

# DoD HFACS

## Department of Defense Human Factors Analysis and Classification System

### A mishap investigation and data analysis tool

#### Executive Summary

This Department of Defense Human Factors (DoD HF) Guide explains procedures for investigating and reporting all DoD mishaps. It supports DoDI 6055.7, Accident Investigation, Reporting, and Record Keeping. The DODI directs DOD components to “Establish procedures to provide for the cross-feed of human error data using a common human error categorization system that involves human factors taxonomy accepted among the DoD Components and U.S. Coast Guard.” It is intended for use by all persons who investigate, report and analyze DoD mishaps, and is particularly tailored to the needs of persons assigned to Interim Safety Boards and formal Safety Investigation Boards following all Classes of mishaps. There are myriad potential human factors, all of which need to be assessed for relevancy during a mishap investigation. No investigator, flight surgeon, physiologist, human factors consultant or aviation psychologist can be expected to be fully familiar with all potential human factors

When using this human factors model, the investigator should consider applying the model to three distinct areas of consideration: environmental, individual and the event or mishap. The mishap crew, operator, or team reacts to the environment to which they are exposed. The environmental factors cover not only the physical environment to which the individual members are exposed, but also the organizational and supervisory environments and specific physical and technological preconditions. The individual factors cover acts, precondition and supervision factors. The mishap factors can cross all four tiers of the model. The investigator can apply this model by entering at any tier that is specifically related to environmental, individual or mishap factors discovered during the analysis. This model can be used as either a primary or secondary tool to investigate both active and latent failures. Our model is designed to present a systematic, multidimensional approach to error analysis. This human factors model covers human error from three perspectives:

- Cognitive Viewpoint and Human System Interaction and Integration
- Human-to-Human Interaction
- Sociocultural and Organization

When using our DoD HF Taxonomy for either primary investigation or secondary analysis, we must assume error can mean several things:

- Error as the failure itself. For example: The operator’s decision was an error (decision, perceptual, or skill- based errors).
- Error as the cause of failure. For example: This event was due to human error (failure to provide guidance).
- Error as a process or, more specifically, as a departure from some kind of standard (exceptional, routine, intentional or unintentional).

A reasonable synthesis of these assumptions, as suggested by Senders and Moray (1991), is the following: Human error occurs when human action is performed that was either (1) not intended by the actor, (2) not desired according to some specified set of rules or by some external observer, or (3) contributed to the task or system “going outside its acceptable limits.”

This DoD Guide starts with a brief history of the development of the DoD HFACS, followed by an introduction and description of the human factor and human performance application of this model. The Guide concludes with a high-level structural overview of the taxonomy and definitions.

#### History

The Secretary of Defense published a memorandum 19 May 2003 stating, “World-class organizations do not tolerate preventable accidents. Our accident rates have increased recently, and we need to turn this situation around. I

challenge all of you to reduce the number of mishaps and accident rates by at least 50% in the next two years.” These goals are achievable, and will directly increase our operational readiness. We owe no less to the men and women who defend our Nation.” This memorandum resulted in the creation of the DOD Safety Oversight Committee to provide guidance to the DOD and individual services on best practices and methods to accomplish this mandate. The Secretary of Defense established the Defense Safety Oversight Council to:

- Review accident and incident trends, ongoing safety initiatives, private sector and other governmental agency best practices, and to make recommendations to the Secretary of Defense for safety improvement policies, programs, and investments.
- Assess, review and advise on improving all aspects of the coordination, relevance, efficiency, efficacy, timeliness and viability of existing DoD-wide safety and injury prevention information management systems.
- Promote the development and implementation of safety initiatives, including Systems Safety for Acquisitions and operations, to improve mission success as well as preserve human and physical resources throughout DoD.
- Coordinate with other federal agencies and industry leaders, to facilitate communication, coordination, and integration of best practices into DoD planning, development and implementation of initiatives and programs that support research to improve human performance, safety education standards/procedures, and equipment.

The Aviation Safety Improvement Task Force (ASI-TF) was established to meet these DOD requirements. The ASI-TF subsequently established the Human Factors Working Group with a charter to identify data-driven, benefit-focused, human-factor and human-performance safety strategies designed to identify hazards, mitigate risk and reduce aviation mishaps inherent in aircraft operations throughout DoD. The ASI-TF chair directed the HFWG to accomplish the following tasks:

- Promote common Human Factors Analysis and Classification System for DoD-wide implementation
- Recommend standardization of human factor and human performance terminology.
- Provide human factors subject matter experts to all ASI-TF working groups, and hazard identification and intervention analysis teams.
- Identify and analyze top human factor and human performance mishap focus areas
- Identify, catalog and recommend approaches to improve organizational/cultural assessments

This guide is produced to meet the first two tasks of the Human Factors Working Group. The guide was initially developed to investigate aviation mishaps, and therefore uses an aviation-centric language. During production the authors have attempted to modify definitions to ensure the tool can be used in the investigation of multiple types of events. This guide was developed based on the evolution of the works produced by Jens Rasmussen, James Reason as well as Douglas Wiegmann and Scott Shappell. As this dynamic document evolves, we plan to ensure that it can be seamlessly applied across all services, and will be used to investigate aviation, ground, weapons, afloat, space and off-duty mishaps and events.

## Introduction

Mishap or event investigation can be extremely difficult, time-consuming and stressful, but it can also be rewarding when we recognize that the contributions we make will improve safety. A thorough mishap investigation is absolutely necessary to determine the cascading events causal to a mishap, and to recommend corrective actions to prevent recurrence. This guide provides the accident investigator with a proven template that aids in organizing the investigation while providing a detailed analysis of human error for on-scene investigation and post-hoc mishap data analysis, revealing previously unidentified human-error trends and hazards.

Human error continues to plague both military and civilian mishaps. Analysis indicates that human error is identified as a causal factor in 80 to 90 percent of mishaps, and is present but not causal in another 50 to 60 percent of all mishaps, and is therefore the single greatest mishap hazard. Yet, simply writing off mishaps to "operator error" is a simplistic, if not naïve, approach to mishap causation and hazard identification. Further, it is well established that mishaps are rarely attributed to a single cause, or in most instances, even a single individual. Rather, mishaps are the end result of myriad latent failures or conditions that precede active failures (Shappell in “The Naval Flight Surgeon’s Pocket Reference to Aircraft Mishap Investigation”). The goal of a mishap or event

investigation is to identify these failures and conditions in order to understand why the mishap occurred and how it might be prevented from happening again.

This reference is an adjunct to formal instructions that govern mishap investigation and is not meant to supplant the other references that address service-specific guidance for mishap investigation. Use this guide as a ready reference in the field to ensure that your data retrieval is complete and that you preserve perishable evidence. This guide is also designed to ensure uniformity of inter-service human factors definitions and data driven analysis.

## Description

This guide is designed for use as a comprehensive event/mishap, human error investigation, data identification, analysis and classification tool. It is designed for use by all members of an investigation board in order to accurately capture and recreate the complex layers of human error in context with the individual, environment, team and mishap or event.

In the past, investigators have thrown human factors analysis to the medical investigator and have asked him or her to do this work on their own. This practice has sometimes produced human error analyses that differed considerably from the boards' investigation and findings of fact. Integrating human factors analysis into all aspects of the investigation will result in a much more coherent final product.

As described by Reason (1990), active failures are the actions or inactions of operators that are believed to cause the mishap. Traditionally referred to as "error", they are the last "acts" committed by individuals, often with immediate and tragic consequences. For example, an aviator forgetting to lower the landing gear before touch down or showing off through a box canyon will yield relatively immediate, and potentially grave, consequences. In contrast, latent failures or conditions are errors that exist within the organization or elsewhere in the supervisory chain of command that effect the tragic sequence of events characteristic of a mishap. For example, it is not difficult to understand how tasking crews or teams at the expense of quality crew rest can lead to fatigue and ultimately errors (active failures) in the cockpit. Viewed from this perspective then, the actions of individuals are the end result of a chain of factors originating in other parts (often the upper echelons) of the organization. The problem is that these latent failures or conditions may lie dormant or undetected for some period of time prior to their manifestation as a mishap.

The question for mishap investigators and analysts alike is how to identify and mitigate these active and latent failures or conditions. One approach is the "Domino Theory" which promotes the idea that, like dominoes stacked in sequence, mishaps are the end result of a series of errors made throughout the chain of command.

A "modernized" version of the domino theory is Reason's "Swiss Cheese" model that describes the levels at which active failures and latent failures/conditions may occur within complex operations (see Figure 1).

Working backward from the mishap, the first level of Reason's model depicts those Unsafe Acts of Operators (operator, maintainers, facility personnel, etc.) that lead to a mishap. Traditionally, this is where most mishap investigations have focused their examination of human error, and consequently where most causal factors are uncovered. After all, it is typically the actions or inactions of individuals that can be directly linked to the mishap. Still, to stop the investigation here only uncovers part of the story.

