Gap Analysis of Dropped Objects

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Introduction

My name is Nick Adams. I am a DROPS Subject Matter Expert & I have been working with Dropped Objects in the oil and gas industry for over 11 years.

For the last 2 ½ years, I have been working with a leading global operator on a long term project to carry out DROPS assessments and gap analysis of contractor DROPS SMS globally, working with a variety of contractors in areas including:

- Alaska

- Azerbaijan

- Egypt

- Indonesia

- Iraq

- Mauritania

- Oman

- Scotland

- Trinidad

- Gulf of Mexico

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Introduction

My work has seen me visit:

- Drill Ships

- Semi Subs

- Jack-ups

- Land Rigs

- Well Intervention Units

- Logistics Support Hubs

- Quayside Facilities

- Contractor Shore Bases

The purpose of today's presentation is to look at Gap Analysis of Dropped Objects within the oil & gas industry and how operators, drilling contractors and service companies can use Gap Analysis methods to support continued improvement in the reduction of Dropped Objects.

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Objectives & Outcomes

- Understand what is DROPS Gap Analysis

- Review why should we do DROPS Gap Analysis

- Understand different forms of DROPS Gap Analysis within an organization at corporate, regional and site levels

- Review common trends, observations and gaps from my work over the last 2 ½ years

- Explain how technology can help support DROPS Gap Analysis

What is DROPS Gap Analysis?

What is DROPS Gap Analysis?

Gap Analysis for Dropped Objects can take various forms at different levels of the organization but the principal is easy – compare the current state to the ideal state.

With any DROPS gap analysis, the goal is always the same – To identify gaps within the company's DROPS SMS, procedures, policies, application of company standards and to identify knowledge gaps with personnel. Using this information, a company can then close the gaps to reduce the risk of Dropped Objects.

This can be achieved through internal or external oversight at corporate, regional or site level and should be part of a company's continuous improvement plan.

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Why Carry Out DROPS Gap Analysis?

Why carry out DROPS Gap Analysis?

Carrying out a DROPS gap analysis can help identify opportunities for improvement within a company's DROPS SMS, identify which areas to invest time & money on improving to have the most cost effective benefits, highlight best practices and most importantly – Save Lives!

Implementing the learnings from gap analysis, along with continued support from senior management, can help significantly reduce dropped objects incidents, reduce risk to personnel, reduce costs from downtime and reduce risk to the public.

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Corporate DROPS Gap Analysis

There are various areas for Gap Analysis that can be implemented by an organization at a corporate level:

- Having a SME review the current company DROPS standard/policy and provide feedback on any gaps against the DROPS Recommended Practice or DROPS Reliable Securing

- Review zone management policies against industry best practices and for compliance with the DROPS Recommended Practice & the DROPS Red Zone guidance

- Review policies, procedures and standards that support a Dropped Object free workplace such as Lifting & Hoisting, Working at Height, Man Riding, Management of Change, Transportation of Equipment, Personnel Training & internal Self-Verification programs

- Co-ordinate with OEM's to identify gaps between OEM maintenance & inspection guidelines and current practices e.g. Have all safety alerts been passed along to sites and actioned?

- Review quality of training provided to personnel and refresher training frequencies – Ensuring personnel have the required competency to identify and eliminate Dropped Objects

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Regional DROPS Gap Analysis

At a regional level, there are various areas that can be assessed to identify potential gaps including:

- Identify at a regional level any gaps between company SMS, procedures & policies and regional legislation or regulations e.g. LOLER in the UK

- How does the region effectively implement and manage corporate policies & procedures?

- What provisions are made for non-English speaking personnel and how does the company ensure all personnel are aware of company policies, procedures & standards?

- Management visits to sites to carry out Gap Analysis in the form of audits or self-verifications

- Management of personnel training and training matrices

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Site DROPS Gap Analysis

There are various methods of Gap Analysis that can be implemented at a site level:

- Gap analysis of 3rd party DROPS surveys for compliance with company standards, accuracy and missing items

- Gap analysis of operator & contractor 3rd parties to ensure personnel and equipment align with site DROPS SMS, securing requirements and zone management

- Self-verification by site management against company procedures for DROPS, zone management, lifting operations and working at height

- Reviewing risk assessments, JSA's & toolbox talks to ensure DROPS hazards are clearly identified with adequate controls in place e.g. tethered tools for working at height, effective barrier management

- Verifying tools aloft/ derrick log book is being used effectively

- Hazard hunts for redundant equipment

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Common Gaps & Trends

Over the last 2 ½ years there have been some common gaps and trends observed which impact all aspects of our industry, from shore bases to rig floors, drivers to derrickmen. Over the following slides we will review some of these gaps and trends, and discuss some potential solutions.

