

THE REGULATOR

2024 - Issue 3



Decommissioning

Now and into the future



NOPSEMA
Australia's offshore energy regulator

About NOPSEMA

The National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) is Australia's independent expert regulator for health and safety, environmental management, structural and well integrity for offshore petroleum and greenhouse gas storage activities in Commonwealth waters.

Under the *Offshore Petroleum and Greenhouse Gas Storage Act 2006*, offshore petroleum and greenhouse storage activities cannot begin before NOPSEMA has assessed and accepted the required permissioning documents demonstrating how the activity will be managed to ensure the associated risks to the health and safety of the workforce are as low as reasonably practicable (ALARP) and risks and impacts to the environment are ALARP and are acceptable.

The Offshore Infrastructure Regulator (OIR) was established under the *Offshore Electricity Infrastructure Act 2021* to regulate work health and safety, infrastructure integrity and environmental management for offshore infrastructure activities.

For more information, visit our website at nopsema.gov.au.

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Offshore activity Q3 2024

I can't believe that the end of the year is already here. As 2024 draws to a close, I wanted to reflect on some of the successes and challenges NOPSEMA has experienced over the past 12 months across some of our key focus areas.

Decommissioning and the work we are doing to ensure the industry is meeting its obligations is one of those. One way we are doing that is by educating industry on the requirements and expectations around decommissioning - now and into the future.

This was the topic of our most recent Better Practice Forum, held in Perth in November, which attracted more than 80 guests and speakers. The forum zoned in on how government, industry, and NOPSEMA can all have a role to ensure decommissioning of offshore energy projects is conducted with minimal impact on the environment, and with the safety of offshore workers top of mind. It was also an opportunity to build on the success of previous forums and unite stakeholders to discuss challenges and developments, share insights, and implement better practices in future projects.

The topic of consultation, another key focus area for us, was also addressed during the forum. NOPSEMA requires titleholders to demonstrate how relevant requirements for decommissioning, including international conventions and standards, will be met in their Environment Plan (EP). We have been proactively engaging with them through EP assessment processes and other forums to provide advice on the requirements of consultation in EPs.

You can read more about the Better Practice Forum on page 6; we plan to hold further forums in 2025, addressing more key topics.

We have also been proactively engaging with titleholders and relevant persons, particularly First Nations people, to give advice and guidance on the broadened requirements, the environmental approval process and our role as regulator.

While the EP approval times remain at 12 to 13 months due to the increased complexity in consultation, it is hoped timeframes will reduce in the near future. To help resource this increased assessment effort, NOPSEMA has expanded its average staffing level involved in assessments by 12 per cent.



Message from the Chief Executive Sue McCarrey

This was funded through rearranging our resources, and the increase to our levies in the Cost Recovery Implementation Statement 2024-26.

As I have said before, safety is at the centre of everything we do at NOPSEMA, and we have a team of dedicated inspectors who help to ensure the safety of offshore workers and the environment.

Over the past year, our inspectors have observed an increase in incidents and complaints relating to vessel readiness for facility activities, in particular vessels that are new to the regime or have not operated within the regime for several years.

To help understand this trend, NOPSEMA conducted an after-action review which examined regulator data. The data revealed important insights that will benefit all vessel operators, oil and gas operators, subcontractors and vessel service providers.

You can read more about this on page 8.

It has also been a big year for the Offshore Infrastructure Regulator (OIR), especially since the Minister for Climate Change and Energy awarded the first feasibility licenses off Victoria and the Exposure Draft of the Offshore Electricity Infrastructure (OEI) Amendment Regulations 2024 was released for public consultation.

This month, the OEI Amendment regulations were tabled in the Australian Parliament and entered into force. This is a real milestone for the OIR.

These regulations amend the Offshore Electricity Infrastructure Regulations 2022 (OEI Regulations), which underpin the *Offshore Electricity Infrastructure Act 2021* (OEI Act), making operational provisions for management plans, design notifications, work health and safety, consultation requirements, safety and protection zones, and financial security under the OEI framework.

You can catch up on everything the OIR has been up to on page 20.

Looking forward to 2025, I am confident it will be another big year. I am looking forward to being able to share our new National Priorities with you. These will help us better address our key focus areas and benchmark our performance. I am also looking forward to the future challenges and successes the new year may bring.

Please look after yourself, your colleagues and your family and friends over the festive season. I hope you are all able to enjoy some well-deserved time off and come back re-energised for the new year.

