the previous year.
- The number of lost time injuries per million hours worked was 0.54 which is 33 per cent lower than the lost time injury rate of 0.81 per million hours worked in 2012.
- The total recordable injury frequency rate was 23 per cent lower than the previous year, with a rate of 3.79 injuries per million hours worked.
- Most reported incidents occurred during construction, production and development drilling activities, similar to 2012.
- Most incidents continued to occur onshore – 92 per cent of reported incidents in 2013.

2013 CEO Safety Leadership Forum

The CEO Safety Leadership Forum comprises chief executives from exploration and production companies, major contractors and service providers.

At its 2013 annual meeting, the forum resolved to develop a new safety leadership program to bring together oil and gas companies, workers, contractors and regulators to reduce the risk of major accident events.

This initiative will transform APPEA's widely recognised and well supported "Stand Together for Safety" (STFS) brand from being an annual industry-wide stop-work safety event into an ongoing program.

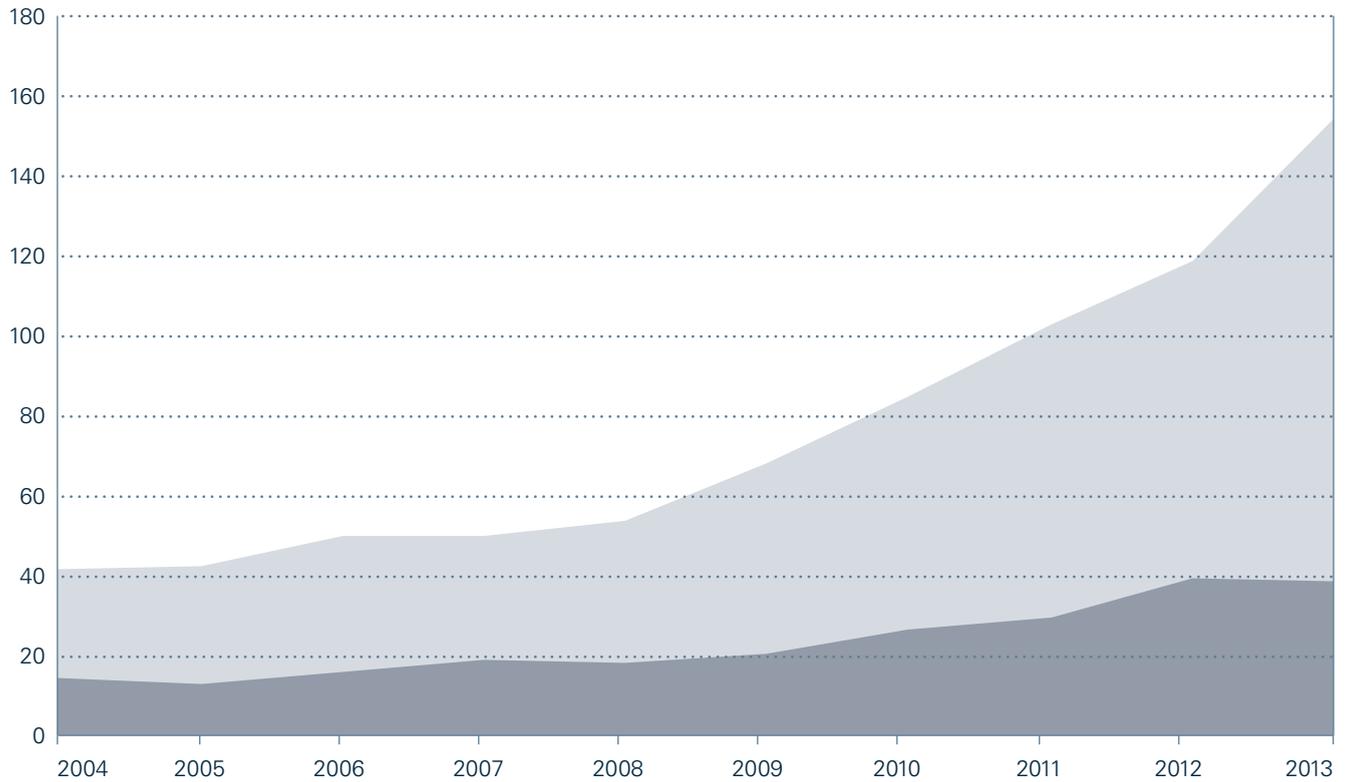
The initial priority for STFS is process safety. A video – "Process Safety – Who's Responsible" – was produced soon after the end of the financial year. It is intended to encourage informed conversations amongst all participants.

