

**From CEO John Clegg**

NOPSA sees many facilities arriving in Australian waters with an unmanageable backlog of commissioning tasks. A number of recent incidents and inspections have highlighted that insufficient attention has been given to the commissioning of safety-critical systems in both new and refurbished facilities.

Examples of problems seen include: complex interlock systems not thoroughly tested; hydraulic systems on crane winches poorly designed and inadequately maintained; pipe fittings poorly installed. All of these examples could have led to fatal accidents.

These incidents are a serious reminder to the industry of the risks associated with starting operations prior to completion of all commissioning tasks. Operators of facilities and their clients should agree in advance what tasks must be achieved before operations can commence.

Operators are reminded that they have a duty under the law to ensure:

- **All** commissioning activities related to safety-critical systems and equipment have been completed satisfactorily before those systems are used for operations
- There is a robust maintenance management system in place,
- There is a training and competency system in place in order for personnel to carry out their activities in a manner that does not adversely affect the health and safety of persons at the facility
- Involvement of the members of the workforce during commissioning and construction

## Industry matters

**Prohibition notice issued after fire on offshore facility**

The National Offshore Petroleum Safety Authority (NOPSA) has issued a prohibition notice to Woodside Energy Ltd, the operator of the Maersk Ngujima-Yin Floating Production Storage and Offloading vessel.

The notice, which prohibits the re-start of petroleum production at the facility, has been issued after a fire caused extensive damage to the high pressure gas compression process module and may have also affected other safety-critical plant or systems of the facility.

The prohibition notice will remain in force until NOPSA is satisfied that plant or systems damaged by the fire are fit for service and do not pose a risk to safe operations.

The fire, which is thought to have started at a gas turbine compressor, occurred on April 13 on board the Maersk Ngujima-Yin and is being investigated by NOPSA inspectors.

### **No room for backtracking on risk**

Reducing risk to a level that is "As low as reasonably practicable" (ALARP) is a key concept in the offshore safety regime. Part of the test for what is reasonable includes a comparison of how much more it would cost (in terms of time, money and effort) to reduce risks to a demonstrably lower level. This is a complex but well established safety process.

NOPSA is concerned that some operators have put forward proposals for acceptance of moving to a less protected situation, or a higher level risk within their safety case, due to an escalation of cost factors. This process is known as "*reverse ALARP*".

The legal requirement to reduce risks to as low as reasonably practicable would prevent NOPSA from accepting a less-protected approach to the control of risks on cheaper cost grounds. The ALARP process cannot be used to justify an increase in risk by diluting the effectiveness of existing safety measures.

In addition, some operators have also seen opportunities to argue for acceptance of higher risk in some part of their operations - for example they might argue that the increased risk of performing SIMOPS (simultaneous operations) is offset by helicopter risk being at a lower level, due to shorter flight times, than was originally envisaged in their safety case. This process is known as "*risk trading*" and does not fit the principles behind the safety regime.

Demonstration of ALARP is a fundamental feature of the safety case regime, and failure to properly justify a case as being ALARP is a common cause of safety case rejection.

NOPSA will be developing a guidance note on the topic of ALARP as part of its ongoing project to develop a comprehensive suite of safety case guidance notes.

### **Help with process for operator changeover**

The operator of an offshore facility has the principal responsibility for safety at a facility and must be registered by NOPSA.

When a new operator replaces an existing registered operator there should be an efficient process within the safety regime to enable this change.

NOPSA has now published a [guideline and associated forms](#)<sup>1</sup> on its website which offer advice and detail the steps which may be necessary. The guideline recommends approaches to any necessary revision to the safety case to address the likely change in the safety management system.

### **Learn from Baker Report – Recommendation 3**

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 3: Process safety knowledge and expertise:** *Management should develop and implement a system to ensure that all levels of management possess an appropriate level of process safety knowledge and expertise.*

- The Baker Panel recommends considerable stakeholder participation in the process. It is in effect asking for a complete competence assurance system for the organisations and its contractors that includes incident investigation, process hazard analysis techniques and awareness training.

### **Ensure all safety-critical items are in the maintenance system**

The need for all safety-critical equipment on offshore facilities to be included in an effective inspection and maintenance programme is highlighted in a new [safety alert](#)<sup>2</sup> from NOPSA.

The alert was prompted by problems which arose when a mobile offshore drilling unit was preparing to undertake well testing operations. Permanent flowlines were originally installed under the main deck structure, and were very difficult to access for routine inspection.