Sue McCarrey
Chief Executive Officer

NOPSEMA hosts successful decommissioning forum

On 20 November 2024, NOPSEMA hosted a Better Practice Forum titled 'Decommissioning: Now and into the future'. The forum attracted more than 80 guests and speakers, including online attendees.

The forum addressed how government, industry, and NOPSEMA can ensure decommissioning of offshore energy projects is conducted with minimal impact on the environment and with the safety of offshore workers top of mind.

NOPSEMA CEO Sue McCarrey said that the forum provided a platform for industry experts to share insights, best practices, and the latest advancements in offshore decommissioning.

"Events like these bring stakeholders together from across government and industry to encourage collaborative discussions on sustainable decommissioning practices," Ms McCarrey said.

"Sharing successful strategies alongside common challenges helps us to maintain high safety standards and minimise environmental impact."

The morning session focused on policy and regulatory changes, titleholder consultation best practice, environmentally responsible decommissioning, and Indigenous engagement.

The afternoon discussion topics turned to the maintenance of structural integrity during late-life operations, managing the HSE risk interface between owners and contractors for property removal, and good practice for safe and responsible decommissioning.

Sue McCarrey said it was heartening to see forum participants network, share ideas, and deepen their understanding of decommissioning challenges.

"The speakers shared valuable insights which fostered meaningful dialogue and collaboration – it was great that the interactive Q&A sessions saw attendees delve deeper into topics of interest.

"We were driven to build on the success of previous forums and unite stakeholders to discuss industry trends, challenges and developments, share insights, and implement better practices in future projects."



Special thanks to all the presenters.

Allseas:

Evert Van Herel: General Manager

Amplitude Energy:

Keith Brand: Principal Completions Engineer

Chevron:

Matt Hewitson: Engagement Lead

Phillip Ligertwood: Engineering Manager

Department of Industry, Science and Resources (DISR):

Jen Simpson: Manager, Financial Assurance Policy (Decommissioning branch, Oil and Gas Division)

Shane McWhinney: General Manager, Northern Endeavour Branch

ExxonMobil:

Richard Perry: Decommissioning Manager

Shell:

Lindal Rohde: Indigenous Engagement Advisor – West

Woodside Energy:

Chris See: Decommissioning Delivery Manager

NOPSEMA:

Graham Blair: Deputy CEO Regulatory Operations

Cameron Grebe: Deputy CEO Strategic Regulation and Improvement

Wouter Pattynama: Executive Director Production

Alice Turnbull: Director Exploration and Development – Environment

Brian Richardson: OHS Regulatory Specialist Decommissioning – Safety

Claudio Pellegrini: Decommissioning Specialist





Vessel facility readiness for Australian operations

Over the past year, NOPSEMA inspectors have observed an increase in incidents and complaints relating to vessel readiness for facility activities, in particular vessels that are new to the regime or have not operated within the regime for several years.

NOPSEMA observed a similar trend in 2010 during the previous development boom, with a peak in incidents or issues relating to vessel readiness prior to or during Australian offshore activities.

Is history repeating itself, and why?

To help understand the trends, NOPSEMA conducted an after-action review which examined regulator data relating to vessel readiness. The data revealed several important insights that will benefit all vessel operators, oil and gas operators, subcontractors and vessel service providers.

These insights are outlined below, followed by a range of measures that can be taken to help reverse these trends and ensure ALARP.

Legislative knowledge

NOPSEMA inspectors have noted a recent trend in the under-reporting of dangerous occurrences and accidents which have then been uncovered during our offshore inspections.

It is thought that this is a result of operators coming into the regime for a short campaign without ensuring they have adequate knowledge of the legislative requirements.

The review found that in many instances operators said that they were not aware that the event type warranted a notification or needed to be reported, and there was a general lack of awareness regarding operator duties under the *Offshore Petroleum and Greenhouse Gas Safety Act 2006* (OPGGs Act) for all parties on a project, including a clear delineation of who oversees day-to-day operations on a given project.

Known issues not being addressed

The review found that known issues on a vessel, prior to entering Australia, were not being addressed in a reasonable timeframe or manner. Multiple examples of issues being left unresolved before starting facility activities were provided to our inspectors.

These included issues related to equipment maintenance such as significant gaps in maintenance records for safety critical equipment, as well as equipment that is not fit for purpose, and a lack of OHS risk management.

As a result, these issues either amplified during the offshore operations or caused a dangerous occurrence.

Crane wires

Ineffective steel wire rope monitoring and maintenance for a crane's mode of operation were common causes of several dangerous occurrences over the past year.

