



Prevention of Dropped Objects: No-Go Zones and Red Zones



Sarah Molyneux

SDA Drilling Engineer

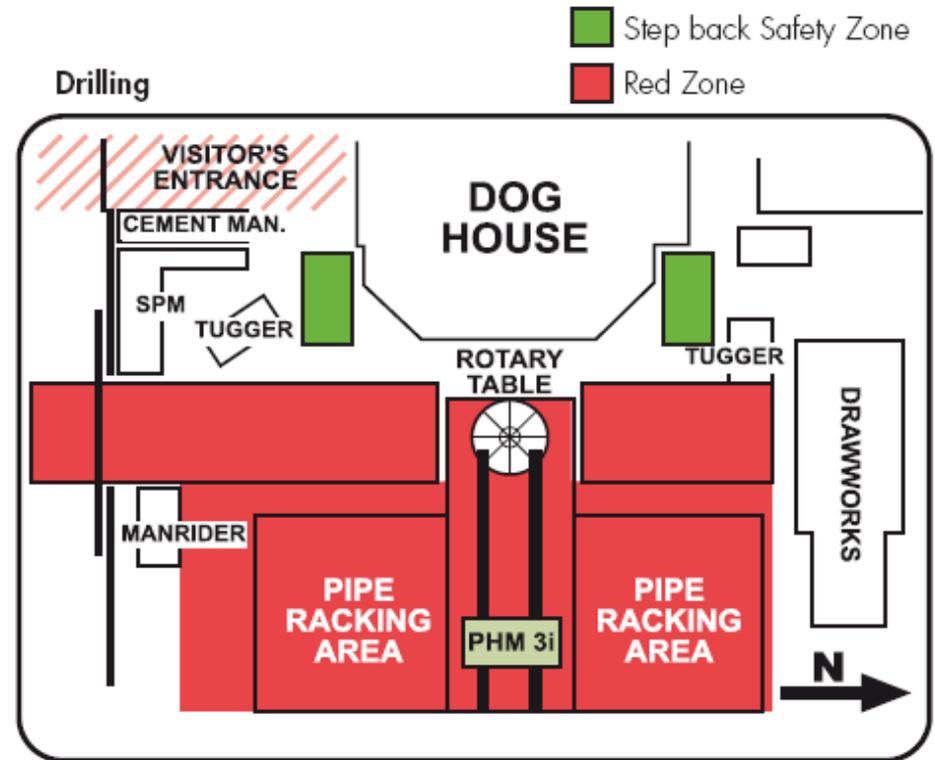
What am I here to talk about today?

- Introduce the topic Red zones and No-Go zones – Part of Shell DROPS
- Why is it important topic to Shell.... And why it should be for you
- Encourage some discussion around good and bad practices
- Encourage some feedback amongst yourselves on how we use No-Go and Red Zones on the rig to keep people out of potentially hazardous areas

- Starting with an awareness session....
- Share some of my experiences relating red zones and no-go zones
- Show you an animation – and get some feedback from you
- Follow up with.....
- Over next couple of days do some ‘rigsite’ training sessions

What is a Red Zone?

- Typically covers the drill floor
- An area that you only go into when needed (and when you are authorised)
- Entry is controlled by a designated person in charge (i.e the driller)
- Red Zones tend to be quite 'static' same red zone on rig floor all the time.



What is a No-Go Zone

- No-Go Zones are restricted areas that no one should enter.
- Controlled by a PTW
- These areas should always have hard barriers
- No-Go zones tend to change frequently
- Good communication required between those setting up the area and the rest of the crew



Shell EPE HS&E Learning Bulletin



Location: Ocean Guardian

Date: 15 May 2006

Ref No: Fountain 78926

What Happened: Whilst running in hole this morning the derrickman released a stand of drill pipe towards the elevators, but missed the elevators allowing the stand to drop into the safety rope. Unfortunately the safety rope was not fully secured and the stand contacted the top drive system blower frame. A piece of old frame was dislodged and consequently dropped to the drill floor. The approximate weight of the dropped object was 650gms. No-one was injured. Upon inspection it became apparent that the original weld on the blower frame bracket had been corroded away.



The dropped bracket came from the TDS blower frame (part of an old frame replaced some time ago). During previous derrick inspections the bracket appeared to be fully welded on to the derrick structure.



Original full weld contact corroded away



Remaining weld contact point

Learning points

- Ensure correct method of securing safety rope is followed in future. The floorman working in the derrick was relatively inexperienced in his position – all crews to be briefed and coached on the findings of this incident.
- The dropped object was a remnant from a previous blower frame. Numerous independent and rig-based derrick inspections did not identify this bracket as a hazard. The inspection of the dropped object made apparent that the original welding was of a very poor standard.