The next phase of the program will include building on the barrier concepts in the video, developing critical leadership behaviours for process safety, and creating materials for facilitated workshops to engage and enrol a broad variety of stakeholders.

A redeveloped STFS website will provide a portal for process safety information.

Other new materials, resources and toolkits are being developed and will be rolled out under the STFS leadership banner. These practical solutions will have industry-wide application.

Hours worked in the Australian oil and industry
millions



■ Work hours contractor ■ Work hours company

Source: APPEA Safety Performance Report – 2013 data.

Lost time injury frequency and total recordable injury rate
per million hours worked



— TRIR — LTIF

Source: APPEA Safety Performance Report – 2013 data.

Continued overleaf.

Total recordable injury rate - offshore, onshore, CSG
per million hours worked

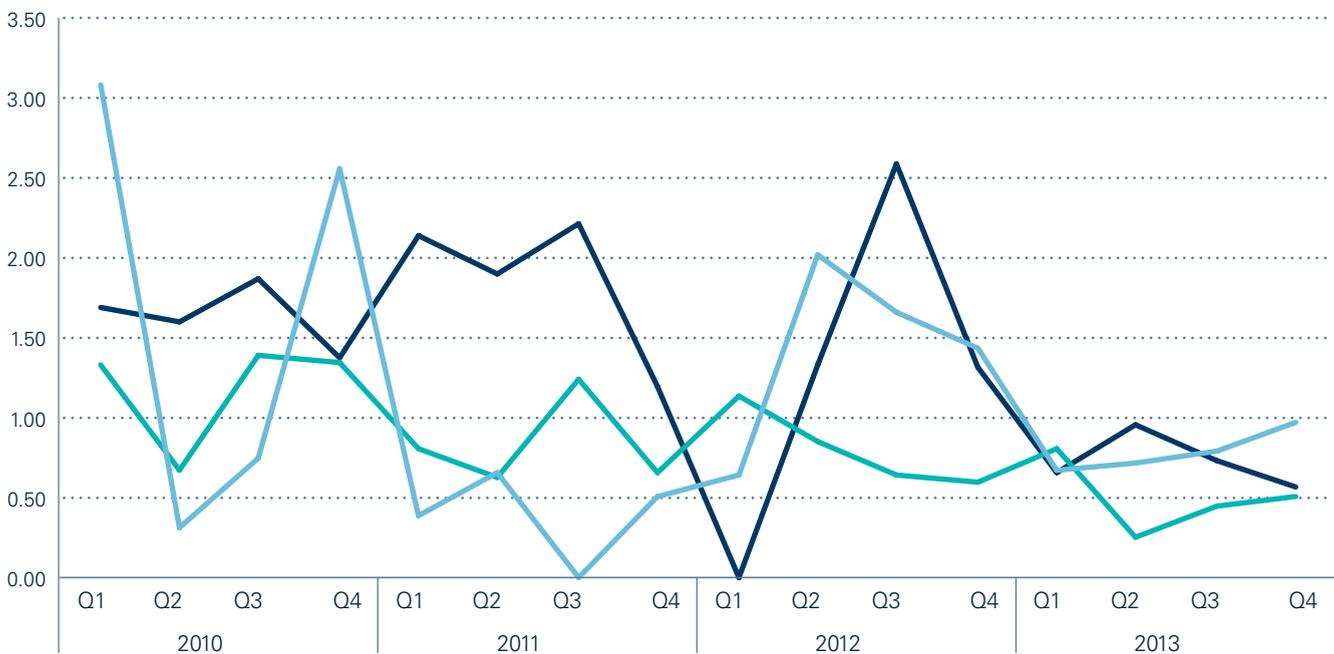


	2010				2011				2012				2013			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Offshore	7.24	7.33	10.50	8.00	6.41	7.40	0.95	4.61	4.74	6.67	8.43	8.13	6.75	6.49	5.69	4.21
Onshore	8.78	5.35	6.97	7.38	5.64	4.99	6.53	6.19	7.95	5.09	4.59	4.80	4.96	2.46	3.46	4.39
CSG	5.40	5.86	6.71	9.10	5.75	6.65	10.40	6.69	3.49	7.06	10.60	8.66	6.30	4.29	5.89	5.05

— Offshore — CSG — Onshore

Source: APPEA Safety Performance Report – 2013 data.