What makes Reason's model particularly useful in mishap investigation is that it forces investigators to address latent failures and conditions within the causal sequence of events. For instance, latent failures or conditions such as fatigue, complacency, illness, and the physical/technological environment all affect performance but can be overlooked by investigators with even the best of intentions. These particular latent failures and conditions are described within the context of Reason's model as Preconditions for Unsafe Acts. Likewise, Supervision can promote unsafe conditions of operators and ultimately unsafe acts will occur. For example, if an Operations Officer were to pair a below average team leader with a very junior/inexperienced crew, the result is increased risk of mission failure. Regardless, whenever a mishap does occur, the crew naturally bears a part of the responsibility and accountability. However, latent failures or conditions at the supervisory level are often equally responsible for poor hazard analysis and subsequent increased mission risk, and may ultimately cause the mishap. In this particular example, the crew was set up for the opportunity for failure.

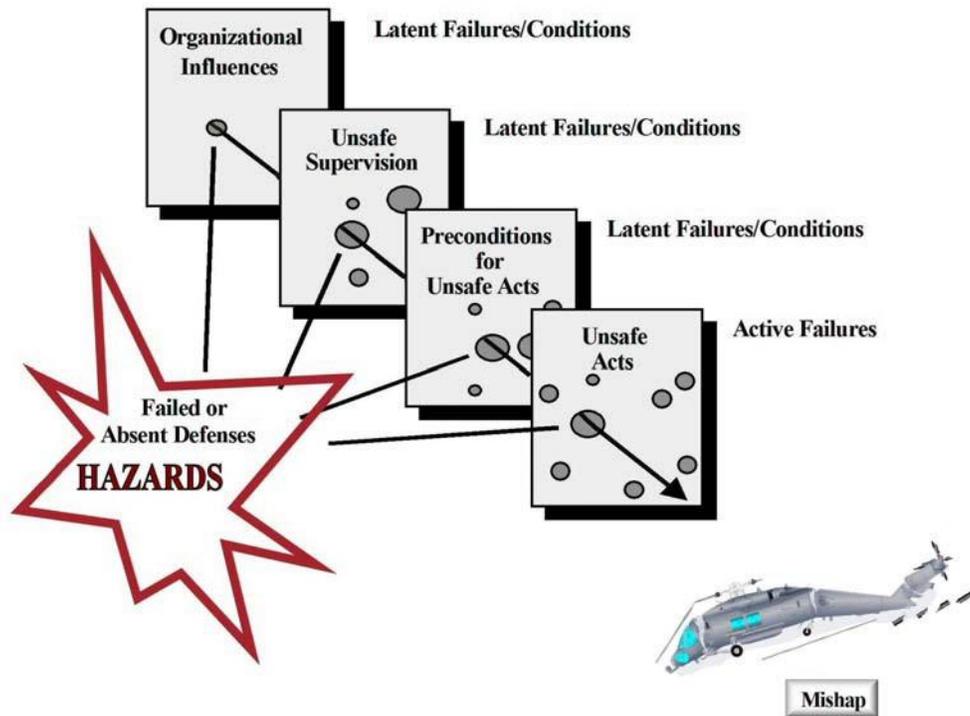


Figure 1. The "Swiss Cheese" Model (adapted from Reason, 1990)

Reason's model does not stop at supervision; it also considers Organizational Influences that can impact performance at all levels. For instance, in times of fiscal constraints, funding may be short and may lead to limited training opportunities. Supervisors are sometimes pressed to task "non-proficient" crews with complex missions. Not surprisingly, unintended and unrecognized errors may appear, and mission performance will consequently suffer. As such, hazards and risks at all levels must be addressed if any mishap investigation process is going to be effective.

The investigation process then endeavors to detect and identify the "holes (hazards) in the cheese" (see Figure 1). So how do we identify these hazards? Aren't they really too numerous to define? After all, every mishap is unique, so the hazards will always be different for each mishap ... right? Well, it turns out that each mishap is not unique from its predecessors. In fact, most mishaps have very similar causes. They are due to the same holes in the cheese, so to speak. The hazards identified in each new mishap are not unique to that mishap. Therefore, if you know what these system failures/hazards or "holes" are, you can better identify their roles in mishaps -- or better yet, detect their presence and develop a risk mitigation strategy correcting them before a mishap occurs.

### Department of Defense (DoD) Human Factors Analysis and Classification System

Drawing upon Reason's (1990) and Wiegmann and Shappell's (2003) concept of active failures and latent failures/conditions, a new DoD taxonomy was developed to identify hazards and risks called the DoD Human Factors Analysis and Classification System. DOD-HFACS describes four main tiers of failures/conditions: 1) Acts, 2) Preconditions, 3) Supervision, and 4) Organizational Influences (Figure 2). A brief description of the major tiers with associated categories and sub-categories follows, beginning with the tier most closely tied to the mishap.

Attachment 1 is the in-depth reference document, and contains all the currently accepted definitions for the sub-codes that fall within the 4 major tiers of human error. This document is subject to review and update every 6 months by the Human Factors Working Group of the Joint Services Safety Chiefs. For comments please contact the Command Flight Surgeon or the Aerospace Experimental Psychologist of the Naval Safety Center.

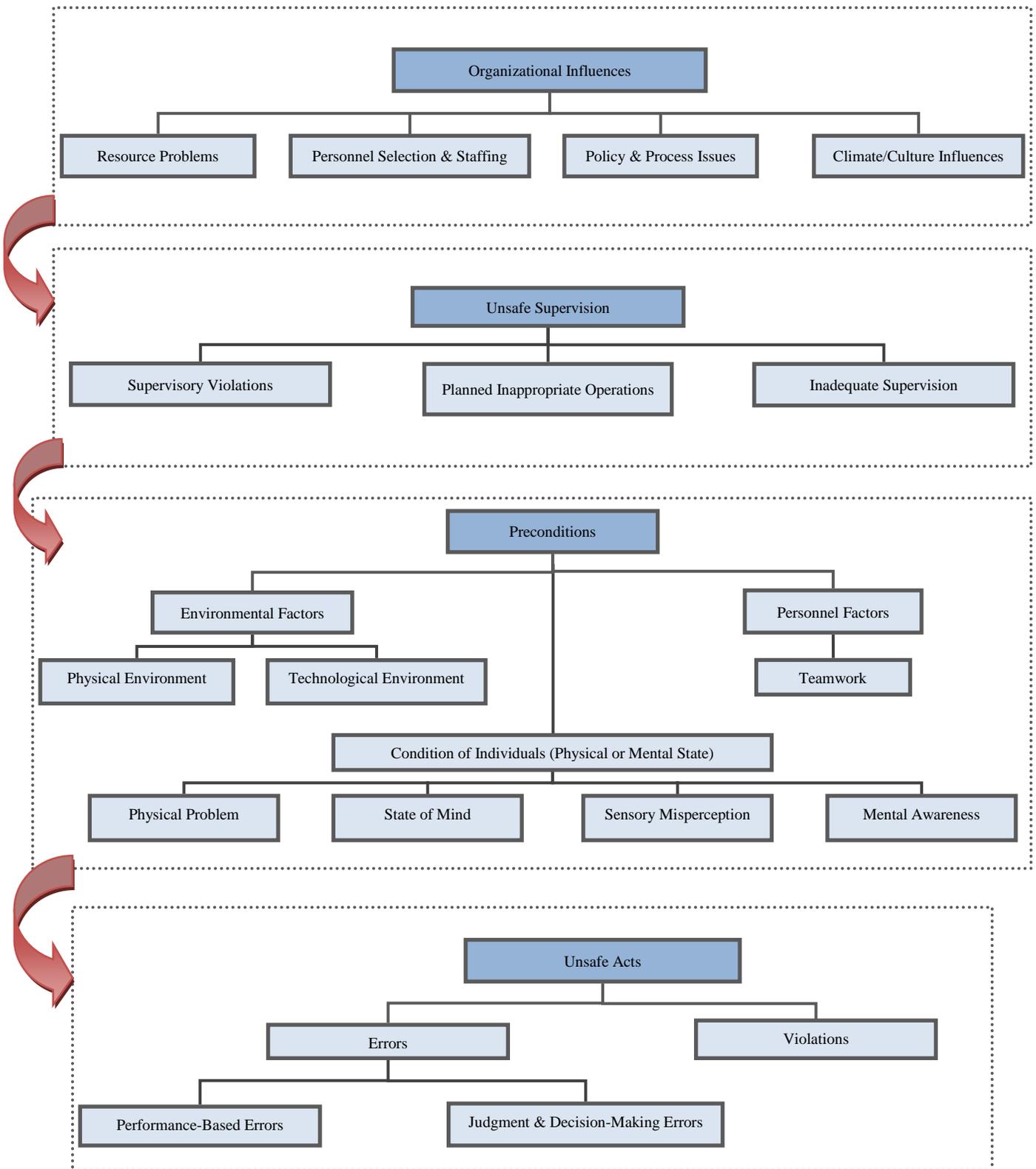


Figure 2. DOD HFACS Model

Note: In the electronic version of this document, each of the HFACS Model boxes is hyper-linked to more in-depth descriptions.

