This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

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Standard Guide for Reporting and Recording of Near-Misses for Maritime Industry[1]

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1. Scope

1.1 This guide provides near-miss reporting criteria and terminology for maritime vessels.

1.2 The purpose of this near-miss reporting guide is to standardize near-miss reporting, including terminology, for the maritime industry.

1.3 The criteria contained within this guide should be applied as a minimum to all near-miss reporting in the maritime industry unless otherwise specified.

1.4 This guide is divided into the following sections and appendixes:

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1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.6 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Terminology

2.1 *Definitions of Terms Specific to This Standard:*

2.1.1 *accident, n*—an incident with unexpected or undesirable consequences that may be related to personnel injury or fatality, property loss, environmental impact, business loss, etc., or a combination of these.

2.1.2 *activity/task, n*—an action or job that was being performed during the time of the near-miss, unsafe act/behavior, or hazardous/unsafe condition.

2.1.3 *causal factor, n*—a structural/machinery/equipment/outfitting problem, human factors, or external factors that contributed to an incident, allowed an incident to occur, or allowed the consequences of the incident to be worse than they might have been.

2.1.4 *consequences, n*—the undesirable or unexpected outcomes that may result in negative effects for an organization. These outcomes can range from minor injuries to major events involving loss of life, extensive property loss, environmental damage, and breaches related to security.

2.1.5 *corrective actions, n*—improvements to an organization's processes taken to eliminate causes of hazards, nonconformities, or other undesirable situations.

2.1.6 *event, n*—a happening caused by humans, automatically operating equipment/components, external events or the result of a natural phenomenon.

2.1.6.1 *Discussion*—Event descriptions typically include action verbs such as walked, turned, opened, said, radioed, discovered, decided, saw, etc. If negative (an error, failure or external factor), then the event may also be a causal factor, intermediate cause, or root cause.

2.1.7 *external factors, n*—issues outside the control of the organization. Examples include uncharted/unknown hazards to navigation, some sea or weather conditions, suicides or homicides, and external events.

2.1.8 *hazard, n*—a condition with the potential to cause injury, illness, or death of personnel; damage to or loss of equipment or property; or degradation of voyage/activity/task capabilities.

2.1.9 *hazardous/unsafe condition, n*—any condition that may adversely affect the safety of any seafarer, equipment, vessel, bridge, structure, or shore area or the environmental quality of any port, harbor, or navigable waterway.

2.1.10 *human errors, n*—performance of humans that deviates from the desired performance.

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2.1.11 *incident, n*—an unplanned sequence of events or conditions, or both, that results in, or could have reasonably resulted in, a loss event.

2.1.12 *incident category, n*—for near-miss reporting the typical categories are near-miss, unsafe act/behavior, or hazardous/unsafe condition.

2.1.13 *incident type, n—for near-miss reporting*, the typical types are near struck near struck by, near struck against, near trapped in, near slip, near trip, near fall (same level or different level), near fire, near spill, near strain/overexertion, near caught between, near contacted by, near contacted with, near exposure, etc.

2.1.14 *injury, n*—damage or harm caused to the structure or function of the human body as a result of an outside physical agent or force.

2.1.15 *intermediate causes, n*—an underlying reason why a causal factor occurred, but it is not deep enough to be a root cause.

2.1.15.1 *Discussion*—Intermediate causes are underlying causes that link causal factors and items-of-note to root causes.

2.1.16 *lagging indicator, n*—measure of a company's safety performance in the form of past incident/accident statistics.

2.1.17 *leading indicator, n*—a measure preceding or indicating a future event used to drive and measure activities carried out to prevent and control incidents/accidents.

2.1.18 *lessons learned, n*—information gained and shared through the study of incidents that serves to help prevent those incidents from occurring in the future.

2.1.19 *loss, n*—human injury, environmental damage, or negative business impact (for example, repair or replacement costs, schedule delays, contract violations, loss of reputation, etc.).

2.1.20 *loss event, n*—undesirable consequences resulting from events or conditions or a combination of these.

2.1.21 *management system, n*—— a methodology devised and put in place by management to encourage desirable behaviors and discourage undesirable behaviors.