Shell EPE HS&E Learning Bulletin



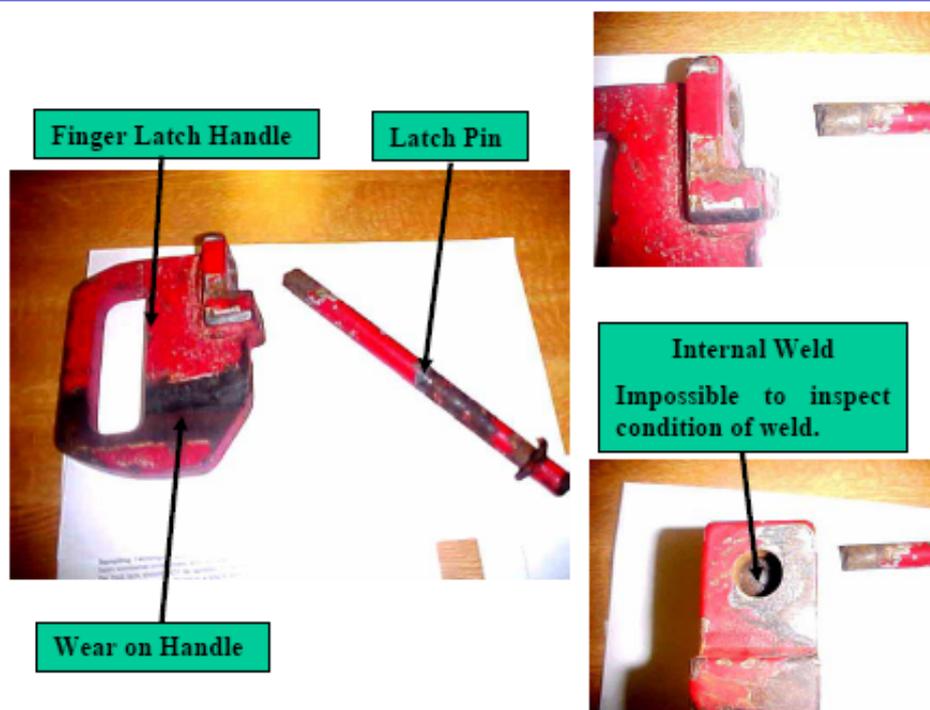
Location: Ocean Guardian

Date: 13th Jan 2005

Ref No: Synergi #10805

What happened: During a period of waiting on severe weather, a finger latch (1.5kg) was found on the rig floor. The time of the actual incident is unknown. Inspection of the failed finger shows failure of the pin within the finger latch handle recess where it is impossible to inspect. Significant wear is visible on the handle itself. The latch was used to store a singular stand which was not amongst a cluster of other stands. Inspection of other accessible fingers in the derrick revealed 4 with bent pins which were changed out. These fingers showed no signs of the excessive wear associated with the finger that failed.

All non essential personnel were confined to the accommodation during the period of very severe weather and it is likely that the latch dropped during this period. Outside restrictions had been removed as the weather improved and personnel had been working on the rig floor (derrick was still out of bounds due to wind) prior to the finger latch being discovered, but not necessarily prior to it having fell.



Learning points

- Initial action was to install secondary fall protection to a number of fingers for trial and review. Geograph line passed through the handles of 2 rows of fingers as a secondary fall protection. Trial inconclusive. Half the crew liked them, the other half didn't.
- Manufacturer investigated failure mechanism. Fingers to be modified as per manufacturers (RB Boss) recommendations. Fingers being replaced with modified fingers in batches of 10.

Good Practise

- Carry out a derrick inspection after periods of waiting on weather.



Shell EPE HS&E Learning Bulletin



Hazard/Incident Report Ref No: 127068 Location: Nelson Date: 03/03/07

What happened: NM D0(P) Dropped Object – Drill line drum structure bracket

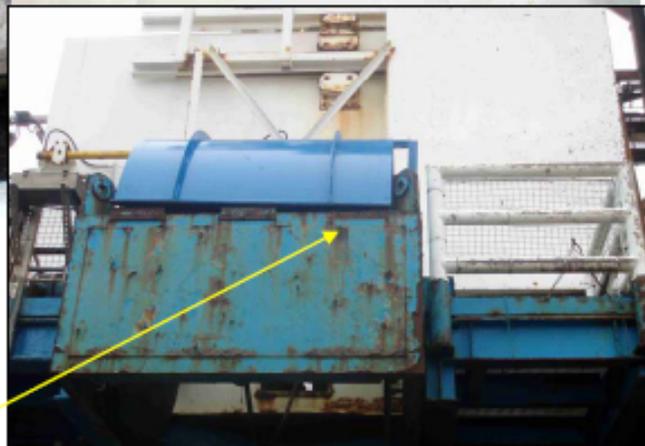
The drill line cover had just come back onboard after refurbishment; the deck crew lifted the cover up to the outside of the drill floor - to the drill line spool and lowered the cover into position. One of three 'L' shaped steel support brackets (5kg)(4" x 13.5") fell approximately 40ft to the heavy tool store roof below. The bracket fell due to corrosion of the retaining bolts.