Lost time injury frequency – offshore, onshore, CSG
per million hours worked

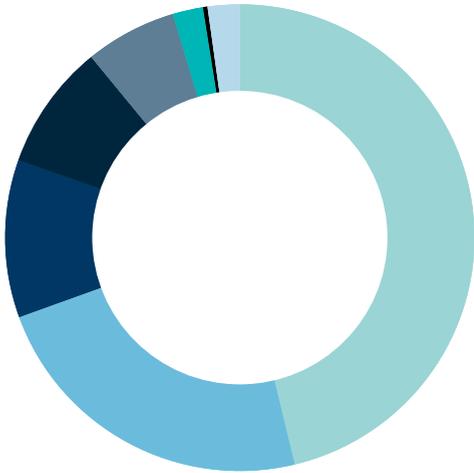


	2010				2011				2012				2013			
	Q1	Q2	Q3	Q4												
Offshore	1.69	1.60	1.87	1.37	2.14	1.90	2.22	1.20	0.00	1.33	2.58	1.32	0.65	0.95	0.73	0.57
Onshore	1.33	0.67	1.39	1.35	0.81	0.62	1.24	0.66	1.14	0.85	0.64	0.60	0.80	0.25	0.45	0.51
CSG	3.08	0.31	0.75	2.55	0.38	0.66	0.00	0.50	0.64	2.02	1.66	1.44	0.67	0.71	0.79	0.97

— Offshore — CSG — Onshore

Source: APPEA Safety Performance Report – 2013 data.

Incidents by activity
(% of incidents with each activity)



	NUMBER	%
Construction, commissioning, decommissioning	270	46.2%
Drilling, workover, well services	136	23.2%
Production operations	64	10.9%
Maintenance, inspection, testing	51	8.7%
Ancillary support	37	6.3%
Seismic / survey operations	12	2.1%
Transport - people	2	0.3%
Transport - other	13	2.2%
Total	585	

Source: APPEA Safety Performance Report – 2013 data.

Workers at the Mutineer-Exeter field.
Photo courtesy Santos.



Continued overleaf.

Safety training programs

APPEA has continued to work hard to ensure the Common Safety Training Program (CSTP) and the Safe Supervisor Competence Program (SSCP) are underpinned by clear, efficient and consistent processes so that they achieve high standards.

The CSTP and SSCP provide a fully immersive and simulated style of learning that directly links the training environment and the workplace — so that the same safety behaviours and culture are delivered and reinforced in learning, demonstration and assessment.

Both programs are overseen by the Industry Advisory Group (IAG) established by APPEA. IAG members are drawn from various part of the industry on a voluntary basis. CSTP is now recognised as a world leader because of its fully immersive, workplace simulation and hands-on approach to developing safety skills and culture from the onset of a worker’s career in the oil and gas industry, backed up by workplace demonstration of key safety behaviours.

Over the last 12 months CSTP has achieved enormous growth in take-up across the Australian offshore oil and gas industry.

The substantial take up and positive experience built up in both programs, is leading to increased interest from across industry in Australia and even internationally.