## 1. Unsafe Acts

Acts are those factors that are most closely tied to the mishap, and can be described as active failures or actions committed by the operator that result in human error or unsafe situation. We have identified these active failures or actions as Errors and Violations (see Table 1).

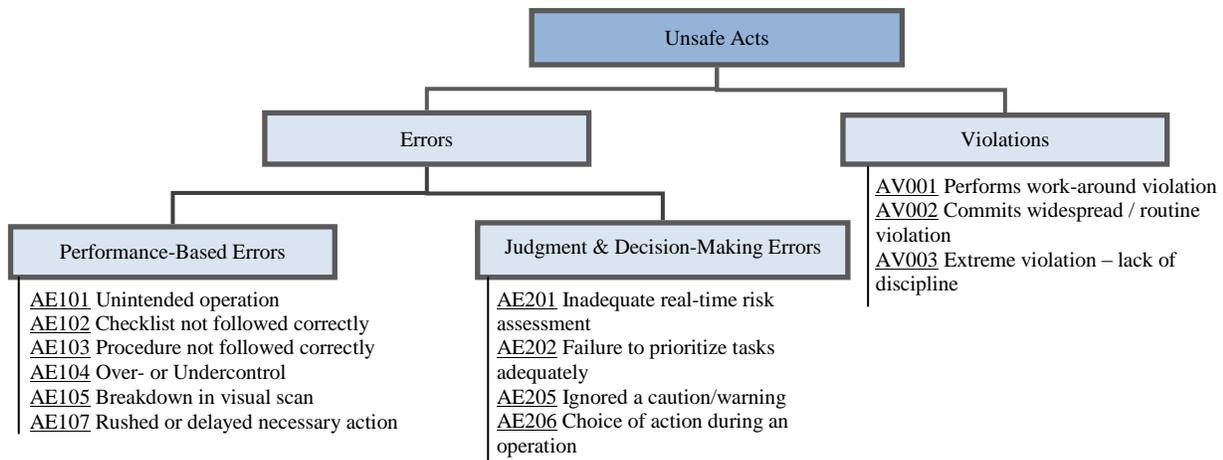


Table 1. Categories of Acts of Operators

**Errors:** Errors are factors in a mishap when mental or physical activities of the operator fail to achieve their intended outcome as a result of performance-based, or judgment and decision making errors, leading to an unsafe situation. Errors are unintended. We classified Errors into two types: Performance-Based, and Judgment and Decision Making. Using this error analysis process, the investigator must first determine if an individual or team committed an active failure. If so, the investigator must then decide if an error or violation occurred. Once this is done, the investigator can further define the error.

*Performance-based Errors:* Performance-based Errors are factors in a mishap when errors occur in the operator’s execution of a routine, highly practiced task relating to procedure, training or proficiency and result in an unsafe situation. Performance-based Errors are unintended behaviors (Table 1).

*Judgment and Decision Making Errors:* Judgment and Decision making errors are factors in a mishap when behavior or actions of the individual proceed as intended yet the chosen plan proves inadequate to achieve the desired end-state and results in an unsafe situation. “An honest mistake.” (Table 1).

**Violations:** Violations are factors in a mishap when the individual intentionally breaks the rules and instructions. Unlike errors, violations are deliberate (Table 1). The actions of the operator must represent willful disregard for rules and instructions. Violations can include routine “work-arounds” and unofficial procedures that are accepted by a community as the best course of action as well as violations that needlessly commit a person or team to an unsafe course of action. Finally, violations can be extreme; in this more unusual case the violation is committed without cause or need, and there is no evidence of being condoned by supervisors.

## 2. Preconditions

Preconditions are factors in a mishap if active and/or latent preconditions such as conditions of the operators, environmental or personnel factors affect practices, conditions or actions of individuals and result in human error or an unsafe situation (Table 2). In this error analysis model preconditions include Environmental Factors, Condition of the Individuals and Personnel Factors.

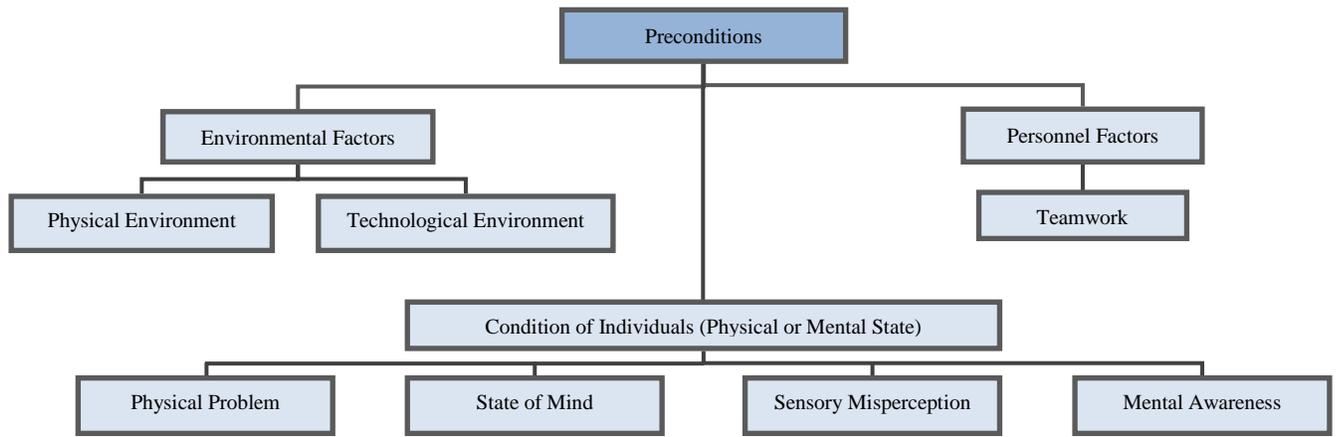


Table 2. Categories of Preconditions for Unsafe Acts

**Environmental Factors:** Environmental factors are factors in a mishap if physical or technological factors affect practices, conditions and actions of individual and result in human error or an unsafe situation. Environmental factors include:

*Physical Environment:* Physical environment are factors in a mishap if environmental phenomena such as weather, climate, white-out or dust-out conditions affect the actions of individuals and result in human error or an unsafe situation. (Table 2)

*Technological Environment:* Technological environment are factors in a mishap when cockpit/vehicle/workspace design factors or automation affect the actions of individuals and result in human error or an unsafe situation. (Table 2)

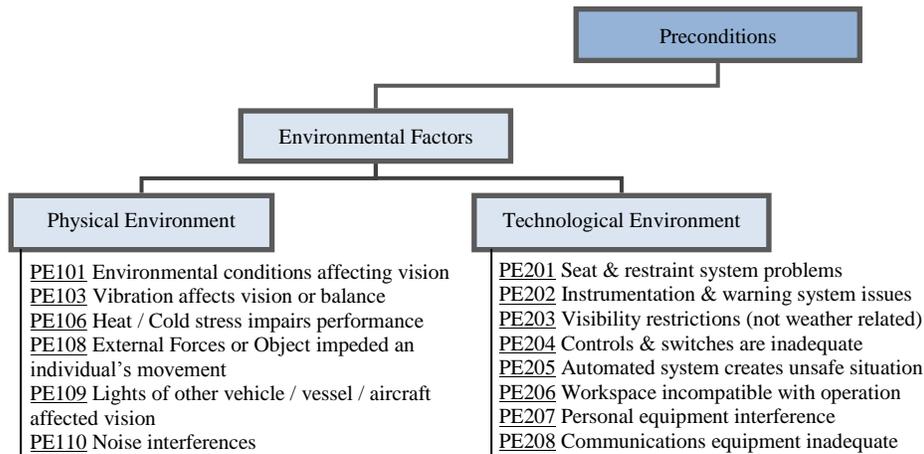


Table 2. Environmental Factors

**Personnel Factors:**

*Teamwork:* Teamwork factors refer to interactions among individuals, crews and teams involved with the preparation and execution of a task/mission that resulted in human error or an unsafe situation (Table 3).