One such dangerous occurrence caused by a crane wire failure resulted in dropped equipment near live infrastructure, posing a significant risk for a loss of containment. The wire's failure was directly attributed to a lack of greasing, inspection and maintenance to ensure the wire was discarded with an appropriate margin of safety.

Several similar events involving vessels new to the regime showed a trend in lack of greasing, inspection and maintenance of crane wires.

Quality of safety cases and implementation of control measures

Over the past 12 months, a number of submitted safety cases have failed to meet the requirements of the safety regulations. Many were submitted with important aspects overlooked, integral parts missing or misaligned links.

NOPSEMA inspectors also found that the safety case detail, particularly the facility description, was not accurate. For example, the safety case may describe extraction equipment for a welding workshop or a gas detection system that is not in place at the facility or is not as described.

The contents of the safety case should always accurately reflect what is in place offshore so the implementation process can help identify any potential gaps.

Considerations

The intent behind sharing these insights is not to single out any operator, but to foster a collective effort towards safety. It takes all stakeholders to create a safe working environment within our industry. By sharing knowledge and information, we can all contribute to this important goal.

Whether you are an oil and gas operator subcontracting a vessel or a vessel operator using a consultant to develop your safety case, you are responsible for vessel facility readiness under the legislation.

A safety case is a 'permissioning' document which once accepted by NOPSEMA, allows an operator to conduct activities as a facility.

The management team of an operating entity is required to understand their duties as an operator under the OPGGS Act and take responsibility for the accuracy of safety case development and its thorough and robust implementation.

Here are some questions you can ask yourself before beginning to operate in the regime.

1. Are you conducting maintenance as planned for safety-critical equipment, such as the crane wire?
2. Have you cross-checked your commitments in the safety case against how work is executed (described activities), and how relevant equipment is functioning at the facility?
3. Have you considered listing your known issues, such as mould problems, equipment out of service, or outstanding maintenance tasks and including rectification of these issues in your vessel readiness plans?
Having a plan in place to identify and address any issues allows time to manage them without causing a safety concern or escalation during offshore operations. This proactive planning puts you in control and ensures a safer working environment.
4. Do you understand the occupational health risks your facility may impose and how they are managed?

Occupational health risks may sometimes be complex to see and understand because they are not always visible, such as fumes. You need to understand your plan to identify these risks, how they will be measured, monitored and controlled to prevent employees' exposures to unacceptable levels and bringing risk to as low as is reasonably practicable. Examples may include chemicals used for pipe coating on a pipelay vessel, welding fumes, radiation or radioactive equipment, and the quality of drinking water.

Development and recognition on offer for HSRs

NOPSEMA, in partnership with Australian Energy Producers and the Australian Council of Trade Unions, is providing further opportunities for Health and Safety Representatives (HSRs) in 2025, with the HSR Forum returning in March alongside the inaugural HSR Awards.

The forum and awards will be held at the Perth Convention and Exhibition Centre on Wednesday 12 March, with attendance open to all offshore HSRs.

This year, the focus will be on the role of HSRs in collaboration and dispute resolution, as well as future occupational health and safety (OHS) challenges in decommissioning. It will also provide an opportunity for HSRs to interact with NOPSEMA officers, and exchange information about industry OHS and safety management trends and issues.

Chris Bourne, Director Exploration and Development – Safety said NOPSEMA wanted to show its appreciation for offshore workers who chose to undertake additional responsibilities of a HSR.

“The forum allows HSRs to hear from experts they generally wouldn’t otherwise and share their experiences with HSRs from other workplaces,” he said.

There will be a mix of interactive sessions throughout the day, including presentations on legislative updates that affect HSRs, and NOPSEMA’s complaints process. Mr Bourne said holding the forum every year “allows HSRs on different rosters an opportunity to attend”.

The HSR Awards add a new element to the day, with outstanding HSRs recognised for their commitment to continuous improvement, advocacy and leadership.

“Anyone currently engaged as an offshore HSR is eligible for the awards, and nominations can come from anybody working within the industry,” Mr Bourne said.

The awards will celebrate HSRs who excel in the identification and implementation of improvements that reduce OHS risk, set an example in advocating for OHS in the workplace, or promote and demonstrate leadership through their actions an important part of the HSR role.

HSRs are encouraged to book early for the free forum, as places are limited. Nominations for the HSR Awards close Friday 14 February.

Register for the HSR Forum



Submit a nomination for the HSR Awards



OHS hazards presented by exposure to welding fumes

Exposure to uncontrolled welding fumes and ultraviolet (UV) radiation from welding and allied processes can result in hazardous working environments and negatively impact workers’ health.

