

**From CEO John Clegg**

Monitoring the safety performance of the Australian offshore petroleum industry is vital to us all. A new yearly publication released by NOPSA which pulls together industry health and safety data will make this task easier. The *Offshore Health and Safety Performance Report 2007-08* is now available and similar reports will be issued each year by NOPSA.

We will be reviewing the data in the latest report with industry management and the workforce in order to increase the focus on key health and safety issues going forward. Areas of concern include a continuing relatively high level of personal injuries and an increasing number of gas releases.

NOPSA's overall approach to the improvement of health and safety outcomes is to move the offshore industry from a culture of minimal compliance with codes and standards to one of continuous improvement. Leadership from the top of an organisation on safety issues is vital in achieving this change in culture.

Accordingly, I was very pleased to see the new Australian initiative *Stand Together for Safety* take place this month. This two-hour stop work safety event held by the oil and gas industry is an example of how industry safety leadership can achieve results.

## Industry matters

**New report on industry safety performance released**

NOPSA's first annual [Offshore Health and Safety Performance Report 2007-08](#)<sup>1</sup> indicates a number of safety challenges are facing the Australian offshore petroleum industry. The report contains an analysis of incidents reported during the year 2007-08 and summary data for previous years.

Although the safety record of Australia's offshore petroleum industry is reasonable compared with many other industries, there is room for improvement, particularly when the performance is compared to that of petroleum operations in other countries.

According to the report, challenges facing the Australian industry include:

- improving leadership - strong leadership is required for the Australian industry to move to the next level
- dealing with a shortage of skilled personnel
- managing ageing facilities and minimising gas releases

Gas releases are a concern as they are an indicator of the potential for a Major Accident Event on an offshore facility. Gas releases are often related to facility integrity issues and the most common root causes for incidents related to facility integrity continue to be equipment design and maintenance deficiencies, particularly backlogs in the maintenance of safety critical equipment. NOPSA continues to emphasise the need for operators to focus on the integrity of their facilities and the implementation and auditing of effective maintenance systems.

The report indicates that personal injury rates in the industry have remained fairly steady over the years but are relatively high compared with other countries. A significant number of personal injuries related to lifting operations where the most common root causes were problems relating to procedures, training and maintenance. It is worth noting that many of those injured were relatively inexperienced in the job.

Dangerous occurrences, which do not involve personal injury and are considered to be lead indicators of how well industry is managing safety, increased over the reporting period. In particular, the number of occurrences involving damage to safety critical equipment showed a significant increase.

NOPSA will use the results in the industry performance report to influence its inspections of offshore facilities over the coming period. NOPSA will issue industry performance reports on an annual basis and copies of the current report can be viewed on NOPSA's website or ordered from: [info@nopsa.gov.au](mailto:info@nopsa.gov.au)

## **Learn from Baker Report – Recommendation 4**

The Baker Report, produced after a devastating process accident at the BP Texas City refinery in 2005, looks at safety culture and contains valuable lessons for industry today. The report called on the operator to give process safety the same priority it had historically given personal safety and environmental performance. Ten milestone recommendations were made by the Baker Report. Each recommendation is examined in a separate issue of this newsletter.

**Recommendation 4: Process safety culture:** Management should involve the relevant stakeholders to develop positive, trusting, and open process safety culture within each refinery.

- *The expectation is that this is done by participation in a climate that encourages participation, where unsafe acts can be reported and used to improve the way things are done. Control, communication and co-operation are key attributes emphasised in the report's recommendation.*

**Information sharing as Malaysian delegation visits NOPSA**

*Left to right: Simon Schubach (NOPSA), Ibrahim Md Dol (DOSH), Amer Othman (Petronas), John Clegg (NOPSA,) Dr Johari Basri (DOSH), Tarmizi Munir, Nik Hishamudin (Petronas), Ian MacGillivray (NOPSA).*

A detailed two-day overview of the Australian occupational health and safety regime for its offshore petroleum industry was delivered to a visiting delegation of Malaysian Government safety and petroleum officials by NOPSA at its Perth head office.

The delegation comprised five senior officials from the Malaysian Department of Occupational Safety and Health (DOSH) and Petronas, the Malaysian government-owned petroleum company.

The visitors received presentations on topics such as safety case assessment, validation, policy and procedures for inspection of offshore facilities, enforcement, and investigation.

**Two-hour stop work for safety - a first for industry**

*Stand Together for Safety*, a safety stop-work event held across the petroleum industry in Australia in May was the first event of its kind held in the sector.

The event originated from the Woodside Contractor Safety Forum held at the beginning of the year and was promoted throughout the rest of the industry by the Australian Petroleum Production and Exploration Association (APPEA). A [video](#)<sup>2</sup> supporting the event and associated material can be viewed on the website established for the project.