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Common Gaps & Trends

DROPS Surveys:

- Lack of detail in, or poor quality of 3rd party DROPS surveys – Items missing, poor descriptions of locations, inaccurate descriptions of securing methods, items grouped together (e.g. "Strip lights in derrick")

- Lack of QA/QC of 3rd party DROPS surveys by contractors – Does the survey meet the requirements of your DROPS policy/ standard? Have all areas been covered? What corrective actions could/ should have been closed out during the survey?

- Inability to update DROPS registers when new equipment is installed - Most inspection reports are locked or in PDF format and can not be updated to reflect new equipment that is installed, changes to equipment, updates to company procedures etc.

- You paid for it, OWN IT!

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Common Gaps & Trends

Contractor standards, policies & procedures not aligning with industry best practices or local legislation/ regulation -

- Some contractors unaware of the DROPS RP

- Standards, policies & procedures not reviewed and updated regularly

- Lack of ownership within organizations

- Lack of SME's within some organizations to ensure DROPS SMS is up to date and effective

- Regional policies & procedures being implemented without full QA/QC and not meeting corporate/ global standards

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Common Gaps & Trends

Poor integration of and control of 3rd party personnel and equipment on sites -

- 3rd party personnel not adequately trained on site HSE policies and SMS

- Poor team work – Service companies not working alongside contractor personnel effectively

- Service company equipment being installed that does not meet contractor securing/ fastening requirements

- Lack of ownership for long term installed 3rd party equipment e.g. Cement units

- Poor oversight of 3rd party personnel and equipment on sites – offshore and shore bases

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Common Gaps & Trends

Lack of controls for equipment being transported, particularly returning from offshore locations

- Poor inspections being carried out on loads prior to transportation from shore bases and/or quayside facilities

- Lack of inspections/ controls for loads returning from offshore locations – Both on location and at quayside facilities

- Lack of ownership for loads being transported

- Poor communication and team work between different parties involved during transportation of equipment (operator, drilling contractor, service companies, vessel, quayside, trucking company etc.)

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Common Gaps & Trends

Lack of adequate training for personnel exposed to DROPS hazards -

- DROPS RP identifies 3 levels of training/ competency which is very rarely met

- Lack of refresher training for DROPS – many companies require only 1 time documented DROPS Awareness training – Could you remember details of training received 5 years ago?

- Shore based personnel not receiving DROPS training

- Potential for more "Hands On" training for personnel carrying out DROPS inspections on site

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Common Gaps & Trends

Poor DROPS hazard identification on sites, especially identifying redundant equipment -

- Risk assessments, JSA's and toolbox talks not clearly identifying the potential for dropped objects at different stages of an operations

- Lack of awareness for potential dropped objects during routine tasks - Many rig crews only focus on what they could drop, not what could drop on them

- Inadequate barrier management due to lack of hazard awareness

- Incorrect tools being selected for working at height

- Personnel not identifying redundant equipment in their work area

- Poor housekeeping after maintenance, repairs or upgrades

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Common Gaps & Trends

Companies not utilizing the hierarchy of controls to control and reduce risk -

- Equipment being installed where it is at risk of impact leading to a dynamic dropped objects

- Positioning of equipment which exposes personnel to unnecessary risk during maintenance

- Substitution of old equipment for newer, lower risk equipment (e.g. Changing fluorescent tube strip lights to LED's)