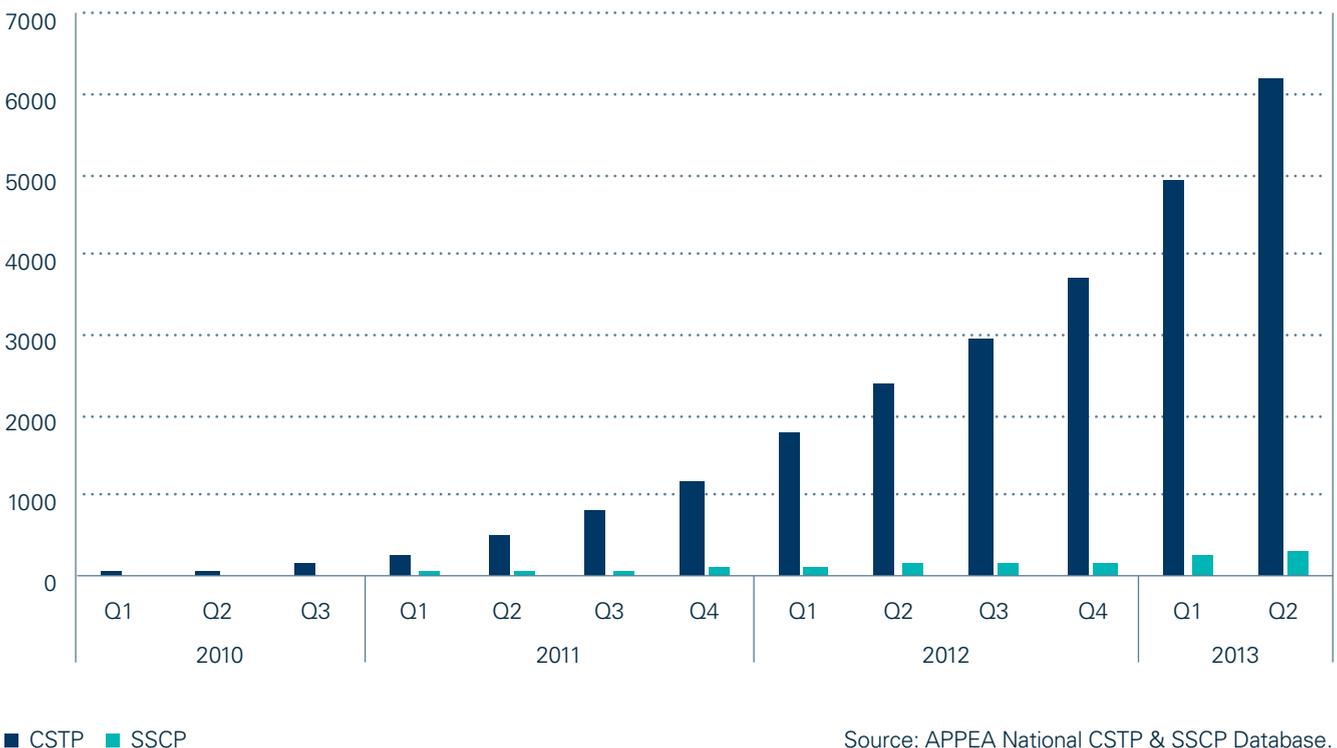
High potential incidents

Industry continued to share high potential incident information, root causes and lessons learned in order to help guard against repeat failures.

APPEA maintains a database of lessons learned for use by industry. In 2013-2014, these incidents were shared with the international Oil and Gas Producers Association to leverage further value from this best-practice Australian approach.

APPEA also facilitates a peer-to-peer sharing of these lessons via the members of its Health Safety and Operations Committee.

Total CSTP & SSCP participants



Source: APPEA National CSTP & SSCP Database.

Environmental management

APPEA has coordinated efforts to further improve the industry's environmental performance.

In 2013-2014, APPEA worked with members and regulators to finalise responses to the 2009 Montara incident, which prompted an increased focus on oil spill preparedness and response.

Oil Spill Response Forum

The APPEA Oil Spill Response (OSR) Forum was established in 2013 to support joint industry initiatives and facilitate greater information sharing between OSR specialists.

A workshop convened in March 2014 identified five priority areas:

- A tool to improve access to key OSR meta-data.
- An industry-wide assessment of OSR preparedness and capacity.
- A best practice guide to developing tactical response plans.
- A consistent approach to oil spill impact assessment and modelling.
- A common understanding of remote sensing and surveillance technologies.

The first of these priorities has been addressed with the start of the Industry-Government Environmental Meta-data (I-GEM) pilot project.

This will streamline access to a common meta-data set in order to increase efficiency of oil spill planning and response.

The benefits will include rapid identification of key environmental data sets during a major oil spill event and providing consistent access to the most up to date data by both oil and gas companies and government agencies.

Oiled Wildlife Response Group

In 2013-14, APPEA's Oiled Wildlife Response Group worked closely with Western Australian government agencies, Apache Energy and Vermilion Oil and Gas Australia to oversee the development of regional OWL response plans for northern waters off Western Australia.

These plans are now being integrated with those of the WA Department of Parks and Wildlife.

