

Maryland Port Administration
Safety Program
Goal

To create an atmosphere that enables employees to recognize and control risks that may adversely affect them and/or the assets of the organization.

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Chapter 1

Management of a Safety Program

Policy

Management of a safety program is based on the following premises:

- Safety of employees is a line management responsibility.
- All accidents are preventable.
- An environment must be created by management that enables all employees to be motivated to perform their safety responsibilities.
- Safety will be managed using the same management principles as used for quality, cost, and operations.
- Managing safety is not something that is done when time allows but should be part of one's everyday activities.

Safety of Employees is a Management Responsibility

Safety of employees is a line management responsibility because it must be an integral part of the supervisors' activities. Line management must direct the safety program by goal setting planning, organizing, and controlling.

All accidents are preventable

Accidents do not occur but are caused. The way to prevent accidents is to eliminate the cause(s). Accident causes are (1) human error and (2) the environment.

An environment must be created by management that enables all employees to be motivated to perform their safety responsibilities.

Research shows that most accidents are caused by unsafe behavior and not by unsafe conditions. Accidents are the result of people reacting in an unsafe manner to their environment. Once we determine the reason(s) for this unsafe behavior, we can correct the environment and reduce the risk of accidents.

Safety will be managed using the same management principles as used for quality, cost, and operations.

It is important that all levels of supervision accept the responsibility of managing safety. Often times, supervisors feel that safety is the safety department's responsibility. But all highly successful organizations treat

safety as they treat any other aspect of their business. Managing safety effectively means establishing goals and objectives, assigning responsibility, holding people accountable, and auditing periodically the success of the program.

Managing safety is not something that is done when time allows but should be a part of one's everyday activities.

Safety cannot be relegated to the "back burner." All employees must integrate safety into his/her job. Safety cannot be considered once a week or once a month, but every day.

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Chapter 2

Safety Responsibilities

Executive Level

- Include safety in the annual business plan.
- Hold managers accountable for integrating safety into their annual goals and objectives.
- Incorporate safety into verbal and written communications whenever possible.
- Hold managers accountable for achieving their goals and objectives.
- Require periodic updates on implementation from Safety/Risk Management Department.

Managers

- Develop and implement an annual safety and health plan.
- Hold supervisors accountable for safety responsibilities.
- Provide resources to accomplish safety and health goals.
- Participate in safety activities such as inspections or safety meetings.

First Line Supervisor

- Participate in investigation of all accidents.
- Conduct safety inspections regularly.
- Implement all applicable governmental regulatory compliance activities with the assistance of Safety/Risk Management Department.
- Hold regular safety meetings.
- Assure that all employees receive pre-job and on-going safety training.

Non-supervisory Employees

- Comply with all safety rules and practices.
- Perform duties in a safe manner.
- Report unsafe practices and conditions.
- Report near misses.
- Assist in improving and maintaining safe and healthy working conditions.

Safety/Risk Management Employees

- Collect, analyze and interpret accident statistics.
- Develop appropriate programs to reduce risk of accidents.
- Provide safety training to employees.
- Assist all departments in the accomplishment of their goals.
- Periodically evaluate the effectiveness of safety program.
- Conduct inspections.
- Provide technical assistance in safety and industrial hygiene matters.

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Chapter 3

Causes of Accidents

What is an Accident?

Every MPA employee needs to clearly understand what constitutes an accident. We once considered an accident an unexpected event that resulted in an injury, but that definition isn't really complete. Some accidents do cause injuries, but accidents also damage tools, machines, raw materials, buildings, etc., and some accidents have little or no obvious result.

Today's definition is:

“An accident is an unplanned, unwanted event that could result in personal injury, health impairment, product, equipment or facility damage, or other financial loss.”

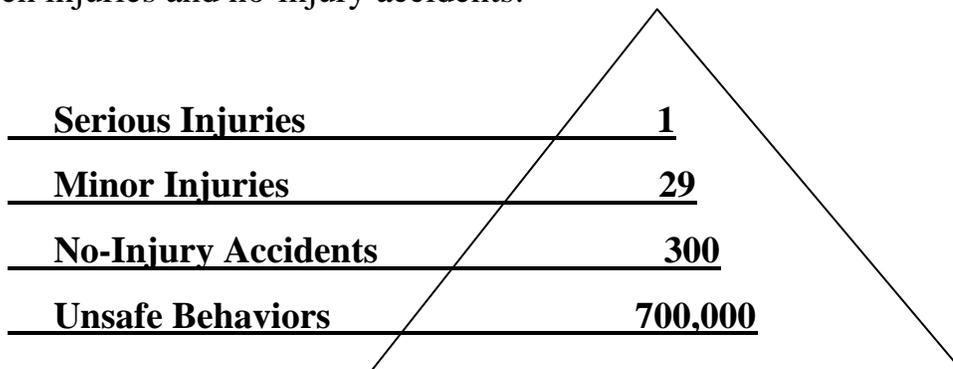
Therefore, we must increase our awareness of what causes accidents and take appropriate steps to prevent. The prevention approach requires a more complete knowledge of safety and health issues.