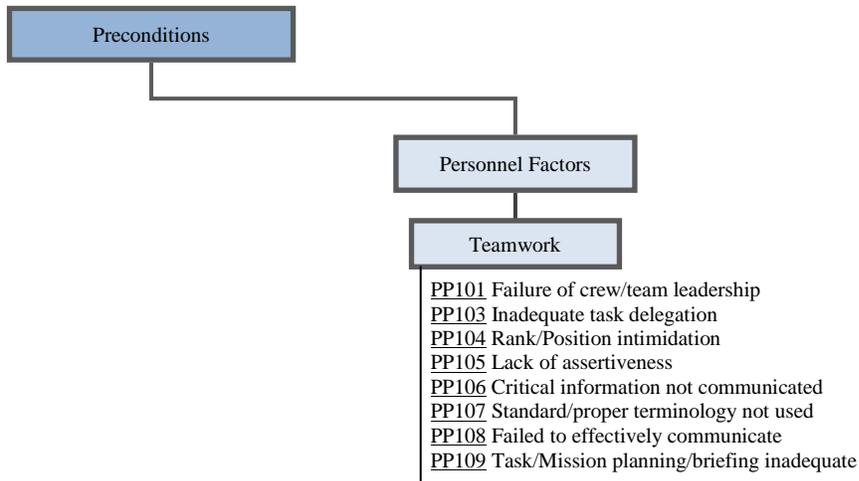


Table 3. Personnel Factors

**Condition of Individuals (Physical & Mental State):** Condition of individuals are factors in a mishap if cognitive, psycho-behavioral, adverse physical state, or physical/mental limitations affect practices, conditions or actions of individuals and result in human error or an unsafe situation. Condition of the Individuals includes:

*Physical Problem:* Physical problems are medical or physiological conditions that can result in unsafe situations. (Table 4.1)

*State of Mind:* State of mind issues are factors when an individual’s personality traits, psychosocial problems, psychological disorders or inappropriate motivation creates an unsafe situation. (Table 4.1)

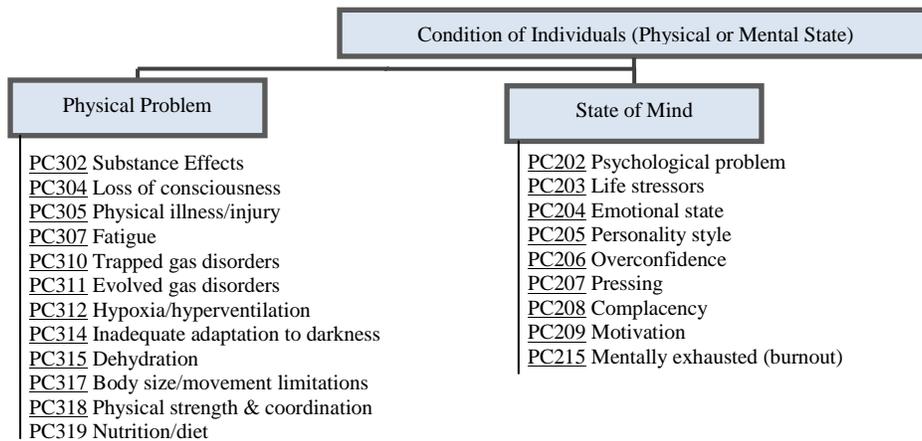


Table 4.1. Condition of individuals (part 1)

*Sensory Misperception:* Sensory misperception factors are factors resulting in degraded sensory inputs (visual, auditory or vestibular) that create a misperception of an object, threat or situation. (Table 4.2)

*Mental Awareness:* Mental awareness factors are factors in a mishap when there is an attention-management or awareness failure that affects the perception or performance of individuals. (Table 4.2)

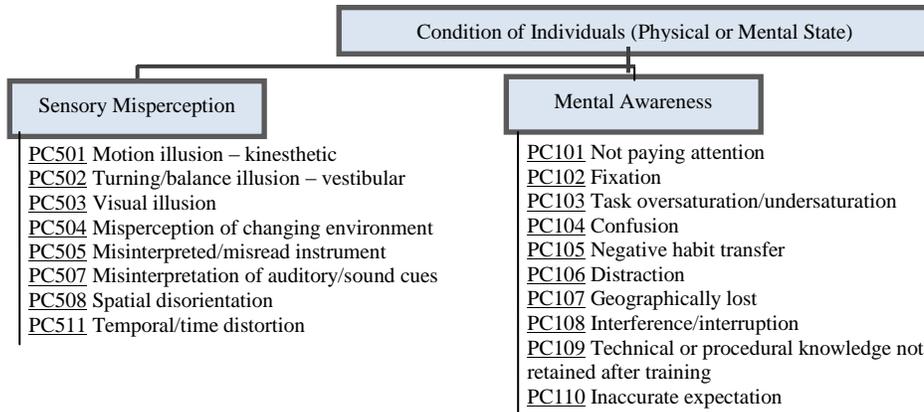


Table 4.2. Condition of individuals (part 2)

### 3. Unsafe Supervision

A mishap event can often be traced back to the supervisory chain of command. As such, there are three major categories of Unsafe Supervision: Supervisory Violations, Planned Inappropriate Operations, and Inadequate Supervision. (Table 5)

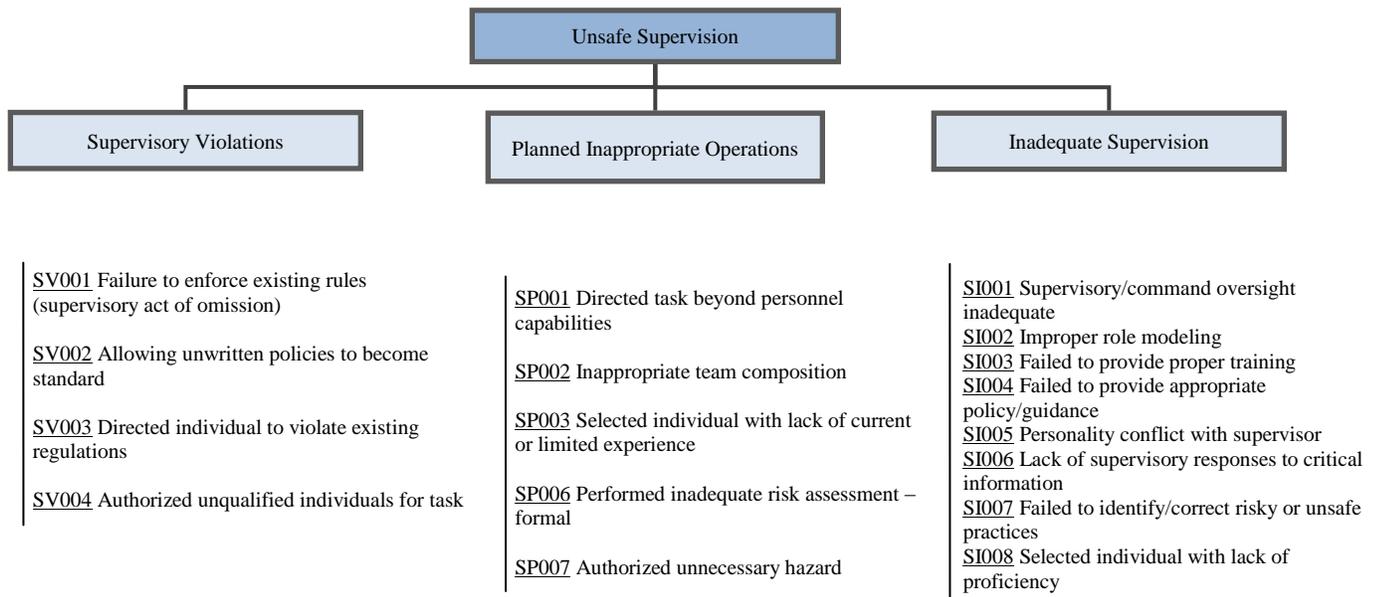


Table 5. Categories of Unsafe Supervision

**Supervision Factors:** Supervision is a factor in a mishap if the methods, decisions or policies of the supervisory chain of command directly affect practices, conditions or actions on the individual(s).

*Supervisory Violations:* Supervisory Violations is a factor in a mishap when supervision, while managing organizational assets, willfully disregards instructions, guidance, rules, or operating instructions and this lack

of supervisory responsibility creates an unsafe situation.

Supervisory Violations are reserved for those instances when supervisors willfully disregard existing rules and regulations. For instance, permitting an individual to operate an aircraft without current qualifications is a flagrant violation that invariably sets the stage for the tragic sequence of events that predictably follow (see Table 5).

*Planned Inappropriate Operations:* Planned Inappropriate Operations is a factor in a mishap when supervision fails to adequately assess the hazards associated with an operation and allows for unnecessary risk. It is also a factor when supervision allows non-proficient or inexperienced personnel to attempt missions beyond their capability or when crew or flight makeup is inappropriate for the task or mission.

Occasionally, the operational tempo or schedule is planned such that individuals are put at unacceptable risk, crew rest is jeopardized, and ultimately performance is adversely affected. Such Planned Inappropriate Operations, though arguably unavoidable during emergency situations, are not acceptable during normal operations. Included in this category are issues of crew pairing and improper manning. For example, it is not surprising to anyone that problems can arise when two individuals with marginal skills are paired together. During a period of downsizing and/or increased levels of operational commitment, it is often more difficult to manage crews. However, pairing weak or inexperienced operators together on the most difficult missions may not be prudent (see Table 5).

*Inadequate Supervision:* Inadequate Supervision is a factor in a mishap when supervision proves inappropriate or improper and fails to identify a hazard, recognize and control risk, provide guidance, training and/or oversight and results in human error or an unsafe situation.

The role of supervisors is to provide their personnel with the opportunity to succeed. To do this, supervisors must provide guidance, training opportunities, leadership, motivation, and the proper role model, regardless of their supervisory level. Unfortunately, this is not always the case. It is easy to imagine a situation where adequate CRM training was not provided to an operator or team member. Conceivably, the operator's coordination skills would be compromised, and if put into a non-routine situation (e.g., emergency), would be at risk for errors that might lead to a mishap. Therefore, the category Inadequate Supervision accounts for those times when supervision proves inappropriate, improper, or may not occur at all (see Table 5).