The International Agency for Research on Cancer (IARC) has classified welding fumes and UV radiation from welding as group 1 carcinogens – the agency’s designation for agents that carry sufficient evidence of carcinogenicity in humans¹.

Dutyholders have a responsibility under the Commonwealth *Offshore Petroleum and Greenhouse Gas Storage Act 2006* to identify, assess and control risk associated with occupational exposure to welding hazards at their facility.

NOPSEMA monitors dutyholder compliance by inspecting their performance when managing the risks and impacts associated with welding activities. This is done by identifying commitments in a safety case and undertaking inspections.

Recently, a planned inspection led to a dutyholder being issued an Improvement Notice after it was found that welding fumes, as well as gases and UV from welding, had not been adequately addressed by engineering controls at the facility.

Engineering controls such as welding fume extraction are considered the most effective preventative method for eliminating or significantly reducing exposure to hazardous materials.

However, inspectors found lower order controls such as personal protective equipment (PPE) had been relied on to limit exposure of workforce members to serious occupational health risks.

Guidelines and codes

Several countries including Australia have published guidance notes on controlling chemical and radiation hazards and have specific codes on welding.

These welding codes and technical notes are an established set of standards, rules and specifications that provide guidelines for welding procedures, processes, quality assurance and safety practices.

Globally, organisations which have issued applicable welding codes include Safe Work Australia, the European Welding Federation, the British Standards Institution and the American Welding Society.

This year, Weld Australia published ‘Technical Guidance Note SW01 Fume Minimisation Guidelines: Welding, Cutting, Brazing & Soldering’.

The guidelines are based on research conducted to establish which processes generate fume levels that need to be controlled to comply with the requirements of what is now the national Code of Practice – Managing the Risks of Hazardous Chemicals, and to provide advice on the control measures which could be introduced to control this.

Operators of facilities have an important duty of care when it comes to on-site exposure to welding fumes and UV radiation and all reasonably practicable steps must be taken to:

- provide and maintain a physical environment at the facility that is safe and without risk to health
- ensure hazardous chemicals at the facility are safe and without risk to health
- implement and maintain systems of work at the facility that are safe and without risk to health.

It is essential to minimise the welder’s exposure to weld fume and radiation to minimise the risk of the welder developing serious acute and long-term health issues.

¹ IARC (2018). Monographs on the Evaluation of Carcinogenic Risks to Humans Volume 118 - Welding, Molybdenum Trioxide, and Indium Tin Oxide. International Agency for Research on Cancer (IARC), Lyon, France.



Joint agency inspections recommence

NOPSEMA and the Australian Maritime Safety Authority (AMSA) have conducted their first joint inspection since 2011.

The two agencies worked together to inspect Santos' Ningaloo Vision floating production storage and offloading (FPSO) unit in October.

In a joint inspection, AMSA is responsible for applying the Navigation Act 2012, and NOPSEMA administers the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (OPGGs Act) – however, only one of these applies to a vessel at any time.

“When a vessel is attached to a riser, the OPGGS Act applies. When it is disconnected from the riser and is in navigable form, it comes under the Navigation Act and our jurisdiction stops,” said NOPSEMA's Director Production – Safety, Percy Dhanbhoora.

The biggest area of common interest for NOPSEMA and AMSA are Disconnectable FPSOs like the Ningaloo Vision, of which there are four in Australian commonwealth waters.

FPSOs must be certified by AMSA as all insurances may be voided without certification once it is disconnected from the riser and becomes a ship.

AMSA may conduct Flag State or Port State Control inspections. These inspections usually occur when the vessel comes into port but FPSO port calls can be sporadic. However, when the vessel is on the riser, NOPSEMA can conduct inspections more frequently. Mr Dhanbhoora said a proactive, coordinated approach such as this was not only beneficial for the industry, but the two agencies.

“It's important for Disconnectable FPSOs to have current documentation for both Acts, especially when they disconnect and sail away from their riser during cyclonic conditions or for periodic maintenance activities,” Mr Dhanbhoora said.

NOPSEMA and AMSA have a Memorandum of Understanding (MoU) in place for joint inspections, which has allowed them to recommence in 2024.

AMSA can now inspect a vessel when it's not in their jurisdiction, and any deficient or non-compliant items are highlighted to NOPSEMA. The opportunity then exists for the vessel to return to compliance before it departs the riser.

“Our main reason for doing this is to have a whole of government approach and so duty holders can ensure they have maintained their FPSO to comply with the certification in a streamlined and timely manner.