**New booklet looks at offshore asset integrity**

A booklet containing papers from four international offshore safety regulators addressing asset integrity has been published by the International Association of Drilling Contractors (IADC) in cooperation with the International Regulators Forum. The papers were first published in the IADC Drilling Contractor Magazine and comprise:

- summary of findings of a three-year study of installation integrity by the UK Health and Safety Executive which revealed the need for major improvements
- highlighting of robust management that is required for life extension for mobile offshore drilling units - many of which have exceeded their notional design life, typically 20 years - by the Petroleum Safety Authority, Norway
- a call for operators to rigorously apply existing asset integrity management techniques after preliminary findings from a national programme of inspection of offshore topsides petroleum process equipment – by NOPSA’s facility integrity team, Australia
- need for all stakeholders, rig owners, classification societies, operators and service contractors to play their part in the need for good asset integrity management with a survey showing interface management to be a particular challenge – by the State Supervisor of Mines, Netherlands

Copies of the booklets are available by contacting IADC at [info@iadc.org](mailto:info@iadc.org). Alternatively, NOPSA has copies available for distribution by contacting [info@nopsa.gov.au](mailto:info@nopsa.gov.au).

**Register now for information session on new safety case guidance notes**

NOPSA will hold an information session in Perth on Tuesday 16 June to release the first suite of its new safety case guidance notes. The information session will explain the development process, the structure of the guidance notes, and highlight main features of the guidance notes.

The session is aimed at operators, safety case custodians and developers, risk engineers and members of the workforce and its representatives. To express your interest in attending this session please contact [jayne.ballantyne@nopsa.gov.au](mailto:jayne.ballantyne@nopsa.gov.au) using the subject heading *Guidance Notes Session*.

The session will also outline progress on other guidance notes under development.

### **Report into offshore hydrocarbon releases**

A detailed [report](#)<sup>3</sup> which examines data from major and significant hydrocarbon releases (HCRs) from 2001 to 2008 in the UK offshore petroleum industry gives an overview of key factors contributing to these incidents. The report is available on the UK Health & Safety Executive website. Key findings from the report include:

- gas hydrocarbon releases (HCRs) are the most common
- older installations (>20 years old) experience most releases
- releases from installations in most age ranges seem to be decreasing over time except the 10-15 year age range which seems to be increasing
- gas compression systems result in most HCRs, followed by export and utility systems
- piping is the most common equipment to experience HCRs, followed by instruments and flanges
- mechanical failure and fatigue are the main equipment failure modes and corrosion is also a significant contributor
- incorrectly fitted equipment is the most common operational cause of HCRs followed by improper operation
- non-compliance with procedures is the most common procedural based cause of HCRs, followed by deficient procedures
- most releases occur during normal operational modes

The report provides evidence that human factors have an important part to play in the prevention and limitation of HCRs. Human involvement is present in the design, operation and procedures and also is vital in the discovery of releases. The report indicates that automatic detection systems fail to spot a significant proportion of releases that are ultimately discovered by operators who detect releases by visual means, closely followed by sound and smell.

## **International**

### **PSA to investigate Oseberg death**

The Petroleum Safety Authority (PSA) Norway has initiated an investigation of a fatal accident which occurred on 7 May on the Oseberg B installation in the North Sea.

A person died after falling about 14 metres from scaffolding to the deck. The victim, who worked for a contractor company, suffered serious injuries and was flown to hospital by a search and rescue helicopter but died soon afterwards.

**Alert on diving fatality**

The OGP has released a [safety alert](#)<sup>4</sup> after a saturation diver using a parachute lift bag was fatally injured in an uncontrolled ascent of the lifting bag.

The incident happened in waters offshore from the US. The diver's umbilical was entangled in the load and rigging during the ascent which pulled him up from the seabed, 200 feet below the surface, too rapidly.

**Report into US pipelay fatality points to inadequate hazard analysis**

A US Minerals Management Service (MMS) [report](#)<sup>5</sup> into an accident where a rear bevel machine operator was fatally crushed between two joints of pipe in the pipe preparation area of a pipelay vessel in 2006 has been published and is available on the MMS website.

The report into the incident, which occurred in the Gulf of Mexico, identifies contributing causes which include:

- *inadequate hazard analyses and failure to implement hazards analyses recommendations*  
There was no documentation that a hazard analysis identifying the bevel machine operators as persons at risk had been conducted and CCTV cameras were not working on the day of the accident
- *failure to adequately implement and adhere to the recommendations of the Job Safety Analyses (JSA).* Although the JSA indicated that personnel should not walk between pipe joints, the bevel machine operator's hand grinder was stored such that the operator would have had to walk between pipe joints to fetch it
- *inadequately written JSA, inadequate supervision, failure of the operator to attend safety meetings, possible inadequate inspection/maintenance of the control panel switch*

The above issues are relevant to the Australian offshore petroleum industry. NOPSA encourages industry to learn the lessons from this tragic event.