The group also produced an operational OWL response manual and facilitated AMOSC's uptake of a containerised mobile OWL Response centre for use by all of its members across Australia.

Dispersant Use Working Group

In 2013-14, APPEA's Dispersant Use Working Group issued a best practice guidance document for oil and gas operators to plan for the use of dispersants in Australia, as a response strategy to marine oil spills.

This document describes a process to deliver assessment and documentation of a chemical dispersant response strategy.

There is an increased focus on oil spill preparedness and response.



The industry has increased research and stakeholder engagement to deal with issues such as seismic surveys.

Marine Environmental Science Program

In 2013, the industry's investment in environmental research was organised into the Marine Environmental Science Program, which brings together several discrete projects. The first of these – "Underwater Sound and Vibration from Offshore Petroleum Activities and its Potential Effects of Marine Fauna: An Australian Perspective" – was awarded to Curtin University's Centre for Marine Science and Technology. Work began in March 2014. The program was expanded during the year to develop technical communication products for use with key stakeholders (such as technical reports, fact sheets and web pages).

Stakeholder engagement

In mid-2013 APPEA began engaging with four of Australia's peak Commercial Fishing Industry Associations – the Northern

Territory Seafood Council, Seafood Industry Victoria, WA Fishing Industry Council, and the Commonwealth Fisheries Association, aiming to reduce the burden of stakeholder engagement between these parties. This led to a draft Memorandum of Understanding that lays out a three-tiered framework:

- A cross-industry roundtable process to facilitate improved communication.
- The development of joint policy frameworks.
- The identification, development and delivery of joint cross-industry opportunities.

APPEA's Environment Committee also established a Fishing Industry Engagement Reference Group. This has representation from nine member companies that provide guidance to the participants in the cross-industry roundtable process.

Environmental regulation

APPEA worked with governments throughout 2013-14 to achieve more efficient environmental regulation regimes.

One-stop shop

The Federal Government has committed to delivering a 'one-stop shop' for environmental approvals to improve Australia's investment climate. If achieved, this will simplify the approvals process for businesses and investors while maintaining high environmental standards.

In 2013, APPEA advocated for the Commonwealth Government's accreditation of the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) to fulfil the requirements of the Commonwealth Environment, Protection and Biodiversity Conservation Act 1999 (EPBC Act). NOPSEMA is now the sole assessor for environmental assessments of petroleum activities in Commonwealth waters.

APPEA has also supported the ongoing dialogue between the Commonwealth, and the States and Territories for the delivery of a one-stop shop for onshore environmental approvals under the EPBC Act, through a series of bilateral agreements.

Significant efficiency gains can be made by achieving robust environmental approvals through consistent regulatory practices. There is also a direct benefit to the environment as regulatory streamlining lets companies put more resources into environmental management and less into administering environmental approvals.

APPEA will continue to advocate in all jurisdictions for the continuation of this significant national regulatory streamlining process.

Water trigger

The "water trigger" introduced into the EPBC Act before the last federal election addresses political rather than environmental objectives.

The law requires Commonwealth approval of coal seam gas projects and large coal mining developments. It was developed without any regulatory impact statement.

It covers only the activities of resources companies while ignoring the vast majority of water users. It duplicates existing state laws, requires new resource sector project proponents to pass both federal and state environmental assessments, and adds unnecessary layers to approvals processes that can increase project costs by millions of dollars.

Throughout 2013-14, APPEA has strongly advocated for the repeal of these amendments and has worked closely with Australian Government agencies to limit the extent of the regulatory burden of the implementation of the water trigger, as far as practicable.

Financial assurances

The Offshore Petroleum and Greenhouse Gas Storage Amendment (Compliance Measures No. 2) Act 2013 enshrines the "polluter pays" principle.

This compels titleholders to demonstrate what has been commonly referred to as a Financial Assurance, before environmental plans can be approved.

The draft regulations presented to the industry in late 2013 impose significant additional administrative burden on titleholders well above what APPEA believed to be the original intent of the legislation.

APPEA has been working closely with its members and the Commonwealth Department of Industry, and liaising with NOPSEMA to develop a practical alternative – a set of compatible industry and regulatory guidelines that will allow titleholders to make a rapid and efficient determination of the assurances they must demonstrate to the regulator.

Constructive dialogue between government and industry has led to a robust outcome while keeping administrative burden to a minimum.