“We can pre-empt non-compliance and avoid further issues – it's a win-win for everyone,” Mr Dhanbhoora said.

Preparation for the joint inspection took several months. Alongside NOPSEMA's typical pre-inspection process, AMSA's inspector had to become certified in offshore helicopter training and undergo a medical assessment. As this joint inspection was completed while the Ningaloo Vision was on the riser and under the OPGGS Act, the operator Santos chose to invite AMSA on board to conduct their part of the inspection.

The agencies agreed that AMSA would issue a Port State control inspection report, and the findings would be included in NOPSEMA's report to ensure mandatory compliance.

“There was a clear understanding and agreement of the joint inspection process,” Mr Dhanbhoora said.

There were 20 findings from AMSA which may have been detainable deficiencies if the Ningaloo Vision was inspected when it came into an Australian port. The vessel operates under Panama's flag, so there is no requirement for it to dock in Australia.

“Owners are responsible to maintain the FPSO to correspond with the initial approved certificate conditions during operations and when released from the riser,” said AMSA acting Executive Director Operations, Greg Witherall.

“It was a good opportunity to identify these issues early and have the FPSO returned to compliance now instead of at the last minute,” Mr Dhanbhoora said.

NOPSEMA and AMSA synchronised their scopes to ensure the joint inspection did not take longer than a regular inspection.

The joint operation is a good example that working together can provide common benefits for industry and regulatory bodies by allowing one inspection for everything to do with seaworthiness, marine pollution control and structural integrity.

More joint inspections are planned for 2025, starting with Australian-flagged FPSOs.



NORM hazards in the offshore industry

What is a NORM hazard in the offshore oil and gas industry?

NORM stands for 'naturally occurring radioactive material' which can be found on the inner walls of production equipment (for example, pipes, valves and pumps) when water is brought to the surface in oil and gas production.

Changes in temperature and pressure can lead to the precipitation of radium rich sulphate and carbonate scales, which can produce a NORM hazard.

The distribution of NORM and associated radionuclide activity throughout hydrocarbon processing systems varies and requires significant understanding and planning prior to undertaking an inspection, and during maintenance and decommissioning activities.

How NORM hazards arise

Within subsea infrastructure, NORM will typically occur within wells (production casing), at the wellhead, inside production flowlines and risers, and inside associated spools, manifolds and pipework.

On offshore production facilities (e.g. platforms of FPSOs), NORM will typically deposit upstream of separation processes within topside production stream piping, vessels such as de-sanding units, separators, and associated pipework, valves and pumps.

Within waste management, significant solid and liquid waste is generated during the operating lives of oil and gas facilities, as well as during decommissioning and rehabilitation activities; some of these waste streams may contain naturally occurring radionuclides¹.

While NOPSEMA does not directly regulate management of NORM waste once it is transported off-title for storage, disposal or transit, titleholder Environment Plans must demonstrate that recording, tracking and stewardship systems are in place to manage potential indirect impacts from NORM waste.

Recovered waste material may be taken onshore to Australia for storage and eventual disposal at an appropriate waste management facility, or be exported internationally to a suitable disposal location if transport and acceptability criteria are met.

What can be done to minimise exposure to NORM hazards?

The radiation hazard in NORM scales has been detected by duty holders in Commonwealth waters, and identified as posing a risk to human health from gamma radiation and inhalation or ingestion of dust during maintenance or decommissioning activities.

Without radiation protection measures, there is the potential for exposure to NORM during production due to the accumulation of gamma-emitting radionuclides.

Radiation protection must be considered for activities including the removal of contaminated scale, sand and sludge during these operations and from the subsequent disposal of waste materials.

People who work near heavily scaled pipes and vessels may need to be subject to radiation protection measures, and waste material must be managed in a safe and environmentally responsible manner.

Controlling NORM hazards

There are several available guidelines on maintaining control over occupational exposures to radiation and protecting the public and environment through the proper management of radiologically and chemically hazardous waste. These include:

- Department of Science, Industry and Resources
- Australian Radiation Protection and Nuclear Safety Agency
- international guidelines, including the International Commission on Radiological Protections and the International Atomic Energy Agency.

It is recommended that where radiation exposure could occur, facility operators put in place health monitoring for workforce members who have the potential to be exposed².

Clause 9(1) of Schedule 3 to the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* places duties on the operator to take reasonably practicable steps to provide and maintain a physical environment at the facility that is safe and without risk to health.