#### **4. Organizational Influences**

Fallible decisions of upper-level management directly affect supervisory practices, as well as the conditions and actions of operators. These latent conditions generally involve issues related to Resource Problems, Personnel Selection & Staffing, Policy & Process Issues, and Climate/Cultural Influences (see Table 6).

Organizational Influences are factors in a mishap if the communications, actions, omissions or policies of upper-level management directly or indirectly affect supervisory practices, conditions or actions of the operator(s) and result in system failure, human error or an unsafe situation.

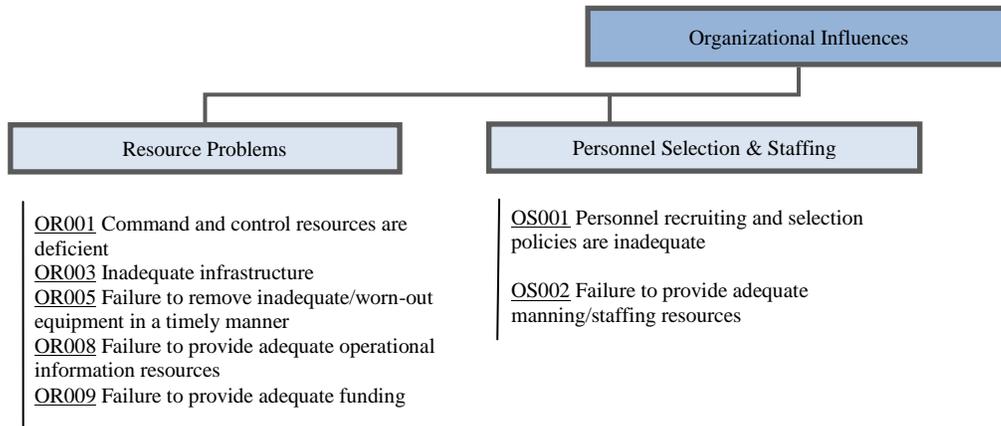


Table 6.1. Categories of Organizational Influences (part 1)

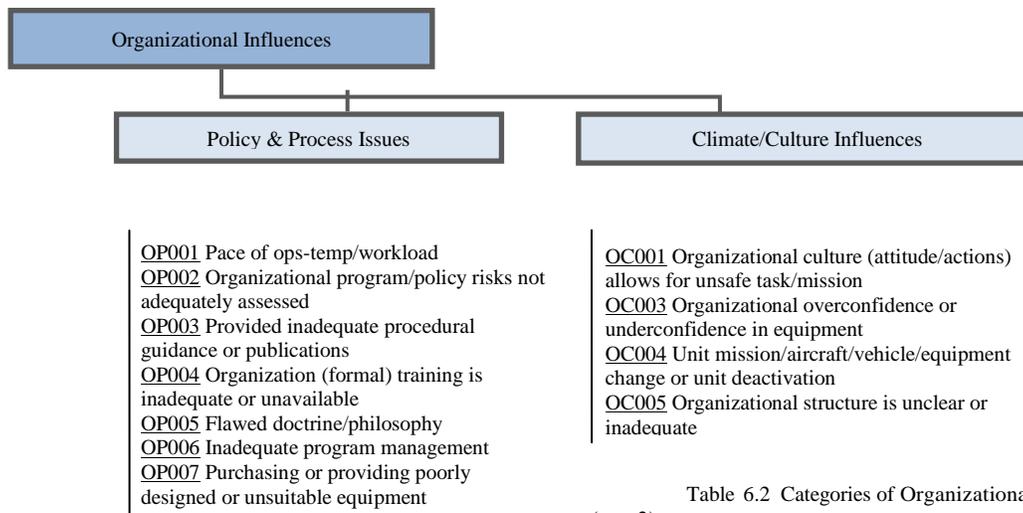


Table 6.2 Categories of Organizational Influences (part 2)

**Resource Problems:** Is a factor in a mishap if resource management, processes, or policies, directly or indirectly, influence system safety and results in inadequate management or creates an unsafe situation.

This category refers to the management, allocation, and maintenance of nonhuman organizational resources—primarily monetary and equipment/facilities. For example, excessive cost cutting and lack of funding for proper equipment have adverse effects on operator performance and safety. Finally, “equipment/facilities” refers to issues related to equipment design, including the purchasing of unsuitable equipment, inadequate design of workspaces, and failures to correct known design flaws. Management should ensure that human-factors engineering principles are known and utilized and that existing specifications for equipment and workspace design are identified and met (see Table 6.1).

**Personnel Selection & Staffing:** Personnel Selection and Staffing are factors in a mishap if personnel management processes or policies, directly or indirectly, influence system safety and result in poor error management or create an unsafe situation.

This category refers to the management of human operators, staff, and maintenance personnel. Issues that directly influence safety include recruitment, selection (including background checks), and staffing/manning.

**Policy & Process Issues:** Policy & Process Issues are factors in a mishap if organizational processes such as operations, procedures, operational risk management and oversight negatively influence individual, supervisory, and/or organizational performance and results in unrecognized hazards and/or uncontrolled risk and leads to human error or an unsafe situation.

This category refers to the formal process by which “things get done” in the organization. It is subdivided into three broad categories--operations, procedures, and oversight. The term “operations” refers to the characteristics or conditions of work that have been established by management. These characteristics include operational tempo, time pressures, production quotas, incentive systems, and schedules. When set up inappropriately, these working conditions can be detrimental to safety. “Procedures” are the official or formal procedures as to how the job is to be done. Examples include performance standards, objectives, documentation, and instructions about procedures. All of these, if inadequate, can negatively impact employee supervision, performance, and safety. Finally, “oversight” refers to monitoring and checking of resources, climate, and processes to ensure a safe and productive work environment. Issues here relate to organizational self-study, risk management, and the establishment and use of safety programs (see Table 6.2).

**Organizational Climate / Culture Influences:** Organizational Climate / Culture is a factor in a mishap if organizational variables including environment, structure, policies, and culture influence individual actions and results in human error or an unsafe situation.

In general, Organizational Climate is the prevailing atmosphere or environment within the organization. Within the present classification system, climate is broken down into three categories--structure, policies, and culture. The term “structure” refers to the formal component of the organization. The “form and shape” of an organization are reflected in the chain-of-command, delegation of authority and responsibility, communication channels, and formal accountability for actions. Organizations with maladaptive structures (i.e., those that do not optimally match to their operational environment or are unwilling to change) will be more prone to mishaps. “Policies” refer to a course or method of action that guides present and future decisions. Policies may refer to hiring and firing, promotion, retention, raises, sick leave, drugs and alcohol, overtime, accident investigations, use of safety equipment, etc. When these policies are ill-defined, adversarial, or conflicting, safety may be reduced. Finally, “culture” refers to the unspoken or unofficial rules, values, attitudes, beliefs, and customs of an organization (“The way things really get done around here.”). Other issues related to culture include organizational justice, psychological contracts, organizational citizenship behavior, esprit de corps, and union/management relations. All these issues affect attitudes about safety and the value of a safe working environment (see Table 6.2).

# DoD HFACS

## Quick user instruction and in-depth Nanocodes (definitions)

### HFACS Quick Users Guide

After any event investigators must gather human factors evidence. One method to do this is to start with the event outcome and create a time line documenting each step that leads up to the event. As you probe backwards determine whether a material (a part failed) event occurred or an individual committed or failed to commit an act the resulted in the outcome event.

At each step the investigator must document who committed the act then utilize the taxonomy to further classify the act. Once the investigator has identified the nanocode that reflects the act he/she must dig deeper.

The next step is to evaluate the preconditions that resulted in the unsafe act. A method that may help evaluating preconditions is to review each of the categories and sub categories in this tier of HFACS and rule in or eliminate the various preconditions that lead to the act. Once the investigator has fully devolved into the preconditions and has recorded all preconditions for the act the focus must move on to supervisory and subsequent organizational issues that contributed to the precondition.

It is recommended that for each nanocode chosen the investigator write a short narrative discussing the nanocode, then conduct an evaluation of each item in the time line. This should give the investigator a thorough human factors picture of all the events that led up to the mishap.

1. Unsafe Acts. Acts are factors that are most closely tied to the mishap, and can be described as active failures or actions committed by the operator that results in human error or unsafe situation.

a. Errors (AE000). Errors are factors in a mishap when mental or physical activities of the operator fail to achieve their intended outcome as a result of skill-based, perceptual, or judgment and decision making errors leading to an unsafe situation. Errors are unintended.

(1) Performance-Based Errors (AE100). Performance-Based Errors are factors when a specific action is performed in a manner that leads to a mishap.

(a) AE101 Unintended Operation of Equipment. Unintended Operation of Equipment is a factor when an individual's movements inadvertently activate or deactivate equipment, controls or switches when there is no intent to operate the control or device. This action may be noticed or unnoticed by the individual.

(b) AE102 Checklist Not Followed Correctly. Checklist Not Followed Correctly is a factor when the individual, either through an act of commission or omission, makes a checklist error or fails to run an appropriate checklist.