**Website****New Offshore Health and Safety Performance Report**

Copies of NOPSA's [Offshore Health and Safety Performance Report 2007-08](#)<sup>6</sup> are available on our website. Alternatively, hard copies of the publication can be requested by contacting [info@nopsa.gov.au](mailto:info@nopsa.gov.au)

## Regulatory activities

### As at 27<sup>th</sup> May 2009

*Disclaimer: Activity and incident quantities identified here may vary as further information becomes available. Statistics are prepared just prior to the last Friday of the month*

### Assessment

The following assessment activity was undertaken in May.

| <b>May 2009<br/>Assessment Type</b> | <b>Submitted</b> | <b>Accepted<br/>/ Agreed</b> | <b>Withdrawn /<br/>Stopped</b> | <b>Rejected</b> | <b>In Progress</b> |
|-------------------------------------|------------------|------------------------------|--------------------------------|-----------------|--------------------|
| Safety Case NEW                     | 1                |                              |                                |                 | 8                  |
| Safety Case REVISED                 | 9                | 4                            | 1                              |                 | 14                 |
| Pipeline SMP NEW                    |                  |                              |                                |                 |                    |
| Pipeline SMP REVISED                | 1                | 1                            |                                |                 | 3                  |
| Diving SMS NEW                      | 2                |                              |                                |                 | 2                  |
| Diving SMS REVISED                  |                  |                              |                                |                 |                    |
| Diving Project Plan                 | 2                |                              |                                |                 | 2                  |
| Request for Exemption               |                  |                              |                                |                 |                    |
| Scope of Validation                 | 4                |                              |                                |                 | 8                  |
| Field Development Plan              |                  |                              |                                |                 | 1                  |
|                                     | <b>19</b>        | <b>5</b>                     | <b>1</b>                       |                 | <b>38</b>          |

### Inspections

Four planned inspections were conducted in May. The scope of these included:

- MAEs – loss of well control, helicopter events, subsea hydrocarbon releases, disconnect / blowdown / reconnect, noise management plans, vessel collision
- OHS – fall from height, personnel transfer
- Two were inspections of vessels after first entry into Australian waters

Issues arising from the inspections included:

- Importance of examining for corrosion in pipeline 'deadlegs'
- Use of standby vessels for accommodation
- Rig-up of well testing spreads
- Management of lifting equipment on newly arrived vessels

### Incidents and complaints

There were a total of 20 notifications to NOPSA in May; all were reportable incidents. There were no complaints reported. The incidents included 18 dangerous occurrences and two injuries. 25% of the incidents were of types categorised as major in severity.

The five major incidents included:

- one fire in switchroom
- two dropped objects that could have caused serious injury or death
- one injury from an accidentally discharged gas bottle
- one broken mooring rope leading to a vessel collision with a platform

The fifteen significant incidents included:

- one that caused injury (burns) to two workers
- one that could have caused incapacitation – crush injury
- four causing damage to safety-critical equipment
- one emergency generator turbine failure
- two valve failures
- one damage to fire gas detection system
- one other incident requiring investigation – no process isolation
- one well kick – 216 bbl
- seven unplanned events requiring implementation of emergency response plan
- six alarms – fumes, steam, 3 x faults, boiler trip
- one medivac (illness)

## Enforcement

The following eight enforcement actions were issued in May:

- Two prohibition notices to:
  - prohibit use of uncertified lifting equipment
  - prohibit use of main hook on crane (damaged sheave block)
- Three improvement notices for:
  - deficient noise management
  - lack of hazardous area electrical equipment register
  - poor condition of hazardous area electrical equipment
- Five written advice/warnings for:
  - use of acetylene cylinders in dropped object zone
  - inspection regime not fit for purpose
  - lack of expertise - legal obligations and protection measures
  - non-use of document control system by workforce
  - failure to implement an effective internal audit program

## Subscribe

[Past issues of this newsletter](#)<sup>7</sup> are available from the NOPSA website. Operators and other employers are encouraged to circulate this newsletter to their workforce. Please add your details to our [distribution list](#)<sup>8</sup> to receive future copies of this newsletter.

## Find out more

<sup>1</sup> <http://www.nopsa.gov.au/document/Report%20-%20Offshore%20Health%20and%20Safety%20Performance%202007-08.pdf>

<sup>2</sup> <http://www.standtogetherforsafety.com.au/>

<sup>3</sup> <http://www.hse.gov.uk/research/rrpdf/rr672.pdf>

<sup>4</sup> <http://info.ogp.org.uk/safety/>

<sup>5</sup> <http://www.gomr.mms.gov/PDFs/2009/2009-028.pdf>

<sup>6</sup> <http://www.nopsa.gov.au/document/Report%20-%20Offshore%20Health%20and%20Safety%20Performance%202007-08.pdf>

<sup>7</sup> [http://www.nopsa.gov.au/CEO\\_emails/index.asp](http://www.nopsa.gov.au/CEO_emails/index.asp)

<sup>8</sup> [info@nopsa.gov.au](mailto:info@nopsa.gov.au)