As with all hazards that exist in the offshore petroleum industry, the duty holder must ensure that risks and impacts associated with NORM are reduced to as low as reasonably practicable by identifying the hazards, assessing the risks and implementing appropriate control measures.

It is important for offshore petroleum facility operators to have systems and procedures in places relevant to radiation, such as NORM, to reduce or eliminate potentially harmful effects on the workforce and on process equipment.

¹ & ² International Atomic Energy Agency, Radiation protection and the management of radioactive waste in the oil and gas industry, Safety Reports Series no. 34, IAEA, Vienna (2003).

The hidden signals: the importance of near-miss reporting

How can the offshore industry reduce serious injury and death on its work sites? And what can regulatory bodies such as NOPSEMA do to help ensure better safety protocols are put in place?

One way is through reporting of near-miss incidents on site, as a webinar and workshop facilitated by NOPSEMA illustrated.

In September, the National Regulators Community of Practice (NRCoP) and Australia & New Zealand School of Government (ANZSOG) presented The Hidden Signals: Enhancing Regulatory Oversight through Near-Miss Reporting.

Hosted by Alice Turnbull, NOPSEMA's Director Exploration and Development – Environment, the event saw guest speaker Jodi Goodall discuss ways in which comprehensive near-miss reporting can help avert serious or fatal accidents in the future. Ms Goodall is Head of Organisational Reliability at Brady Heywood, a consultancy firm working in high-risk areas such as mining, defence and explosives.

She defined a near-miss event as one which could have resulted in a serious, even fatal outcome, but was either averted at the last minute, or enabling conditions were not present, or last line of defence controls worked to avert disaster.

“Near-misses are warning signs,” Ms Goodall said.

“Nearly every major incident is preceded by a near-miss. And near-misses are free lessons – there are no bad outcomes.

“It’s a matter of learning from the near misses so they don’t escalate into a major event or fatality.”

In 2023, a Brady Heywood report into mining fatalities saw several key themes and patterns emerge.

“There were usually a series of interrelated failures – physical, individual, supervisory and organisational,” Ms Goodall said.

The report found most of the fatalities were preceded by risk assessments that failed to include specialist industry safety experts. In every single fatality, there was a failure of certain controls to be in place, or a combination of control failures contributed to the incident.

It also found that in 86 per cent of the mining fatalities, risk management controls were not effective or inadequate to the task.

“A control system is like a Jenga block, full of changing, moveable parts,” Ms Goodall said.

“Pull one Jenga tile out, and it creates holes – like a control failing.

“Usually, the person who pulled the last Jenga block out gets the blame, but there are more systemic issues involved.

“When things are going badly, the Jenga holes are hidden; when things are going well, the Jenga holes are identified.”

Thankfully, serious harm or fatality is a rarity in the offshore industry. However, regulators do face certain challenges when it comes to ensuring things stay that way.

“The three key challenges for regulators are getting those near-miss reports in the first place, knowing when to take the appropriate action, and making meaning of near-miss data,” Ms Goodall said.

Challenges in getting near-miss reports from industry

- 1. Normalisation of deviance.** If exceedances continue to happen without an adverse outcome, that normalises a deviance from the norm – until a fatality happens.
- 2. Optimism bias.** We tend to think things won’t happen to us, especially if we are highly skilled or experts in our area.
- 3. Poor risk imagination.** Companies feed an actual outcome into the risk matrix rather than imagining a potential outcome.
- 4. Withholding of reports.** This could be for any number of factors, including time constraints.
- 5. Industry perception of regulating bodies.** Industry may feel that regulators will respond to near-miss incidents in ways that could be seen as punishment rather than considering the response as an opportunity to learn.
- 6. The cycle of blame.** Regulator reinforcement leads to a fear of sharing bad news, which leads to cover-ups and a lack of information flow, and a reduced knowledge of reality meaning there is no improvement.

Good regulator practice for near-miss reporting

What makes for good regulator practice when it comes to near-miss reporting?

Regulators must clearly specify the types of near misses that need to be reported. Giving clear written guidance is key.

When it comes to educating industry it’s important to use storytelling that draws on an emotional or human element.

How could an accident affect you, your family and loved ones, for example? Link that human element to risk and control failure. This makes the scenario real for workers and the personal element means people are more likely to report to the regulator. Illustrative pictures and diagrams that explain what could have happened in any given scenario can also cut through when words don’t.

Finally, once a near-miss report does come in, regulators should share that information widely across industry – and make sure to incorporate key learnings from the near-miss incident into regulatory policy.