The bracket landed on the heavy tool store roof, a none accessible area, with no walkway in the drop zone, and therefore no potential dangers to personnel.

Dropped Object – 5kg bracket



Landing area of bracket on heavy tool store roof



Original position of bracket

Learning points

- There was no way of checking the bolts and brackets prior to operation due to lack of access.
- The potential of dropped objects was identified on the TRIC card and precautions (barriers) put in place.
- Job was carried out under General deck lifts LOLER and SMS and TRIC had been held for the task.
- Scaffold to be built and remaining two brackets to be checked
- PIR to be raised to find alternative solution to brackets.



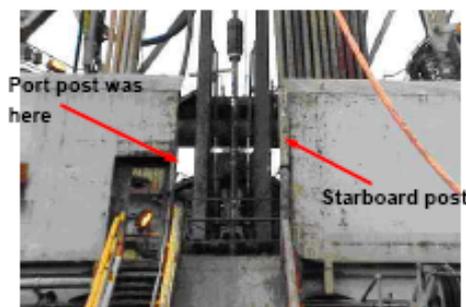
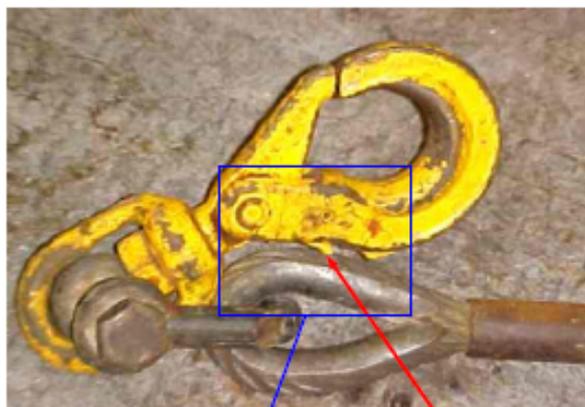
Shell EPE HS&E Learning Bulletin

Location: Ocean Guardian Date: 3 June 2005 15:25 Hrs Ref No: Synergi 11684 NM C1(A)



What happened:

An operation was in progress to lift guide posts out of the side of the v-door. The posts were being lifted one at a time vertically with the Port crane. During the port post lift, it initially resisted releasing from its socket. A TBT identified the dropped object risk and it was discussed to remove all non essential personnel and to keep potential drop zone clear of personnel. Hence there was no risk to personnel in this incident. Tension was subsequently increased and at approx 1.5 ton pull on the crane, the post jumped free. The momentum and interaction between sling and crane hook resulted in the hook opening and releasing the load which then descended down the v-door and along the catwalk. Investigation is currently ongoing.



Final resting place of the guide post



Trigger hard up against pennant hard eye



Post socket at the top of the V-door

Observations/Learnings

- Inspection of the BKL 18-20-8 Gunnebo safety hook identified no defects. Attempts to knock the latch open or pass the sling through the gap failed. It has been quarantined for inspection.
- The only trial to trip the safety latch was by rotating it back on itself until the release trigger came into contact with the pennant hard eye (see photos opposite). This is only speculation as to the cause of the failure however.
- The hook is of a newer type, specifically designed to prevent this type of occurrence.
- Always consider possible failure of equipment during any TBT and ensure all unnecessary personnel are well clear of any hazards.





Red Zone Awareness



- New guy on the rig – ‘green hat’
- Asked directions... pointed in right direction
- Followed the walk way... (at least didn’t walk up catwalk)
- Didn’t report to driller
- Man-riding started with people below
- Grease Gun secured... but dropped free!
- 2nd time round escorted to rig floor introduced to driller and shown red zone
- 2nd time round – rig floor made a no-go zone, PA announcement made and man-riding eliminated
- Making new people aware of red zones and safe routes
- Labelling / marking of the red zone
- People in the Red Zone when not needed.

No-Go Zone



- Working at height – on the crane... non-routine
- Identified that a No-Go zone was required
- Poor barrier... didn't let the guy inside the container know
- No signs on barrier or PA announcement
- 2nd time round man was able to exit container via different route and stayed out of the danger area.
- Correct use of barriers for a No-Go zone
- Communicating a No-Go Zone

Working in a Red Zone



- POOH – four floor men stood directly around the rotary table in the ‘Red Zone’
- TDS / Blocks / Derrick.... Full of potential dropped objects
- 2nd time round – all floormen out of the way in the ‘green zone’....
Even automatic pipe wiper.
- Reduce time in Red Zone
- Use ‘safer’ step back areas

Where do we go from here...

- End of the Awareness session...

- Follow up with some 'rigsite' training sessions...
 - Red Zones

 - No-Go Zones

- Encourage some discussion around good and bad practices

- Encourage some feedback amongst yourselves about unsafe work practices

- Get you to look for improvements in your workplace.