APPEA expects that agreement on the guidelines will be reached by all parties in 2014-15.

APPEA Health and Safety Awards

The 2013 APPEA Health and Safety Awards were presented at the Conference and Awards Dinner.

The winner was Weatherford Australia for its Rig 9 RADAR Rap, which used music and humour to push a strong safety system message.

During a site visit to meet the crews, Weatherford senior executives overheard the crew of Rig 9 rapping about RADAR (Recognise, Approach, Discuss, Agree, Report).

The crew had incorporated the RADAR definitions into an entire song on their own initiative, mainly in order to help the younger members of the crew.

The end result was a music production team visiting Rig 9 to film and produce the rap video.

The response from industry has been overwhelming. Many companies now use the video in their inductions.

Weatherford has seen health and safety performance on its rigs steadily improving since the launch of the RADAR Rap. The rap video can be found on YouTube.

Apache Energy's submission, Giving and Receiving HSE Feedback, was highly commended.

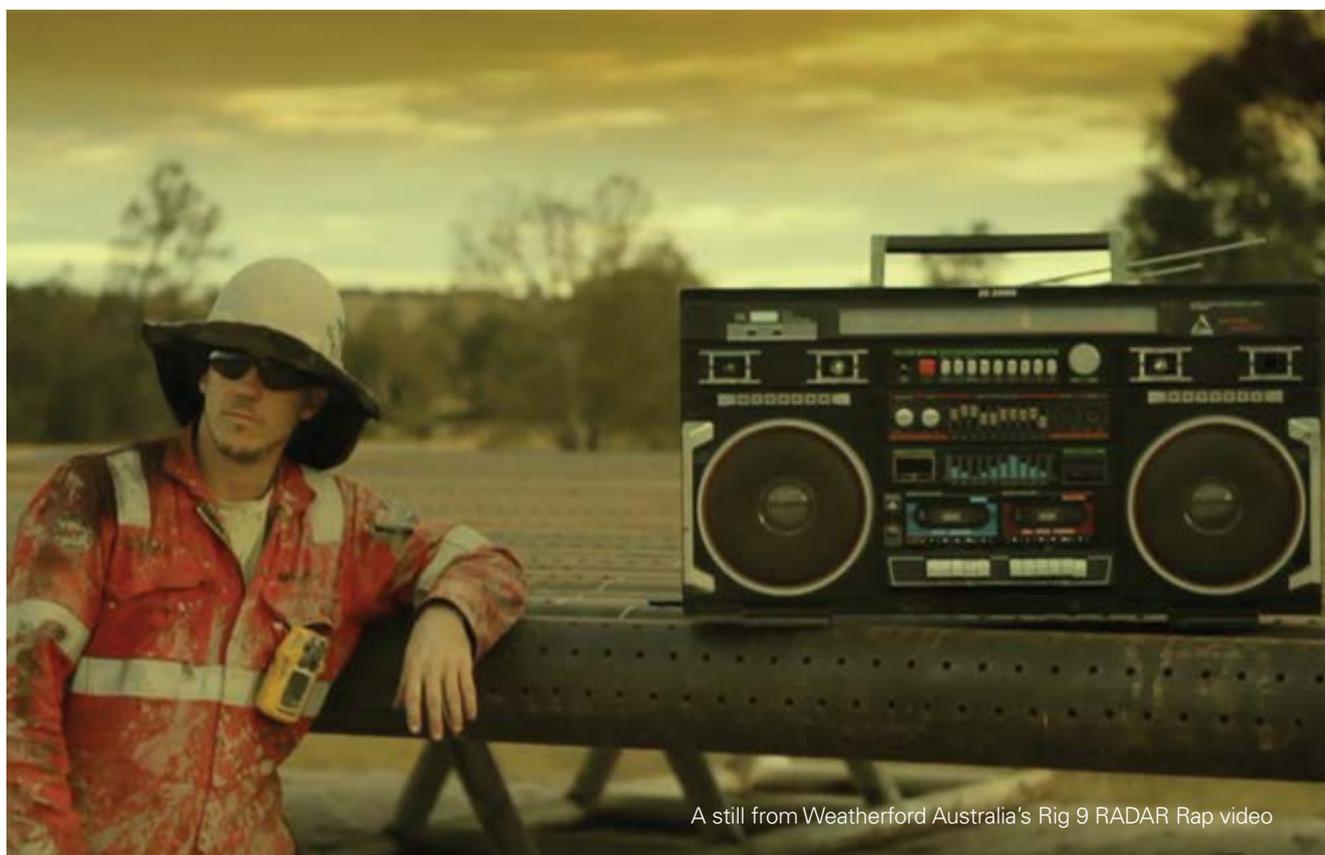
All finalists' submissions were displayed in the poster presentation in the exhibition area.