2.1.22 *near-miss, n*—a near-miss is a non-loss sequence of events or conditions/acts, or both, that could have resulted in a loss, or in an outcome with more severe consequences than actually occurred. This loss was prevented only by a fortuitous or intentional break in the chain of events or conditions/acts, or both. The potential loss could result from human injury, environmental damage, or negative business impact (for example, repair or replacement costs, scheduling delays, contract violations, loss of reputation, etc.).

2.1.23 *near-miss frequency (NMF), n*—the total number of near-miss cases multiplied by 200 000 (or 1 million), divided by the number of exposure (working) hours over the past year.

2.1.24 *root cause, n*—deficiency of a management system component that allowed the causal factors to occur or exist. Root causes must be within the control of management to address. For a typical causal factor, there are one to four root causes. Root causes are usually as deep as a typical root cause analysis will go in attempting to identify the underlying causes of an incident. Organizational culture issues, which are deeper than root causes, could also be identified and addressed.

2.1.25 *root cause analysis (RCA), n*—an analysis by a person(s), appropriately trained in RCA, that identifies the causal factors, intermediate causes, and root causes of an incident and develops recommendations to address each level of the analysis.

2.1.26 *safeguard, n*—a physical, procedural or administrative control that prevents or mitigates consequences associated with an incident.

2.1.27 *unsafe act/behavior, n*—any act/behavior of a seafarer(s) that may adversely affect the safety of any seafarer, the vessel, the bridge, any structure, shore area, or the environmental quality of any port, harbor, or navigable waterway.

2.2 *Acronyms:*

2.2.1 *IMO*—International Maritime Organization

2.2.2 *ISM*—International Safety Management

3. Significance and Use

3.1 The objective of this guide is to provide near-miss reporting guidance for maritime vessels to promote standardization of near-miss reporting which will allow for better use of the data industrywide.

3.2 *Importance of Near-Miss Reporting:*

3.2.1 Most accidents/incidents are preceded by a chain of events, circumstances, acts, or conditions. If any of these events, circumstances, acts, or conditions had transpired another way, at another time, or had been corrected, the accident/incident may have been avoided. Reporting near-misses can play an important role in learning from mistakes, preventing accidents, and suffering from their serious consequences.

3.3 Near-miss reporting can provide information that can be used to improve most any safety system, often complementing other safety system components such as accident/incident investigations, hazard analyses, safety reporting, prioritizing, root cause analysis, solution identification, communication, identifying corrective actions, sharing lessons learned, leading safety indicator analyses, and safety culture enhancement. In addition, in terms of human life and property damage, near-misses are very low cost learning tools for training, prevention of re-occurrence, and a new data source on what may work to break the chain of events before an accident occurs. Finally, near-misses may provide key data that can prevent low probability-high consequence accidents by providing safer alternatives.

3.4 *Barriers to Near-Miss Reporting:*

3.4.1 It is generally agreed that effective near-miss reporting can reduce hazardous conditions and situations in the workplace, resulting in a reduction in accidents, or at least provide an opportunity for hazard identification and abatement. However, there remain significant challenges and obstacles to implementing near-miss recording/reporting systems. The barriers to near-miss recording/reporting can be related to the employees and management as well as outside influences. The barriers to near-miss recording/reporting can lead to underreporting in the maritime industry. Common near-miss reporting barriers include, but are not limited to:

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- Employees lack adequate near-miss training. Employees must be trained to report near-misses, how to report near-misses, what constitutes a near-miss, and the benefits of near-miss reporting.
- Employees not being fully engaged in the development and operation of near-miss reporting. Employees should be involved in the development and implementation of near-miss reporting.
- Employees feel their near-miss reports are not being followed up on. If the reports are not actively followed up on and there is not clear communication between ship and shore, near-miss reporting efforts will fail.
- Employees fear some type of reprimand or discipline. Employees must not fear any disciplinary action, peer teasing, or supervisory belittling. A means of anonymous or confidential reporting should exist and a positive, no-blame near-miss reporting culture needs to be nurtured.
- Employee lack adequate motivation to report near-misses or even disincentives. Participation in near-miss reporting cuts across all levels of an organization and management must fully support near-miss reporting through their words, actions, and support.
- Management not providing unwavering support to near-miss reporting. This includes providing adequate time for the employee to complete the near-miss report. Additionally, this includes any financial support or support from external experts, if necessary to correct potentially hazardous conditions. Management commitment to safety has a positive effect on reporting, while underreporting has been linked to lack of management commitment to safety.
- Near-miss reporting is viewed as overly time consuming. Near-miss reporting forms must be streamlined to be easily completed, easily available, easily submitted, easily reviewed, and lessons learned easily disseminated.
- Management may fear legal liability or recrimination. When deciding to formalize a near-miss reporting system, organizations have both legitimate and unsubstantiated fears of liability and recrimination. Regardless, if legislators, enforcement agencies, and the legal community give companies legitimate fear of liability based on their near-miss reporting or the fear is unfounded, the result most likely will be the same; companies will not report near-misses. Near-miss reporting must be viewed by all stakeholders (companies, legislators, enforcement agencies, and the legal system) as one of the most effective ways to identify hazards and reduce accidents/incidents and not used for recrimination of any type.

4. Near-Miss Standardization

4.1 The maritime industry does not have a standardized definition of a near-miss or near-miss reporting methodology, therefore providing industry-wide lessons learned, trending, and benchmarking proves to be challenging.

4.2 *Near-Miss Reporting in Current Practice:*

4.2.1 Studies of maritime companies show a wide-range of near-miss reporting system maturity ranging from no system to systems being in place for over 10 years.

4.2.2 Studies of maritime companies' near-miss reporting programs and other guidance on near-miss reporting highlight the fact that there exists varying definitions of what constitutes a near-miss and various interpretations within companies of their own definition.

4.2.3 Based on analyses of over 100 000 maritime near-miss reports, approximately 75 % of the reported near-misses are related to hazardous/unsafe conditions and unsafe acts and approximately 25 % are related to a non-loss incident. A review of near-miss reporting practices and literature suggests that a majority of maritime companies do capture hazardous/unsafe conditions and unsafe acts in their near-miss reports, regardless of their near-miss definition.

4.2.4 Near-miss reports across the maritime industry vary in their data collection fields. This also creates a challenge for industry-wide trending and benchmarking.

4.2.5 While most maritime companies that are recording/reporting near-misses use computer technology to capture near-misses, some still use paper. One of the challenges in the maritime industry is paperwork load. The computer technology used varies widely. Computer technology is preferred.

4.2.6 Some maritime companies require near-miss quotas, while others do not. If seafarers are expected to complete a minimum number of near-miss reports in a given time, processes should be in place that prevent erroneous near-miss reporting.

4.2.7 Some maritime companies normalize their near-miss data based on exposure (for example, hours worked), while others do not. It is best practice to normalize near-miss data. Refer to 5.10.

5. Procedure

5.1 *Near-Miss Definition:*

5.1.1 Maritime companies should have a clear definition of what constitutes a near-miss. A definition is provided in 2.1.22.

5.2 Maritime companies should provide adequate near-miss reporting training. Minimally, this training should include what constitutes a near-miss, how to report near-misses, and the benefits of near-miss reporting.

5.3 Maritime companies should involve their employees in the development, updating, improving, and implementation of their near-miss reporting program.

5.4 Maritime companies should have and follow a policy of actively and promptly following up on near-miss reports, communicating any corrective actions and lessons learned to their vessels, and throughout their fleet when necessary, and have clear and unambiguous communication between ship and shore.

5.5 Employees should not fear any disciplinary action, peer teasing, or supervisory belittling. A means of anonymous or confidential near-miss reporting should exist and a positive, no-blame near-miss reporting culture should exist.

5.6 Employees should be motivated and supported to properly and promptly complete near-miss reports. This support should include training and time to complete the near-miss reports and should not have any disincentives. Participation in near-miss reporting cuts across all levels of an organization and management should fully support near-miss reporting through their words, actions, and support.

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5.7 Near-miss reporting should not be viewed as overly time consuming, confusing, or burdensome. Near-miss reporting forms should be streamlined to be easily completed, easily available, easily submitted, easily reviewed, and lessons learned easily disseminated. The initial reporter (initiator) fields should not require more than 10 minutes to complete and the investigator fields should not require more than 15 minutes to complete, except in cases of potentially serious near-misses or other necessity. Near-miss reporting systems should be automated as much as possible and not require input of redundant/repetitive information.