The lines had not been subject to any inspection or examination and had not been included in the planned maintenance system of the facility. When the lines were pressure tested prior to the flowing of the well, it was found the lines were leaking. This led to subsequent safety issues when temporary flow lines were installed.

Ensuring that facilities have a comprehensive inspection, testing and maintenance regime leads to smoother operations, less downtime, fewer incidents and possibly less enforcement action.

### **Protection recommended for crane overhead windows**

Operators are advised to carry out an assessment to confirm crane overhead windows are physically protected and not just reliant on safety glass. NOPSA has produced a [safety alert](#)<sup>3</sup> drawing attention to an American Petroleum Institute recommendation that crane cabs with overhead windows have a grating or other protection over the window to prevent debris from falling on the operator.



*No drops protection*



*With drops protection*

### **Planning for HSR forum underway**

The 2009 Health and Safety Representatives [Forum](#)<sup>4</sup> will be held at the Burswood Convention Centre in Perth, WA, on Monday 3 August.

NOPSA is chairing the HSR Forum Steering Committee which has selected topics including 'the safety case and the role of the HSR', 'the safety culture of organisations' and 'the common safety training model'. Invitations to attend and submit presentations have been issued. Please contact [lily.martin@nopsa.gov.au](mailto:lily.martin@nopsa.gov.au) for further information. The event is aimed specifically at HSRs and will be followed by the National Oil & Gas Safety Conference on 4-5 August which is suitable for a wider audience.

### **New leaflet looks at prescription and standards**

A [new leaflet](#)<sup>5</sup> in NOPSA's series of information pamphlets which explain aspects of the safety legislation applying to offshore petroleum operations is now available. This leaflet looks at 'prescription and standards' within the safety regime. Copies of NOPSA's information leaflet series can be ordered by contacting [info@nopsa.gov.au](mailto:info@nopsa.gov.au)



*NOPSA inspector Brian Moore discusses the new leaflet with executive assistant Jayne Ballantyne.*

### **New Medivac aircraft in place**

A worker with a serious hand injury was one of the first cases to benefit from the new dedicated medivac fixed wing aircraft based in Karratha. Six oil companies have formed a consortium to pay the retainer for the aircraft.

Previously, the injured worker would have faced an uncertain number of hours of waiting for suitable air transport from Karratha.

NOPSA sees this as a good example of the oil and gas industry working collectively to address a significant and expensive health and safety issue.

The aircraft is a Cessna Citation 550 including aircrew, medical crew and medical equipment. It can transport one stretcher and one sitting casualty or two sitting casualties.

**Checks on HSR trainers underway**

NOPSA occupational health and safety inspectors are completing an audit of accredited HSR trainers to ensure that their instruction and materials meet required standards. With most of the initial audits completed, indications are that the trainers are providing a high standard of training and information.

**Update on safety case guidance note project**

The comment period on the initial draft of the NOPSA guidance note: "Safety Management Systems" has now closed.

The [current plan](#)<sup>6</sup> for the guidance notes can be found on the NOPSA website. The first three guidance notes (the safety case in context, safety case lifecycle management, and safety case content and level of detail) are being revised as a result of feedback from recent stakeholder workshops. They are due to be finalised and issued for use at the end of May.

## Stakeholder relations

**New members join NOPSA advisory board**

NOPSA welcomes three new [board members](#)<sup>7</sup> who bring extensive experience in the areas of risk management, petroleum operations and policy decision-making. They are Tony Pooley, Michael Ollis and Dr Lynne Chester.

## International

**Alert issued over quality variations in pipe components**

NOPSA has received [information](#)<sup>8</sup> from the Petroleum Safety Authority of Norway (PSA) about quality variations in certain oil and gas pipe components made of duplex steel. The PSA reports that the deviation in quality does not show on the material certificates and could involve a higher risk of brittle fractures. The cause of the quality deviation is believed to be faulty heat treatment by the manufacturer. It is believed, a major manufacturer of such fittings installed a new heat treatment furnace in 2006. The manufacturer is believed to have used an inadequate method of stacking the pipe fittings in baskets to be treated in the furnace.

NOPSA has issued a [safety alert](#)<sup>9</sup> on this topic which is on its website.

## Casing fall prompts warning

An incident in which a floorhand was struck on the shoulder when an elevator latch opened and released a joint of casing has prompted a [safety alert](#)<sup>10</sup> from the Oil and Gas Producers (OGP).