Control and management of mercury in the offshore environment

The Minamata Convention on Mercury, the international treaty that seeks to protect human health and the environment from mercury emissions, reached a significant milestone in Australia in October 2024, with the release of the National Implementation Plan (NIP).

The Department of Climate Change, Energy, the Environment and Water leads Australia's involvement in the Minamata Convention.

NOPSEMA has been working to ensure industry is aware of, and meeting the requirements and intent of the convention, and is referenced in Australia's NIP – highlighting the efforts of the regulator since Australia ratified the convention in December 2021.

Mercury naturally occurs in many oil and gas fields, existing in solid, liquid or gaseous forms. It is considered a global pollutant that makes its way into marine ecosystems through various sources, including produced water, improper disposal of waste materials and atmospheric emissions.

Methylmercury, a highly toxic form of mercury, is highly persistent in the marine environment. A key environmental concern is biomagnification through the food chain, with mercury levels in fish tissue often orders of magnitude above that of water.

Working in confined spaces offshore can potentially expose workers to mercury through three major routes: inhalation, skin exposure and ingestion. Operators have a duty to monitor the health and safety of all members of the workforce and to keep records of such monitoring under Clause 9(2) (g) of Schedule 3 to the *Offshore Petroleum and Greenhouse Gas Storage Act 2006*.

Similarly, during decommissioning, mercury vapour can pose a health risk. Steel production piping and equipment used for transporting hydrocarbons can accumulate mercury over time.

During the decommissioning process piping and equipment have the potential to expose workers through the same routes, depending on the activity.

Barite, a product used extensively in offshore drilling, is known to contain trace levels of mercury (along with other products such as cement and bentonite), and is often used in large quantities. There can be up to 200 to 300 tonnes of these bulk powders on a rig during drilling activities. NOPSEMA has been working with industry to ensure excess bulk powders are managed in a safe and environmentally sound manner.

When approving Environment Plans (EPs), NOPSEMA must determine whether the EP includes sufficient information on the legislative requirements that are relevant to the activity, and a demonstration of how they will be met throughout the life of the activity.

The facility safety case must also contain a detailed description of the safety management system (SMS) which provides for the continual and systematic identification of hazards and assessment of risk to health and safety of persons at or near the facility. This should allow the facility operator to demonstrate potential mercury hazards have effective technical control measures to reduce risk to a level that is as low as reasonably practicable.

"It's NOPSEMA's expectation that bulk powders are not dumped into the marine environment at the end of an offshore activity," said Alice Turnbull, Director Exploration and Development – Environment.

NOPSEMA will continue to monitor titleholder performance in addressing the requirements of the convention and will provide additional guidance if necessary.

NOPSEMA endorses updated financial assurance estimation method

To help titleholders calculate their financial assurance needs in the event of an oil spill, NOPSEMA recently endorsed the Australian Energy Producers' (AEP) 2024 Method for Estimating Levels of Financial Assurance (the 2024 FA Method).

Under the *Offshore Petroleum and Greenhouse Gas Storage Act 2006*, titleholders are required to have sufficient financial assurance to meet the costs, expenses and liabilities that may arise in connection with carrying out petroleum activities, including those associated with responding to a major oil spill. This requirement is a prior condition of acceptance of an environment plan, and applies to new and revised environment plans.

"The 2024 FA Method is a suitable form for demonstrating financial assurance when used in conjunction with NOPSEMA's process for making financial assurance declarations and confirmations," Chief Executive Officer, Sue McCarrey said.

"It provides a methodology, verified by a third party, for calculating the remediation costs of any potential marine oil pollution."

The new method consists of two parts, with its usage limitations now extended for the general method part to encompass oil spill incident scenarios in which the total volume of hydrocarbon released is less than 1,750,000m³ and the total volume of oil ashore is less than 30,000m³.

Indicative cost bandings have been revised following an update in costings for well control and operational response, which has the potential to affect the level of financial assurance required to be held.

A second part of the method has been introduced for estimating financial assurance needs for marine diesel or gas oil incidents arising from vessel-based activities. This part of the method will cover such releases up to 1,250m³ which may occur during the petroleum activity itself.

The Financial Assurance for Petroleum Titles guideline on NOPSEMA's website, nopsema.gov.au, has been updated to reflect this endorsement, with the AEP's 2018 APPEA Method no longer applicable. Transitional arrangements for 2024 AEP Methods are in place until 31 March 2025, which provides titleholders time to implement the new method.

The 2024 FA Method was developed by GHD Pty Ltd on behalf of AEP, in consultation with NOPSEMA and independently validated by Vysus Group.