5.8 See Appendix X1 for an example probability/severity risk assessment matrix. This or an equivalent probability/severity risk assessment should be used to determine level of near-miss investigation.

5.9 *Minimum Near-Miss Reporting Data Fields:*

5.9.1 At a minimum, the following information should be gathered about any near-miss. This core near-miss information can be then used across the industry.

- Who and what was involved?
- What happened, where, when, and in what sequence?
- What were the potential losses and the potential severity?
- What was the likelihood of a loss being realized?
- What is the likelihood of a recurrence of the chain of events or conditions/acts, or both, that led to the near-miss?
- Were corrective actions taken?
- What were the lessons learned?

5.9.2 *Example – Near-Miss Reporting Best Practices:*

5.9.2.1 The near-miss reporting fields should be separated into two different categories – items to be entered by the initial reporter of the incident and items to be entered by the investigation team. This separation is necessary because a number of the fields require an investigation to be done or specific training in order to be able to enter the information accurately.

(a) Near-Miss Report Initiator Fields—The number of fields to be entered by the initial reporter should be limited, only including fields that may be difficult for the investigator to ascertain later or fields that would add value to the investigation process. The minimal near-miss report initiator fields are listed in Table 1.

(b) Near-Miss Report Investigator Fields—The remainder of the fields that should be included in incident reporting should be entered after the initial entry of the incident. These details may not be available until the incident has been investigated. Additionally, these fields typically require more than basic knowledge of incident investigation, for this reason these fields should only be entered by trained personnel. The minimal near-miss report investigator fields are listed in Table 2.

5.10 Near-miss frequency calculations should be used to assist in benchmarking activities. This normalization is needed in order to benchmark near-misses based on exposure. The following calculation can be used for the most basic near-miss normalization for all vessels in an organization:

TABLE 1 Report Initiator Fields for Near-Miss Reporting

Fields	Details
Identifier (ID)	Automatically assigned
Vessel flag	Drop down or automatically assigned
Vessel name	Drop down or automatically assigned
Master's name	Drop down or automatically assigned
Date and time	Menu/system driven
Incident category	Check boxes for hazardous/unsafe conditions, unsafe act, or non-loss incident
Time in shift?	Menu driven for hours into shift; hours left in shift
Time in voyage assignment	Check boxes for beginning, middle, end
Name(s) and demographics of personnel involved (optional if anonymous)	Free text if not automatically assigned
Description of event	Free text if not automatically assigned
Activity and task	Free text
Incident type	Drop down with near struck by, near struck against, near trapped in, near slip, near trip, near fall (same level or different level), near fire, near explosion, near spill, near strain/overexertion, near caught between, near contacted by, near contacted with, near exposure, etc., and other)
Equipment involved	Free text
Vessel type	Drop down based on company's vessels if not automatically assigned
General location on vessel	Drop down (accommodations, engine room, machinery space, deck, etc.)
Specific location on vessel	Free text
Weather conditions	Drop downs for temperature, precipitation, wind, sea state, visibility, etc.
Other conditions	Drop downs for noise, vibration, lighting, etc.
Crew rank	Drop down based on company's crew ranks
Type of crewmember	Drop down for regular crew, temporary crew, or contractor
Attachment	If necessary

$$\frac{(\text{\# near-misses across all vessels} \times 200\,000)}{(\text{\# hours worked across all vessels in the past year})} \tag{1}$$

5.10.1 Numerous other variants of the above basic normalization calculation can be used.

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TABLE 2 Report Investigator Fields for Near-Miss Reporting

Fields	Details
Identifier (ID)	Automatically assigned; linked to Initiator Fields Report
Name of qualified person(s) completing the near-miss report	Drop down or automatically assigned
Description of event	Ability to edit the Initiator Fields Report
Location of vessel	Free text/drop down
Cause (various levels)	Primary, secondary, intermediate, root, etc., free text
Contributing actions	Drop down (for example, inadequate training, failure to make secure, failure to recognize hazardous condition, used wrong tool or equipment, etc.) and free text to provide details
Contributing conditions	Drop down (for example, fire or explosion hazard, poor housekeeping, close clearance/congestion, insufficient lighting, etc.) and free text to provide details
Immediate corrective actions	Free text with responsible person(s) and dates
Long term corrective actions	Free text with responsible person(s) and dates
Risk	Severity, probability, and risk level
Factors that prevented an incident	Free text
Ship/shore communications	Free text for feedback and follow-up
Shore management review	Free text with responsible person(s) and dates
Dissemination of lessons learned	Free text