The Industry Choice Award was determined after the delegates had the opportunity to vote for their favourite initiative.

The winner of the Industry Choice Award was Weatherford for Rig 9 RADAR Rap. Esso Australia was a close runner-up for its Elevated Helicopter Inspection Platforms.

APPEA HSR of the Year Award

This award recognises an outstanding Health & Safety Representative in the Australian oil and gas industry who has made a valuable contribution to the health and safety of fellow workers. The recipient was Sean Turnbull, a process operator at Santos's Tirrawarra site in the Cooper Basin.



A still from Weatherford Australia's Rig 9 RADAR Rap video

2014 Safety Excellence Award



Esso Australia received the 2014 APPEA Safety Excellence Award at the APPEA 2014 Conference Dinner in Perth on 8 April.

The judges found that Esso Australia had been outstanding in several key areas – prevention of major accidents, safety culture, workforce engagement, and industry safety leadership.

In 2013, the company worked to complete the Kipper Tuna Turrum project in Bass Strait.

This saw a new offshore production facility – Marlin B – beginning production in October.

Despite the concentrated effort and pressure involved with building a major project, Esso Australia achieved a record year in its safety statistics.

It posted a total recordable injuries rate of just 1.4 incidents per million work hours.

This reflects the efforts its entire workforce made to prioritise safety.

Esso also screens its contractors on an ongoing basis to ensure that they are aligned with the company's safety focus and fully integrated into its safety programs.

Esso's contractor performance is in line with that of its own, reflecting the effectiveness of this approach.

Environment Excellence Award

A perentie lizard on Barrow Island.



Chevron Australia was presented with the Australian Petroleum Production & Exploration Association (APPEA) Environment Excellence Award at the APPEA Conference Dinner in Perth on 8 April 2014.

The judges concluded that the company demonstrated overall excellence against a broad suite of criteria.

Chevron's Operational Excellence Management System enables employees, team leaders and senior staff to evaluate environmental performance, seek continuous improvement and strive for environmental excellence.

The company also engages with independent expert panels, advisory committees and community reference groups to further improve its environmental planning and program delivery.

Chevron's formal Environmental Stewardship process communicates its core value of protecting the environment to the entire workforce.

This includes expectations that staff will:

- diligently implement environmental plans
- always consider environmental risks
- seek ways to demonstrate good environmental stewardship
- contribute to the ongoing improvement of Chevron Australia's environmental performance.

Chevron Australia has a long history of cutting-edge environmental management.

For more than 50 years, the company has operated on Barrow Island, a Class A Nature Reserve.

During this time, Chevron has successfully protected the island's conservation values.

Barrow Island continues to host both a major oil and gas hub and a rich and diverse ecosystem.

APPEA safety events

APPEA National Oil & Gas Safety Conference 6-7 August 2013, Perth

The 2013 APPEA National Oil & Gas Safety Conference was held at Crown Perth (Burswood). More than 400 delegates attended the event.

Keynote speakers included Professor Sidney Dekker who is acclaimed worldwide for his groundbreaking work in human factors and safety and Dr Ali Dale who has consulted extensively to the resources industry across 18 countries throughout Asia, the Pacific, South America, North America, Europe and Africa.

International speakers discussed changes in industry practice following the Macondo incident in the Gulf of Mexico.

Nine concurrent session streams covered process safety, human factors, safety culture and leadership, occupational health, onshore safety, emergency response, and technical and operational matters.

HSR Forum 5 August 2013, Perth

The 2013 HSR Forum was held at Crown Perth, immediately preceding the APPEA National Oil & Gas Safety Conference. It attracted almost 200 delegates.

The program provided several thought-provoking presentations, as well as many opportunities for engagement, including an interactive role play about improving safety, one act at a time, and panel discussions on fatigue, heat stress and teams, routine and change.