(c) AE103 Procedure Not Followed Correctly. Procedure Not Followed Correctly is a factor when a procedure is performed incorrectly or accomplished in the wrong sequence.

(d) AE104 Over-controlled or Under-controlled Aircraft or Vehicle or System. Over-controlled or Under-controlled Aircraft or Vehicle or System is a factor when an individual responds inappropriately to conditions by either over-controlling or under-controlling the aircraft or vehicle or system. The error may be a result of preconditions or a temporary failure of coordination.

(e) AE105 Breakdown in Visual Scan. Breakdown in Visual Scan is a factor when the individual fails to effectively execute visual scan patterns.

(f) AE107 Rushed or Delayed a Necessary Action. Rushed or Delayed a Necessary Action is a factor when an individual takes the necessary action as dictated by the situation but performs these actions too quickly or too slowly.

(2) Judgment and Decision-Making Errors (AE200). Judgment and Decision-Making Errors are factors when an individual proceeds as intended, yet the plan proves inadequate or inappropriate for the situation – usually “an honest mistake.”

(a) AE201 Inadequate Real-time Risk Assessment. Inadequate Real-time Risk Assessment is a factor when the individual fails to adequately evaluate the risks associated with a particular course of action and this faulty evaluation leads to an inappropriate decision and subsequent unsafe situation.

(b) AE202 Failure to Prioritize Tasks Adequately. Failure to Prioritize Tasks Adequately is a factor when based on accepted prioritization techniques; the individual does not organize the tasks needed to manage the immediate situation.

(c) AE205 Ignored Caution or Warning. Ignored Caution or Warning is a factor when a caution or warning is perceived and understood by the individual but is ignored by the individual.

(d) AE206 Wrong Choice of Action During an Operation. Wrong Choice of Action During an Operation is a factor when the individual, through faulty logic or erroneous expectations, selects the wrong course of action.

b. Violations (AV000). Violations are factors when the individual intentionally breaks the rules and instructions. “Violations are deliberate.”

(1) AV001 Performs Work-around Violation. Work-around Violation is a factor when the consequences or risk of violating published procedures was recognized, consciously assessed and honestly determined by the individual, crew or team to be the best course of action. Routine “work-arounds” and unofficial procedures that are accepted by the community as necessary for operations are also captured under this code.

(2) AV002 Commits Widespread or Routine Violation. Widespread or Routine Violation is a factor when a procedure or policy violation is systemic in a unit or setting and not based on a risk assessment for a specific situation. It needlessly commits the individual, team, or crew to an unsafe course of action. These violations may have leadership sanction and may not routinely result in disciplinary or administrative action. Habitual violations of a single individual or small group of individuals within a unit can constitute a routine or widespread violation if the violation was not routinely disciplined or was condoned by supervisors.

(3) AV003 Extreme Violation – Lack of Discipline. Extreme violation is a factor when an individual, crew or team intentionally violates procedures or policies without cause or need. These violations are unusual or isolated to specific individuals rather than larger groups. There is no evidence of these violations being condoned by leadership. These violations may also be referred to as “exceptional violations.”

**2. Preconditions**. Preconditions are factors in a mishap if active or latent preconditions such as conditions of the operators, environmental or personnel factors affect practices, conditions or actions of individuals and result in human error or an unsafe situation.

a. Environmental Factors (PE000). Environmental Factors are factors in a mishap if physical or technological factors affect practices, conditions and actions of individual and result in human error or an unsafe situation.

(1) Physical Environment (PE100). Factors when the environment such as weather, climate, fog, brownout (dust or sand storm) or whiteout (snow storm) affects the actions of individuals.

(a) PE101 Environmental Conditions Affecting Vision. Environmental Conditions Affecting Vision is a factor that includes obscured windows; weather, fog, haze, darkness; smoke; brownout or whiteout (dust, snow, water, ash or other particulates); or exposure to windblast that affects the individual’s ability to perform required duties.

(b) PE103 Vibration Affects Vision or Balance. Vibration Affects Vision or Balance is a factor when the intensity or duration of the vibration is sufficient to cause impairment of vision or adversely affect balance.

(c) PE106 Heat or Cold Stress Impairs Performance. Heat or Cold Stress Impairs Performance is a factor when the individual is exposed to conditions resulting in compromised performance.

(d) PE108 External Force or Object Impeded an Individual’s Movement. External Force or Object Impeded an Individual’s Movement is a factor when acceleration forces longer than one second cause injury or prevent or interfere with the performance of normal duties. Do not use this code to capture G-induced loss of consciousness (G-LOC). See PC304.

(e) PE109 Lights of Other Vehicle, Vessel or Aircraft Affected Vision. Lights of Other Vehicle, Vessel or Aircraft Affected Vision is a factor when the absence, pattern, intensity or location of the lighting of another vehicle, vessel or aircraft prevents or interferes with safe task accomplishment.

(f) PE110 Noise Interference. Noise Interference is a factor when any sound not directly related to information needed for task accomplishment interferes with the individual's ability to perform that task.

(2) Technological Environment (PE200). Technological Environment are factors in a mishap when automation or the design of the workplace (e.g. cockpit, inside vehicle or control station) affects the actions of an individual.

(a) PE201 Seat and Restraint System Problems. Seat and Restraint System Problems is a factor when the design of the seat or restraint system, the ejection system, seat comfort has poor impact-protection qualities.

(b) PE202 Instrumentation and Warning System Issues. Instrumentation and Warning System Issues are factors when instrument factors such as design, reliability, lighting, location, symbols, size, display systems, auditory or tactile situational awareness or warning systems create an unsafe situation.

(c) PE203 Visibility Restrictions (Not Weather Related). Visibility Restrictions (Not Weather Related) are factors when the lighting system, windshield or windscreen or canopy design or other obstructions prevent necessary visibility. This includes glare or reflections on the windshield or windscreen or canopy. Visibility restrictions due to weather or environmental conditions are captured under PE101.

(d) PE204 Controls and Switches are Inadequate. Controls and Switches are Inadequate is a factor when the location, shape, size, design, reliability, lighting or other aspect of a control or switch is inadequate.

(e) PE205 Automated System Creates an Unsafe Situation. Automated System Creates an Unsafe Situation is a factor when the design, function, reliability, symbols, logic or other aspect of automated systems creates an unsafe situation.

(f) PE206 Workspace Incompatible with Operation. Workspace Incompatible with Operation is a factor when the workspace is incompatible with the task requirements and safety for an individual.

(g) PE207 Personal Equipment Interference. Personal Equipment Interference is a factor when the individual's personal equipment interferes with normal duties or safety.

(h) PE208 Communication Equipment Inadequate. Communication Equipment Inadequate is a factor when communication equipment is inadequate or unavailable to support mission demands. This includes electronically or physically blocked transmissions. Communications can be voice, data or multisensory.

b. Physical and Mental States (PC000). Physical and Mental States are factors in a mishap if cognitive, psycho-behavioral, adverse physical state, or physical or mental limitations affect practices, conditions or actions of individuals and result in human error or an unsafe situation.

(1) Physical Problem (PC300). Physical Problem is a factor when a medical or physiological condition can result in unsafe situations.

(a) PC302 Substance Effects (Alcohol, Supplements, Medications or Drugs). Substance Effects (Alcohol, Supplements, Medications or Drugs) are factors when the individual uses legal or illegal drugs, supplements, energy drinks or any other substance with measurable effect that interferes with performance.

(b) PC304 Loss of Consciousness (Sudden or Prolonged Onset). Loss of Consciousness (Sudden or Prolonged Onset) is a factor when the individual has a loss of functional capacity or consciousness due to G-force induced loss of consciousness (G-LOC), seizure, trauma or any other cause.

(c) PC305 Physical Illness or Injury. Physical Illness or Injury is a factor when a physical illness, injury, deficit or diminished physical capability causes an unsafe situation. This includes preexisting and operationally related medical conditions, overexertion, motion sickness, etc.

(d) PC307 Fatigue. Fatigue is a factor causing diminished physical or mental capability resulting from chronic or acute periods of prolonged wakefulness, sleep deprivation, jet lag, shift work or poor sleep habits.

(e) PC310 Trapped Gas Disorders. Trapped Gas Disorders are factors when gasses in the middle ear, sinuses, teeth or intestinal tract expand or contract.

(f) PC311 Evolved Gas Disorders. Evolved Gas Disorders are factors when inert gas evolves in the blood causing an unsafe situation. This includes “the chokes” (pulmonary decompression sickness), central nervous system

(CNS) disorder, “the bends” (decompression sickness), paresthesia or other conditions caused by inert-gas evolution.

(g) PC312 Hypoxia or Hyperventilation. Hypoxia or Hyperventilation is a factor when the individual has insufficient oxygen supply to the body or breathing above physiological demands causes impaired function.

(h) PC314 Inadequate Adaptation to Darkness. Inadequate Adaptation to Darkness is a factor when the normal human limitation of dark-adaptation rate affects safety, for example, when transitioning between aided and unaided night vision.

(i) PC315 Dehydration. Dehydration is a factor when the performance of the individual is degraded due to dehydration as a result of excessive fluid losses due to heat stress or insufficient fluid intake.