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5.10.2 *Representative Examples:*

5.10.2.1 A company only is interested in the near-miss frequency from the previous 6 months:

$$\frac{(\text{\# near-misses across all vessels } \times \ (200\,000 \ \times \ 0.5))}{(\text{\# hours worked in that 6 months})} \qquad (2)$$

5.10.2.2 A company is only interested in near-miss frequency relating to safety equipment:

$$\frac{(\text{\# near-misses related to safety equipment } \times \ 200\,000)}{(\text{\# hours worked in the past year})} \qquad (3)$$

5.10.2.3 A company only is interested in the near-miss frequency on vessel X:

$$\frac{(\text{\# near-misses on vessel X } \times \ 200\,000)}{(\text{\# hours worked in the past year on vessel X})} \qquad (4)$$

5.11 *Near-Miss Investigation Process:*

5.11.1 The details found in 5.9 will help determine if an in-depth investigation is needed, or if a cursory report will suffice. An in-depth investigation is required of those near-misses which are likely to recur or which could have severe or worse consequences, or both. Examples of severe consequences include one or more serious injuries; a release from a cargo tank causing serious environmental damage; or major damage to the vessel estimated to cost over US$100 000. Refer to Appendix X1.

5.11.2 A low-level investigation with short report is appropriate if the potential consequences are estimated to be minor (for example, below the damage or cost-related thresholds, or both, in 5.11.1. An example of a minor near-miss is when routine maintenance reveals that a gasket was severely worn, that it was the wrong gasket for the equipment, and that the potential failure of the gasket would have resulted in only a minor incident.

5.11.3 Once a decision has been taken to proceed with a full investigation, further decisions are taken about how much staffing is required, who should be responsible, and what resources are required for the investigation to be completed successfully. The main steps in the investigation are:

5.11.3.1 Gathering near-miss information. Regardless of the nature of the near-miss, the basic information that should be gathered include: people, paper documents, electronic data, physical, and position/location. These data are vital for ensuring that an understanding can be reached about what, how, who, and eventually why the near-miss occurred. Data gathering is accomplished by interviews of key personnel and the collection of physical, position and location data, using such things as photographs, recordings, charts, logs, or any damaged components. Some of the initial questions that should be asked as a part of the information gathering stage of a near-miss investigation include:

- Are the risks associated with this near-miss well understood?
- Should the potential near-miss consequences be considered an acceptable risk? If a decision has been made that the risk from this near-miss is acceptable, then an investigation would not result in any significant changes.
- Are adequate safeguards in place to protect the workers and the public against these near-misses? If adequate safeguards are provided, then an investigation would not result in any significant changes.

5.11.4 *Analyzing Information:*

5.11.4.1 Three tools or techniques commonly used to analyze near-miss data are: root cause analysis, fault tree analysis, and the "Five Whys" technique. Other tools can also be used, such as hazard and operability analysis, components of task analysis, and failure modes and effects analysis (FMEA).

5.11.4.2 Applying data analysis techniques helps to identify information that still needs to be collected to resolve open questions about the near-miss and its causes. This can make the collection of additional data more efficient. The end goal of this activity is to identify all causal factors and root causes.

5.11.5 *Identifying Causal Factors and Root Causes*—At this point the who, what, where, why, and when of the near-miss is understood, and the human errors, structural/machinery/equipment/outfitting problems, and external factors that led to the near-miss, have been identified. The next step is to better understand the causal factors that contributed to the near-miss so that root causes can be identified. There are a variety of identification methods for this purpose, including taxonomies

of causes. These can be used for deep probing past the most evident causes through to underlying root causes of the near-miss.

