



### INTRODUCTION

Why investigate a near miss? Near misses share similar causal factors and underlying causes as accidents. By investigating near misses and addressing the underlying causes of accidents and near misses, the precipitating conditions can be influenced so as to be avoided in the future. Near miss reporting is important for continuous improvement efforts for an organization's safety performance. The purpose of accident investigation is to identify causative factors and develop corrective action to prevent accident recurrence, mishaps, or near misses.

### TERMS/DEFINITIONS

**Accident:** Unplanned sequence of events accompanied by undesirable consequences

**Causal Factor:** Structural/Machinery/Equipment/Outfitting problems, human errors and external factors that caused an incident, allowed an incident to occur or allowed the consequences of the incident to be worse than they might have been.

**Incident:** Unplanned sequence of events with the potential for undesirable consequences (i.e., accidents and near misses)

**Loss:** Any condition or sequence of events and outcomes that leads to human injury, environmental damage, equipment damage, or business loss.

**Near miss:** An unplanned sequence of events and/or conditions that results, or could have reasonably resulted, in a loss event. A near miss is an event where no contact or exchange of energy occurred, and thus did not result in personal injury (and any observed unsafe working conditions are to be reported electronically as a near miss).

**Potential Loss:** Any condition or sequence of events and outcomes that may potentially lead to human injury, environmental damage, equipment damage, or business loss. These are events where good fortune may have intervened, and thus avoided a loss.

**Root Cause:** Commonly used to describe the depth in the causal chain/analysis where an intervention can reasonably be identified and implemented to change performance and prevent an undesirable outcome.

### DISCUSSION

#### Level of Concern

The contribution of human error to accidents has been a much discussed topic for decades. Summarizing it all, about 80% of marine accidents involve human error. In about 50% of accidents human error is the precipitating cause, and in about 30% of accidents human error is a contributing cause (where a situation, such as weather, likely would not have resulted in an accident or loss if the human acted without error). This also suggests that only about 20% of marine accidents are not directly attributable to humans making errors.

Near misses are another matter, and it is only recently that the notion of analyzing "accidents that almost happened" has been receiving wider attention and scrutiny. After all, the difference between a loss and a non-loss is often due to