(j) PC317 Body Size or Movement Limitations. Body Size or Movement Limitations is a factor when the size, strength, dexterity, mobility or other biomechanical limitations of an individual creates an unsafe situation. It must be expected that the average individual qualified for that duty position could accomplish the task in question.

(k) PC318 Physical Strength and Coordination (Inappropriate for Task Demands). Physical Strength and Coordination (Inappropriate for Task Demands) is a factor when the relative physical strength and coordination of the individual are not adequate to support task demands.

(l) PC319 Nutrition or Diet. Nutrition or Diet is a factor when the individual’s nutritional state or poor diet is inadequate to fuel the brain and body functions, resulting in degraded performance.

(2) State of Mind (PC200). State of Mind is a factor when an individual's personality traits, psychosocial problems, psychological disorders or inappropriate motivation creates an unsafe situation.

(a) PC202 Psychological Problem. Psychological Problem is a factor when the individual meets medical criteria for a psychiatric disorder.

(b) PC203 Life Stressors. Life Stressors are factors when the individual's performance is affected by life circumstance problems (includes relationship issues, financial stressors, recent move, etc.)

(c) PC204 Emotional State. Emotional State is a factor when the individual is under the influence of a strong positive or negative emotion and that emotion interferes with duties.

(d) PC205 Personality Style. Personality Style is a factor when the individual's personal interaction with others creates an unsafe situation. Examples are authoritarian, over conservative, impulsive, invulnerable, submissive or other personality traits that result in degraded performance.

(e) PC206 Overconfidence. Overconfidence is a factor when the individual overvalues or overestimates personal capability, the capability of others or the capability of aircraft or vehicles or equipment.

(f) PC207 Pressing. Pressing is a factor when the individual knowingly commits to a course of action that excessively presses the individual or the equipment beyond reasonable limits (e.g., pushing self or equipment too hard).

(g) PC208 Complacency. Complacency is a factor when the individual has a false sense of security, is unaware of or ignores hazards, and is inattentive to risks.

(h) PC209 Motivation. Motivation is a factor when the individual's motivation to accomplish a task or mission is excessive, weak or indecisive, or when personal goals supersede the organization's goals.

(i) PC215 Mental Exhaustion (Burnout). Motivational Exhaustion (Burnout) is a factor when the individual has the type of exhaustion associated with the wearing effects of high operational or lifestyle

tempo, when operational requirements impinge on the ability to satisfy personal requirements and leads to degraded effectiveness.

(3) Sensory Misperception (PC500). Sensory Misperception is a factor when degraded sensory inputs (visual, auditory or vestibular) create a misperception of an object, threat or situation.

(a) PC501 Motion Illusion – Kinesthetic. Motion Illusion – Kinesthetic is a factor when physical sensations of the ligaments, muscles or joints cause the individual to have an incorrect perception of orientation, motion or acceleration. (If this illusion leads to spatial disorientation, you must use code PC508.)

(b) PC502 Turning or Balance Illusion – Vestibular. Turning or Balance Illusion – Vestibular is a factor when stimuli acting on the balance organs in the middle ear cause the individual to have an incorrect perception of orientation, motion or acceleration. (If this illusion leads to spatial disorientation, you must use code PC508.)

(c) PC503 Visual Illusion. Visual Illusion is a factor when visual stimuli result in an incorrect perception of orientation, motion or acceleration. (If this illusion leads to spatial disorientation, you must use code PC508.)

(d) PC504 Misperception of Changing Environment. Misperception of Changing Environment is a factor when an individual misperceives or misjudges altitude, separation, speed, closure rate, road or sea conditions, aircraft or vehicle location within the performance envelope or other operational conditions.

(e) PC505 Misinterpreted or Misread Instrument. Misinterpreted or Misread Instrument is a factor when the individual is presented with a correct instrument reading but its significance is not recognized, or it is misread or misinterpreted.

(f) PC507 Misinterpretation of Auditory or Sound Cues. Misinterpretation of Auditory or Sound Cues is a factor when the auditory inputs are correctly interpreted but are misleading or disorienting, or when the inputs are incorrectly interpreted and cause an impairment of normal performance.

(g) PC508 Spatial Disorientation. Spatial Disorientation is a factor when an individual fails to correctly sense a position or motion of the aircraft or vehicle or vessel or of oneself. Spatial disorientation may be unrecognized or result in partial or total incapacitation.

(h) PC511 Temporal or Time Distortion. Temporal or Time Distortion is a factor when the individual experiences a compression or expansion of time relative to reality. This is often associated with a “fight or flight” response.

(4) Mental Awareness (PC100). Mental Awareness is a factor when attention management or awareness failure affects the perception or performance of individuals.

(a) PC101 Not Paying Attention. Not Paying Attention is a factor when there is a lack of state of alertness or a readiness to process immediately available information. The individual has a state of reduced conscious attention due to a sense of security, self-confidence, boredom or a perceived absence of threat from the environment. This may often be a result of highly repetitive tasks.

(b) PC102 Fixation (“channelized attention”). Fixation is a factor when the individual is focusing all conscious attention on a limited number of environmental cues to the exclusion of others.

(c) PC103 Task Oversaturation or Undersaturation. Task Oversaturation or Undersaturation is a factor when the quantity of information an individual must process exceeds the person’s mental resources in the amount of time available to process the information.

(d) PC104 Confusion. Confusion is a factor when the individual is unable to maintain a cohesive and orderly awareness of events and required actions and experiences a state characterized by bewilderment, lack of clear thinking, or (sometimes) perceptual disorientation.

(e) PC105 Negative Transfer. Negative Transfer is a factor when the individual reverts to a highly learned behavior used in a previous system or situation and that response is inappropriate for current task demands

(f) PC106 Distraction. Distraction is a factor when the individual has an interruption of attention or inappropriate redirection of attention by an environmental cue or mental process.

(g) PC107 Geographically Lost. Geographically Lost is a factor when the individual is at a different location from where the individual believes he or she is.

(h) PC108 Interference or Interruption. Interference or Interruption During Task is a factor when an individual is performing a highly automated or learned task and is distracted by another cue or event that results in the interruption and subsequent failure to complete the original task or results in skipping steps in the original task.

(i) PC109 Technical or Procedural Knowledge Not Retained After Training. Technical or Procedural Knowledge Not Retained After Training is a factor when the individual fails to absorb or retain required information or is unable to recall past experience needed for safe task completion.

(j) PC110 Inaccurate Expectation. Inaccurate Expectation is a factor when the individual expects to perceive a certain reality and those expectations are strong enough to create a false perception of the expectation.

c. Personnel Factors (PP000)

(1) Teamwork (PP100). Teamwork is a factor when interactions among individuals, crews, and teams involved with the preparation and execution of a task or mission result in human error or an unsafe situation.

(a) PP101 Failure of Crew or Team Leadership. Failure of Crew or Team Leadership is a factor when the crew or team leadership techniques failed to facilitate a proper crew or team climate, to include establishing and maintaining an accurate and shared understanding of the evolving task and plan on the part of all crew or team members.

(b) PP103 Inadequate Task Delegation. Inadequate Task delegation is a factor when the crew or team members failed to actively manage the distribution of tasks to prevent the overloading of any individual member.

(c) PP104 Rank or Position Intimidation. Rank or position Intimidation is a factor when the differences in rank of the team or crew caused the task performance capabilities to be degraded. Also, includes conditions where formal or informal authority gradient is too steep or too flat across a crew or team and this condition degrades collective or individual performance.

(d) PP105 Lack of Assertiveness. Lack of Assertiveness is a factor when an individual failed to state critical information or solutions with appropriate persistence and or confidence.

(e) PP106 Critical Information Not Communicated. Critical Information Not Communicated is a factor when known critical information was not provided to appropriate individuals in an accurate or timely manner.

(f) PP107 Standard or Proper Terminology Not Used. Standard or Proper Terminology Not Used is a factor when clear and concise terms, phrases, hand signals, etc., were not used per service standards and training.

(g) PP108 Failed to Effectively Communicate. Failed to Effectively Communicate is a factor when communication is not understood or is misinterpreted as the result of behavior of either sender or receiver. Effective communication includes backing up, supportive feedback and acknowledgement to ensure that personnel correctly understand announcements or directives.

(h) PP109 Task or Mission Planning or Briefing Inadequate. Task or Mission Planning or Briefing Inadequate is a factor when an individual, crew or team failed to complete all preparatory tasks associated with planning or briefing the task or mission.

**3. Supervision**. Supervision is a factor in a mishap if the methods, decisions or policies of the supervisory chain of command directly affect practices, conditions, or actions of the individual(s).

a. Supervisory Violations (SV000). Supervisory Violations are factors when supervision willfully disregards instructions or policies.

(1) SV001 Failed to Enforce Existing Rules (Supervisory Act of Omission). Failed to Enforce Existing Rules (Supervisory Act of Omission) is a factor when operating rules have not been enforced by authority supervisor.

(2) SV002 Allowing Unwritten Policies to Become Standard. Allowing Unwritten Policies to Become Standard is a factor when unwritten or unofficial policy is perceived and followed by the individual, although it has not been formally recognized by the organization.