5.11.6 *Developing and Implementing Recommendations*—Any recommendations need to address all of the identified causal factors to improve organizational and shipboard policies, practices, procedures, and possibly even job/vessel re-design. Implementing appropriate recommendations is the key to eliminating or reducing the potential for the reoccurrence of similar near-misses or more serious losses. All recommended corrective actions and lessons learned should be developed in consultation with shore safety personnel and approved by ship and shore leadership personnel (corporate review).

5.11.7 *Completing the Investigation*—Completion of the investigation process requires the generation of a report (either brief or extensive, depending on the depth of analysis performed and the extent of risk), and in codifying and storing the information in a way that supports subsequent (long term) trend analysis.

5.11.8 *Reporting*—The ultimate objective of near-miss identification, analysis, and reporting is to identify areas of concern and implement appropriate corrective actions to avoid future losses. To do so requires that reports to be generated, shared, read, and acted upon. It may take years for safety trends to be discerned, and so reporting must be archived and revisited on a timely basis. Since near-miss reports should be trended along with actual casualty or incident reports, there must be consistency in the identification and nomenclature of causal factors across near-miss and casualty/incident reports. Corrective actions and lessons learned should be across the fleet or at least across vessels with similar technology.

6. Keywords

6.1 corrective action; lessons learned; maritime; near-miss; near-miss frequency; near-miss reporting; ship; vessel

APPENDIXES

(Nonmandatory Information)

X1. PROBABILITY, SEVERITY, AND RISK ASSESSMENT

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X1.1 *Probability, Severity, and Risk Assessment*—The following tables are provided as examples only. Companies should quantify as appropriate or use their existing corporate risk-ranking methodology.

X1.1.1 To determine the appropriate severity category as defined in Table X1.1 for a given hazard at a given point in time, identify the potential for death or injury, environmental impact, or monetary loss. A given hazard may have the potential to affect one or all of these three areas.

X1.1.2 To determine the appropriate probability level as defined in Table X1.2 for a given hazard at a given point in time, assess the likelihood of occurrence of an incident.

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TABLE X1.1 Severity Categories[A]

Description	Severity Category	Potential Near-Miss Result Severity Criteria
Catastrophic	1	Could result in one or more of the following: death, permanent total disability, irreversible significant environmental impact, or monetary loss equal to or exceeding $1M.
Severe	2	Could result in one or more of the following: permanent partial disability, injuries or occupational illness that may result in hospitalization of at least three personnel, reversible significant environmental impact, or monetary loss equal to or exceeding $500K but less than $1M.
Marginal	3	Could result in one or more of the following: injury or occupational illness resulting in one or more lost work day(s), reversible moderate environmental impact, or monetary loss equal to or exceeding $10K but less than $100K.
Minor	4	Could result in one or more of the following: injury or occupational illness not resulting in a lost work day, minimal environmental impact, or monetary loss less than $10K.

[A] Company can assign its own values in these tables. However, doing so may limit the ability to compare data across the industry.

TABLE X1.2 Probability Levels[A]

Description	Level	Potential Near-Miss Result Probability
Frequent	A	Likely to occur often in a year.
Probable	B	Will occur several times in a year.
Occasional	C	Likely to occur sometime in a year.
Remote	D	Unlikely, but possible to occur in a year
Improbable	E	So unlikely, it can be assumed occurrence may not be experienced in a year.
Eliminated	F	Incapable of occurrence. This level is used when potential hazards are identified and eliminated.

[A] Company can assign its own values in these tables. However, doing so may limit the ability to compare data across the industry.

Probability level F is used to document cases where the hazard is no longer present. No amount of doctrine, training, warning, caution, or personal protective equipment (PPE) can move a mishap probability to level F. Only engineering design/redesign can potentially attain a level F.

X1.1.3 When available, the use of appropriate and representative quantitative data that defines frequency or rate of occurrence for the hazard, is generally preferable to qualitative analysis. The Improbable level is generally considered to be less than one in a million.

X1.1.4 In the absence of such quantitative frequency or rate data, reliance upon the qualitative text descriptions in Table X1.2 is necessary and appropriate.

X1.1.5 Assessed risks are expressed as a Risk Assessment Code (RAC) which is a combination of one severity category and one probability level. For example, a RAC of 1A is the combination of a Catastrophic severity category and a Frequent probability level. Table X1.3 assigns a risk level of High, Serious, Medium, or Low for each RAC.

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