- Too much reliance on procedural controls when there may be options for elimination, substitution or engineering controls
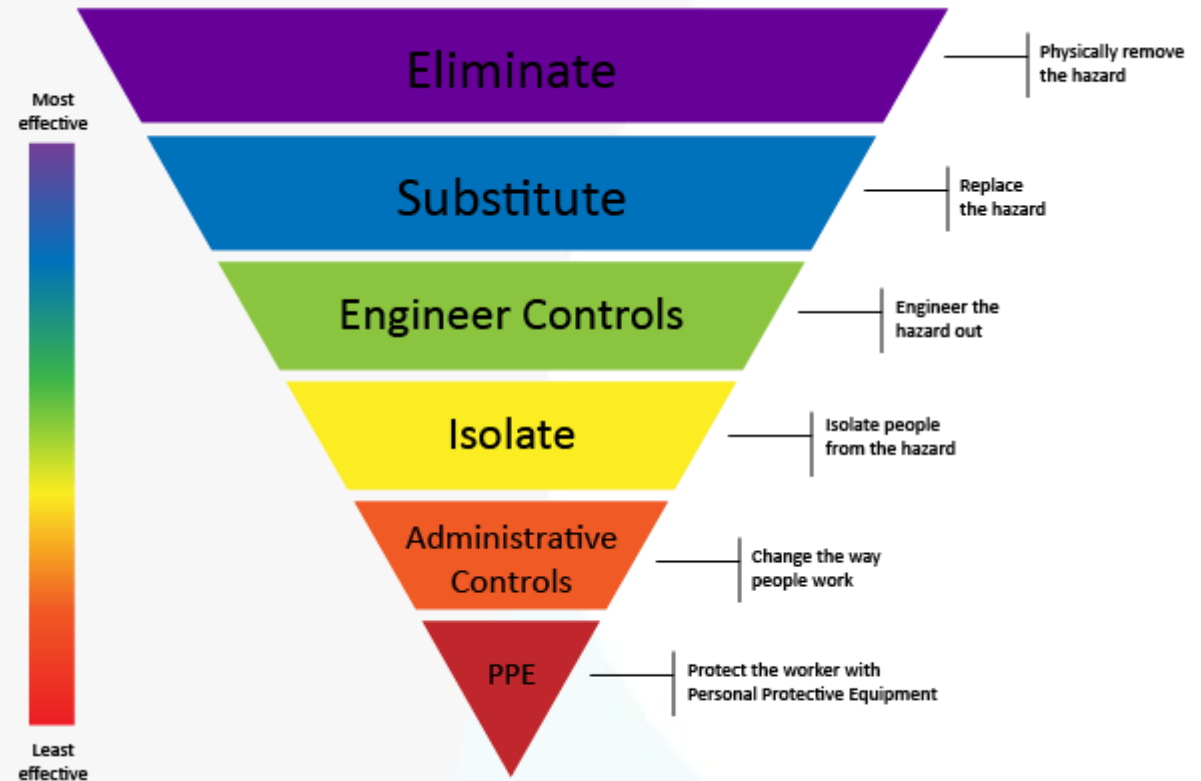
Common Gaps & Trends

Contractors failing to recognise the potential for dropped objects at their on shore facilities (workshops, warehouses etc) -

- Shore based personnel not receiving DROPS training

- No 3rd party DROPS surveys being carried out

- No systematic DROPS inspections being carried out at on shore facilities

- Lack of secondary retention and/or safety securing installed on equipment at height

- Poor zone management and lack of barriers

- Potential to improve storage of equipment in warehouses

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How Can Technology Support Gap Analysis

Technology can be utilised to assist with the Gap Analysis of Dropped Objects and provide a real time audit visibility of overdue and new actions, using software and hardware to aid with the following:

- Accurate Identification of assets (RFID, Barcode, etc.).

- Links to existing Maintenance Systems allowing for Corrective Workorders to be automatically created.

- Guided inspection processes according to operators procedures.

- Help guides and reference materials can be linked to inspections, reducing off-site training and allowing for standardized rejection and acceptance criteria.

- Live changes to Zoning, Inspection Frequencies and Inspection Prompts, no waiting for the next Annual Third Party Dropped Objects Survey for policies to be reflected in checklists.

- Ability to Add, Remove and Amend inventories without additional Third Party Reporting Costs.

- Visibility of upcoming inspection schedules, allowing for interim inspections based on availability of equipment and downtime windows.

- Auditable inspections, showing near real-time history and showing which items have received hands on inspections through RFID scanning.

- Accurate time on task for inspections.

- Live Tools Aloft and Temporary Equipment Registers.

- Trend analysis of common findings.

Questions?