The dropped casing pinned the worker to the racked pipe and forced him down to the rig floor. The result was a compression fracture of a vertebra. An investigation identified that the elevator latch was missing the set screw which allowed the elevators to open without activating the latch. The safety alert contains detailed recommendations for inspection of elevators and general preventative advice.

NOPSA is aware of a number of similar incidents which have occurred in Australian waters. This type of incident is therefore clearly foreseeable and operators are reminded that they have a duty to ensure that the equipment used on their facilities is safe.

## Website

### Updates to safety alerts, information leaflets

New information on NOPSA's website includes new [safety alerts](#)<sup>11</sup>, new [guidelines and forms](#)<sup>12</sup> for operator registration and a new [information leaflet](#)<sup>13</sup>.

## Regulatory activities

**As at 29<sup>th</sup> April 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 April.

<b>April 2009 Assessment Type</b>	<b>Submitted</b>	<b>Accepted / Agreed</b>	<b>Withdrawn / Stopped</b>	<b>Rejected</b>	<b>In Progress</b>
Safety Case NEW	2	1			8
Safety Case REVISED	11	2		3	14
Pipeline SMP NEW					
Pipeline SMP REVISED	1				2
Diving SMS		1			
Request for Exemption	1	1			
Scope of Validation	1				1
Field Development Plan					1
	<b>16</b>	<b>5</b>		<b>3</b>	<b>26</b>

## Inspections

Five inspections were conducted in April. The scope of these included:

- one routine inspection
- two first inspections (one pre-mobilisation)
- one examination of incident site
- one multiple incident follow-up

Issues included the condition of cranes.

## Incidents and complaints

There were a total of 27 incidents and no complaints reported in March. Incidents included 24 dangerous occurrences and three lost time injuries (LTIs).

The major incidents included:

- one fire
- one inadvertent CO<sub>2</sub> gas release
- one electric shock

The significant incidents included:

- three LTIs – laceration from angle grinder, broken ‘padeye’ struck arm, hand trapped by pipes
- three hydrocarbon gas releases between 1 and 300 kg
- one struck by spinning tong
- one dropped object – tugger wire
- four other incidents requiring investigation
  - generator cooler failure
  - separator overflow
  - melted cable
  - water leak into column
- twelve unplanned events requiring implementation of emergency response plan
  - two gas alarms
  - six smoke detector alarms
  - three manual call point activations
  - one response to assist the Royal Australian Navy

## Enforcement

The following six enforcement actions were issued in April:

- One prohibition notice to prevent recommencement of petroleum production post fire
- Five improvement notices for:
  - alarms management system – display console
  - deluge system did not function appropriately
  - maintenance activities not being addressed in a timely manner, work orders lack appropriate descriptions and task actions
  - training and competency system for safety-critical activities not in place
  - failure of firewater hydrant system

## Subscribe

[Past issues of this newsletter](#)<sup>14</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>15</sup> to receive future copies of this newsletter.

## Find out more

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<sup>1</sup> <http://www.nopsa.gov.au/operator.asp#nomination>

<sup>2</sup> <http://www.nopsa.gov.au/alert/alert26.asp>

<sup>3</sup> <http://www.nopsa.gov.au/alert/Alert29.pdf>

<sup>4</sup> [http://www.nopsa.gov.au/hsr\\_forum.asp](http://www.nopsa.gov.au/hsr_forum.asp)

<sup>5</sup> <http://www.nopsa.gov.au/document/QandA%20-%20Prescription%20and%20Standards.pdf>

<sup>6</sup> <http://www.nopsa.gov.au/projects.asp>

<sup>7</sup> <http://www.nopsa.gov.au/board.asp>

<sup>8</sup> <http://www.ptil.no/news/update-on-quality-variations-in-piping-components-of-duplex-and-super-duplex-steel-article5485-79.html>

<sup>9</sup> <http://www.nopsa.gov.au/alert/Alert30.pdf>

<sup>10</sup> <http://info.ogp.org.uk/safety/>

<sup>11</sup> <http://www.nopsa.gov.au/alert/>

<sup>12</sup> <http://www.nopsa.gov.au/operator.asp#nomination>

<sup>13</sup> <http://www.nopsa.gov.au/media/>

<sup>14</sup> [http://www.nopsa.gov.au/CEO\\_emails/index.asp](http://www.nopsa.gov.au/CEO_emails/index.asp)

<sup>15</sup> [info@nopsa.gov.au](mailto:info@nopsa.gov.au)