(3) SV003 Directed Individual to Violate Existing Regulations. Directed Individual to Violate Existing Regulations is a factor when a supervisor directs a subordinate to violate existing regulations, instructions or technical guidance.

(4) SV004 Authorized Unqualified Individuals for Task. Authorized Unqualified Individuals for Task is a factor when an individual has not met the general training requirements for the job or weapon system and is considered non-current but supervision or leadership allows the individual to perform the task.

b. Planned Inappropriate Operations (SP000). Planned Inappropriate Operations are factors when supervision fails to adequately plan or assess the hazards associated with an operation and allows for unnecessary risk.

(1) SP001 Directed Task Beyond Personnel Capabilities. Directed Task Beyond Personnel Capabilities is a factor when supervisor or management directs personnel to undertake a task beyond their skill level or beyond the capabilities of their equipment.

(2) SP002 Inappropriate Team Composition. Inappropriate Team Composition is a factor when the makeup of the crew or teams should have reasonably raised safety concerns in the minds of members involved in the task or in any other individual directly related to the scheduling of this task.

(3) SP003 Selected Individual with Lack of Current or Limited Experience. Selected Individual with Lack of Current or Limited Experience is a factor when the supervisor selects an individual whose experience is not sufficiently current or proficient to permit safe task execution.

(4) SP006 Performed Inadequate Risk Assessment or Mitigation – Formal. Performed Inadequate Risk Assessment and or Mitigation – Formal is a factor when supervision does not adequately evaluate or mitigate the risks associated with a task or when pre-mission risk assessment tools or programs are inadequate.

(5) SP007 Authorized Unnecessary Hazard. Authorized Unnecessary Hazard is a factor when supervision authorizes an activity or task that is unnecessarily hazardous without sufficient cause or need.

b. Inadequate Supervision (SI000). Inadequate Supervision is a factor when department-level or command-level supervision proves inappropriate or improper or fails to identify hazards, recognize and control risk or provide guidance, training or oversight.

(1) SI001 Supervisory or Command Oversight Inadequate. Supervisory or Command Oversight Inadequate is a factor when the availability, competency, quality or timeliness of leadership, supervision or oversight does not meet task demands. Inappropriate supervisory pressures are also captured under this code.

(2) SI002 Improper Role-Modeling. Improper Role-Modeling is a factor when the individual's learning is influenced by the behavior of supervisors and when that learning manifests itself in actions that are either inappropriate to the individual's skill level or violate standard procedures.

(3) SI003 Failed to Provide Proper Training. Failed to Provide Proper Training is a factor when one-time or recurrent training programs, upgrade programs, transition programs or any other local training is inadequate or unavailable, etc. Note: The failure of an individual to absorb the training material in an adequate training program does not indicate a training program problem.

(4) SI004 Failed to Provide Appropriate Policy or Guidance. Failed to Provide Appropriate Policy or Guidance is a factor when policy or guidance, or a lack of policy or guidance, leads to an unsafe situation.

(5) SI005 Personality Conflict with Supervisor. Personality Conflict with Supervisor is a factor when a supervisor and individual member experience a "personality conflict" that leads to a dangerous error in judgment or action.

(6) SI006 Lack of Supervisory Responses to Critical Information. Lack of Supervisory Responses to Critical Information is a factor when information critical to a potential safety issue was provided but supervisory or management personnel failed to act upon it (failure to close the loop).

(7) SI007 Failed to Identify or Correct Risky or Unsafe Practices. Failed to Identify or Correct Risky or Unsafe Practices is a factor when a supervisor fails to identify or correct risky behaviors or unsafe tendencies and or fails to institute remedial actions. This includes hazardous practices, conditions or guidance.

(8) SI008 Selected Individual with Lack of Proficiency. Selected Individual with Lack of Proficiency is a factor when a supervisor selects an individual that is not proficient in a task, mission or event.

**4. Organizational Influences**. Are factors in a mishap if the communications, actions, omissions or policies of upper-level management directly or indirectly affect supervisory practices, conditions or actions of the operator(s) and result in system failure, human error or an unsafe situation.

a. Resource Problems (OR000). Resource Problems are factors when resources influence system safety, resulting in inadequate error management or creating an unsafe situation.

(1) OR001 Command and Control Resources Are Deficient. Command and Control Resources Are Deficient is a factor when installation resources are inadequate for safe operations. Examples include command and control, airfield services, battle group management, etc.

(2) OR003 Inadequate Infrastructure. Inadequate Infrastructure is a factor when support facilities (dining, exercise, quarters, medical care, etc.) or opportunity for recreation or rest are not available or adequate. This includes situations where leave is not taken for reasons other than the individual's choice.

(3) OR005 Failure to Remove Inadequate or Worn-out Equipment in a Timely Manner. Failure to Remove Inadequate or Worn-out Equipment in a Timely Manner is a factor when the process through which equipment is removed from service is inadequate.

(4) OR008 Failure to Provide Adequate Operational Information Resources. Failure to Provide Adequate Operational Information Resources is a factor when weather, intelligence, operational planning material or other information necessary for safe operations planning is not available.

(5) OR009 Failure to Provide Adequate Funding. Failure to Provide Adequate Funding is a factor when an organization or operation does not receive the financial resources necessary to complete its assigned task or mission.

b. Personnel Selection & Staffing (OS000). Personnel Selection & Staffing are factors if personnel management processes or policies, directly or indirectly, influence system safety and result in poor error management or create an unsafe situation.

(1) OS001 Personnel Recruiting and Selection Policies Are Inadequate. Personnel Recruiting and Selection Policies Are Inadequate is a factor when the process through which individuals are screened, brought into the service or placed into specialties is inadequate.

(2) OS002 Failure to Provide Adequate Manning or Staffing Resources. Failure to Provide Adequate Manning or Staffing Resources is a factor when the process through which manning, staffing or personnel placement or manning resource allocations are inadequate for task or mission demands.

c. Policy & Process Issues (OP000). Policy and Process Issues are factors in a mishap if these processes negatively influence performance and result in an unsafe situation.

(1) OP001 Pace of Ops-Tempo or Workload. Pace of Ops-Tempo or Workload is a factor when the pace of deployments, workload, additional duties, off-duty education, professional military education (PME) or other workload-inducing conditions of an individual or unit creates an unsafe situation.

(2) OP002 Organizational Program or Policy Risks Not Adequately Assessed. Organizational Program or Policy Risks Not Adequately Assessed is a factor when the potential risks of a large program, operation, acquisition or process are not adequately assessed and this inadequacy leads to an unsafe situation.

(3) OP003 Provided Inadequate Procedural Guidance or Publications. Provided Inadequate Procedural Guidance or Publications is a factor when written directions, checklists, graphic depictions, tables, charts or other published guidance are inadequate, misleading or inappropriate.

(4) OP004 Organizational (Formal) Training Is Inadequate or Unavailable. Organizational (Formal) Training Is Inadequate or Unavailable is a factor when one-time or initial training programs, upgrade programs, transition programs or other training that is conducted outside the local unit are inadequate or unavailable, etc.

(5) OP005 Flawed Doctrine or Philosophy. Flawed Doctrine or Philosophy is a factor when the doctrine, philosophy or concept of operations in an organization is flawed or accepts unnecessary risk that leads to an unsafe situation or unmitigated hazard.

(6) OP006 Inadequate Program Management. Inadequate Program Management is a factor when programs are implemented without sufficient support, oversight or planning.

(7) OP007 Purchasing or Providing Poorly Designed or Unsuitable Equipment. Purchasing or Providing Poorly Designed or Unsuitable Equipment is a factor when the processes through which aircraft, vehicle, equipment or logistical support is acquired allows inadequacies or when design deficiencies allow inadequacies in the acquisition

d. Climate or Cultural Influences (OC000). Climate or Cultural Influences are factors when the working atmosphere within the organization influences individual actions, resulting in human error (e.g. command structure, policies and working environment)

(1) OC001 Organizational Culture (Attitude or Actions) Allows for Unsafe Task or Mission. Organizational Culture (Attitude or Actions) Allows for Unsafe Task or Mission is a factor when explicit or implicit actions, statements or attitudes of unit leadership set unit or organizational values (culture) that allow an environment in which unsafe task or mission demands or pressures exist.

(2) OC003 Organizational Overconfidence or Under confidence in Equipment. Organizational Overconfidence or Under confidence in Equipment is a factor when there is organizational over- or under confidence in an aircraft, vehicle, device, system or any other equipment.

(3) OC004 Unit Mission, Aircraft, Vehicle or Equipment Change or Unit Deactivation. Unit Mission, Aircraft, Vehicle, Equipment Change or Unit Deactivation is a factor when the process of changing missions, aircraft or vehicle or equipment or an impending unit deactivation creates an unsafe situation.

(4) OC005 Organizational Structure Is Unclear or Inadequate. Organizational Structure Is Unclear or Inadequate is a factor when the chain of command of an individual or structure of an organization is confusing, non-standard or inadequate and this creates an unsafe situation.