"We are supporting a flexible transition to the updated method; however, titleholders retain responsibility for the costs of cleaning up pollution events, regardless of the estimation method used," Ms McCarrey said.

To obtain the method or for more information regarding the review, please contact AEP at appea.com.au.

Offshore renewables update

It has been a busy few months for the **Offshore Infrastructure Regulator (OIR)** since the **Minister for Climate Change and Energy** awarded the first feasibility licenses off **Victoria** and the **Exposure Draft of the Offshore Electricity Infrastructure (OEI) Amendment Regulations 2024** was released for public consultation.

This month, the OEI Amendment regulations were tabled in the Australian Parliament and entered into force.

These regulations amend the Offshore Electricity Infrastructure Regulations 2022 (OEI Regulations), which underpin the *Offshore Electricity Infrastructure Act 2021* (OEI Act), making operational provisions for management plans, design notifications, work health and safety, consultation requirements, safety and protection zones, and financial security under the OEI Act framework.

You can catch up on everything else the OIR has been up to below.

OIR webinar: Ask the Regulator

In October, more than 160 Australian and international attendees logged on for the OIR Ask the Regulator webinar, hosted from the OIR's Perth office.

CEO Sue McCarrey discussed the OIR's vision for a safe, environmentally responsible and sustainable offshore renewables industry.

Owen Wilson, Executive Director Offshore Renewables Regulation, gave an overview of the OEI Act framework, and discussed requirements for management plans, design notifications, work

health and safety, financial security and safety and protection zones for offshore renewables.

The webinar also explored decommissioning of offshore wind projects, emergency response arrangements and interactions between the OEI Act and the *Environment Protection and Biodiversity Conservation Act 1999*.

You can view the webinar presentation by visiting the News and Community section at oir.gov.au.

IRFORES AGM

The first Annual General Meeting (AGM) of International Regulators Forum Offshore Renewable Energy Sub-committee (IRFORES) was held in Dublin, Ireland, on Tuesday 29 October.

Chaired by Owen Wilson, the AGM brought together regulators from Australia, Canada, Denmark, Norway, Netherlands, USA, and the United Kingdom, with Ireland, Brazil and Germany as observers.

Mr Wilson said one of the highlights of the AGM was the UK regulator's discussion of the challenges presented by floating offshore wind turbines.

"There are huge aspirations for offshore wind in the North Sea in particular, but all the way around Europe, including the Baltic Sea," Mr Wilson said.

"The UK is getting to the point where fixed bottom (turbine) opportunities are starting to run out, so they are starting to look at options for floating offshore wind at commercial scale.

"That brings with it a whole new range of hazards and risks that regulators haven't been used to dealing with in the offshore renewables space. For regulators who have dealt with FPSOs and mooring spreads on mobile offshore drilling units, you can understand some of the challenges around integrity and safety for floating units.

"We can learn a great deal from the UK and other jurisdictions on how they will regulate this."

Other insights from the IFORES AGM included international interest in the introduction of a design notification scheme for offshore renewables projects in Australia and the possibility of using remote technologies such as drones to help in the investigation of offshore incidents.

The AGM also focused on the health and safety of the offshore renewables workforce.

Discussions ranged from the setting up of standardised training courses and requirements for offshore wind technicians to how large the offshore renewables workforce will need to be to satisfy the sector's aspirations, and how transferability of skills can be ensured across different jurisdictions globally.

"That would mean that if someone was working in the Netherlands, they could just as easily go and work in the US or Australia the next day and the same qualifications would be recognised," Mr Wilson said.

Global Offshore Wind Regulators Forum

Recently the OIR also attended the Global Offshore Wind Regulators Forum (GOWRF), which focused on leasing and licensing, regulatory approaches, the exchange of scientific and technical information, energy security and independence, and industry trends and developments in the offshore wind sector.

The members of GOWRF include Australia, Canada, USA, the United Kingdom, Denmark, Sweden, Germany, the Netherlands, Romania and Ireland.

Forum sessions centred on environmental management and the use of price and non-price criteria in seabed allocation processes for offshore wind infrastructure.

"Increasingly, non-price criteria are starting to come through in European jurisdictions, and in the US as well," Mr Wilson said.

"There is a strong focus now on making sure you are having a nature-positive outcome, how you are using nature-inclusive design, how to ensure social and community benefit, and how you are contributing back to the economy and the jurisdiction in which you are operating."

Offshore activity Q3 2024





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Environmental Management Authority (NOPSEMA)**

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