# Near Misses

RAMP RISK ASSESSMENT MANAGEMENT & PREVENTION

**What's a Near Miss?** Usually, a near miss or hit is defined as an accident that almost happened. For example, the situation where someone trips and almost falls down the stairs but manages to grab the handrail just in time, or when someone is almost hit by a reversing forklift. In these two examples no injury resulted but this was the result of good luck rather than good management. When near misses occur they can be regarded as early warnings that something is wrong somewhere in the system. We, therefore, need to develop a system that allows us to take action before an injury takes place – and of course, this is nothing other than good management practice.

*Discussion is an exchange of knowledge; argument is an exchange of ignorance.*

*Robert Quillen*

When a Hazard and Near Miss report is received by a supervisor, the supervisor must discuss it with the person making the report, decide what corrective action must be taken and implement the change as soon as possible if it is within the supervisor's authority. If not, the matter must be referred to the manager for correction. Near Miss reports and recommended corrective action must not be deferred until the next committee meeting unless it requires further discussion. **The idea is to take immediate corrective action now.**

**Below is a summary of an actual near miss that is quite common:**

**Incident Date:** 1/09/2009

**Task Description:** Working on elevated platforms using hand tools.

**Summary:** A hand tool fell through a small gap in the work area and dropped and deflected from other equipment causing the hand tool to fall outside the exclusion zone identified for the process.

**Incident consequences (potential or actual):** Near Miss

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**Cause of incident:** Moving, flying or falling object

**Root cause:** Lack of risk assessment

**Activity Type:** Maintenance

**Specific Equipment:** Hand Tools and the lack of securing devices to ensure they are unable to fall from aloft.

**Lessons Learned:**

- It appears there was a deficiency in the risk assessment which had not identified a large enough exclusion zone underneath the work area
- It appears there was no 'tool control' for the safe and controlled use of working with tools at height
- It appears that gaps in the protective matting still existed; this had not been managed effectively

**Near-misses are often less obvious than accidents and are defined as having little if any immediate impact on individuals or processes. Despite their limited impact, near-misses provide insight into potential accidents that could happen.**

As numerous catastrophes illustrate, management failure to capture and remedy near-misses may foreshadow disaster. Notable examples where near-miss precursors have been observed but not effectively managed include:

1. The 1986 Space-Shuttle Challenger explosion. Engineers had identified and reported degraded O-ring seals on previous missions dating back to 1982 with degradation increasing as ambient lift-off temperature decreased. The night before the disaster, management had been warned of the potential for catastrophic failure when lifting off at ambient temperatures of 53 8F or below (the lift-off temperature was 36 8F) (Vaughan, 1996).

2. The 1997 Hindustan refinery explosion in India. Sixty people died and over 10,000 metric tons of petroleum-based products were released to the atmosphere or burned. Written complaints of corroded and leaking transfer lines where the explosion originated went unheeded (Khan and Abbasi, 1999).
3. The 1999 Paddington train crash catastrophe in which 31 people died. From 1993-1999 eight near misses, or 'signals passed at danger' (SPADS), had occurred at the location (Signal 109) where the eventual collision and explosion occurred. At the time of the crash, the signal was one of the 22 signals with the greatest number of SPADS (Cullen, 2001).
4. The 1998 Morton explosion and fire resulting from a reactor temperature excursion. Nine people were injured, two seriously. In an accident investigation, the Chemical Safety Board concluded "Management did not investigate evidence in numerous completed batch sheets and temperature charts of high temperature excursions beyond the normal operating range." A disproportionate number of excursions resulted after the process was scaled-up (Chemical Safety Board, 2000).

**Many accidents can be prevented by taking prompt action to prevent a hazardous situation from continuing or developing into something worse. Therefore, use Near Miss reports as your early warning system - waiting for the injury to happen before acting just doesn't make sense!!!**



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