

Dropped objects

What happened?

NOPSEMA has identified a concerning increase in dropped object events in the first quarter of 2013. Nine dropped object notifications have been received by the authority in the first quarter of 2013. All of these dropped object events have occurred on mobile offshore drilling units (MODUs). As a comparison, one dropped object was reported on MODUs for the same period in 2012 and a total of 13 for the entire year.

The weights and heights of the dropped objects ranged from 2 to 2,300 kilograms and from less than 1 metre to 43 metres. The dropped objects were sections of drill pipe and casing, a spool of wire rope, a navigation light fitting, slip inserts, a hose bundle, an equipment handle and a camera located in the derrick. Three members of the workforce were injured in three separate dropped object events. Two workers each suffered a crush injury to the foot requiring a medical evacuation from the facility, while another worker required first aid treatment for a leg injury. In another case, a member of the workforce was standing only 2 metres from where a 28 kilogram object landed having dropped from a height of 19 metres. Analysis using the industry supported 'DROPS Calculator'¹ indicates that six of these dropped object events could have resulted in a fatality.

An analysis of the data reported to NOPSEMA in relation to the dropped object events in 2012 highlighted the predominant root causes as being: poor design of equipment; work procedures followed incorrectly; wrong procedures used or no procedures used; dropped objects not anticipated and factored into the planning for the work; lack of training, lack of instruction, lack of understanding of the task; and preventive maintenance issues.

Nine notified dropped object events on MODUs for the first quarter compared to thirteen over the preceding twelve months is of concern and should be taken as a warning sign by operators and other duty holders that action needs to be taken to arrest this trend.

What could go wrong?

The 'DROPS Calculator' highlights that a mass of as little as 700 grams falling from a height of 15 metres could result in a fatality. While responsible operators cordon off or barricade areas where a dropped object hazard has been identified, it should be kept in mind that dropped objects can bounce on impact and end up in an area not anticipated in the risk assessment.

NOPSEMA re-emphasises the need to appropriately apply the hierarchy of controls to dropped object hazards. In particular, operators are reminded that the risk management focus should be on elimination, substitution and engineering controls before consideration of administrative controls. Administrative controls such as creating safety zones and areas of restricted access may assist in protecting members of the workforce from dropped objects, however, all reasonably practicable steps to eliminate the dropped object hazard altogether, substitute the dropped object hazard with a safer alternative, and effectively engineer out the dropped object hazard should be considered first and action taken if practicable.

Key lessons

- Thorough pre-task risk assessments should address dropped object hazards.

¹ "DROPS is an industry-wide initiative focused on preventing dropped objects, with the ultimate goal of delivering a second nature dropped objects prevention strategy across our industry."
[\[http://www.dropsonline.org/index.asp?id=1&refID=4&contentID=4\]](http://www.dropsonline.org/index.asp?id=1&refID=4&contentID=4)

- The hierarchy of controls should be applied to ensure an appropriate balance of preventative and mitigative control measures are identified and implemented.
- Risk assessments should consider areas outside of the anticipated dropped object area.
- Regular dropped object prevention inspections should be undertaken, with any resulting action items attended to in a timely manner.
- Consideration should be given to including competent members of the workforce who do not regularly work in the area to be inspected as a 'fresh pairs of eyes' in dropped object prevention inspection teams.

The legislation

In accordance with Clause 9(1)(a) of Schedule 3 to the *Offshore Petroleum and Greenhouse Gas Storage Act 2006*: "The operator of a facility must take all reasonably practicable steps to ensure that the facility is safe and without risk to the health of any person at or near the facility."

In addition, Clause 9(2)(a) of Schedule 3 requires operators to take all reasonably practicable steps to provide and maintain a physical environment at the facility that is safe and without risk to health. Clause 9(2)(c) requires operators to take all reasonably practicable steps to ensure that any plant, equipment, materials and substances at the facility are safe and without risk to health.

Contact

For further information email alerts@nopsema.gov.au and quote Alert 56.

Further practical information and guidance on the DROPS scheme can be found at www.dropsonline.org

NOPSEMA Safety alerts are on the 'Safety Alerts' page, under the 'Safety' tab at www.nopsema.gov.au