The Significance of Near-Miss Accidents

The seriousness of the injury suffered in an accident is largely a matter of chance. A person falling from a ladder could end up with no injuries whatsoever, or could be killed. The causes, however, may be the same in both cases.

In preventing future injuries or losses, it is important to study **root causes** not results. Thus, what we learn from no-injury accidents is just as valuable as from serious-injury accidents.

It is just as important to have a system in place that collects data and analyzes that data on near-misses as it is to have a system for the investigation of serious injuries. There are a number of ways to do this. The following diagram illustrates the relationship between injuries and no-injury accidents:



Safety professionals have been aware of this pyramid and the correlation between unsafe behaviors and types of injuries for a long time.

To effectively evaluate unsafe behaviors, the supervisor must observe employees'

behaviors to determine if the employees are working safety. If several unsafe behaviors are noted, the probability increases that a serious injury will occur. A part of every supervisor's job is to insure the safety of his or her employees. Techniques to accomplish this may include the following:

1. **Casual observation of his or her employees.** This should be done anytime the supervisor is watching his or her employees performing their job. A follow-up discussion should always occur after the observation to give the employee feedback of his or her performance.
2. **Planned observation of his or her employees.** This type of observation generally occurs when the job task being done is one that may be more hazardous, not performed often, or has a prescribed procedure that must be followed. Again, immediate performance feedback must be provided to the employee.

Accident Causes

Accidents or incidents are generally caused by a (1) management systems failure and/or (2) human error. These causes will be fully described in the next sections.

Management System Failure

A management system failure is a breakdown of a program, or policy controlled by management.

Examples of management failures are as follows:

- Does management have a policy statement on safety and health?
- Who is designated as responsible and to what degree?
- Who has what authority, and to do what?
- Who is held accountable for safety and health? How?
- How are they measured for their performance?
- What systems are used for inspections to find out what went wrong?
- How are new employees selected?
- How are new employees oriented?
- Is sufficient training given?
- What are standard operating procedures? What standards are used?
- How are safety and health hazards recognized, evaluated and eliminated or controlled?
- What records are kept, and how are they used?
- What is the medical program?

Human Error

Generally workers tend to err as a result of the following:

Employees may act unsafely because they don't know the safe way, or sometimes they will deliberately choose unsafe behavior. They decide on the unsafe behavior because some other factor has a higher priority than their concern about their own safety. In

such instances, the unsafe behavior makes sense to them at the time. Here are some of the reasons:

1. **Danger awareness.** Employees will often act unsafely because they simply don't recognize the danger.
2. **Information gap.** Sometimes employees act unsafely because they don't know the right way to perform a given job, or they don't know how to circumvent a known job hazard. We can't expect a new employee to know how to correctly clean up an oil spill until he or she has had proper instructions.
3. **Level of skill.** Skill and information are not the same. Many skills require the use of hands, eyes, and certain muscles in a coordinated fashion to produce the desired result. Few of us have the natural skill and coordination to drive a stick-shift car, or to hit a golf ball the first time out. Neither can most people operate a crane, locomotive, or other heavy industrial equipment without a considerable amount of training and experience.
4. **A time bind.** If the safe way takes more time than an unsafe alternative, many employees will choose to take the shortcut and save time. The greater the time advantage of the unsafe approach, the greater temptation to run the risk of the unsafe behavior.
5. **The easy way.** Any time the safe behavior takes more effort of physical exertion, we can expect some employees to take the easy way. The greater the

effort, greater is the temptation to use the unsafe behavior.

6. **Pain prevention.** When the safe behavior involves some physical discomfort (such as wearing personal protective equipment), some people will choose the more comfortable alternative.
7. **Attention device.** Some people will take life-threatening chances to just to gain group approval or attract attention from their peers.
8. **Resentment.** Some employees resent and react negatively to supervision. They will sometimes pursue an unsafe behavior to express their independence or to “get even” with a supervisor for some real or imagined grievance.
9. **Physical impairment.** Employees may be influenced in the direction of unsafe behaviors by intoxication, hangovers, drug use, fatigue, minor injuries or other physical incapacities.
10. **Mental conditions.** Anger, frustration, boredom, worry, stress of family problems can all distract employees and interfere with their ability to concentrate and safely perform the work at hand.

Multiple Causes

Most accidents have more than one cause. Our common tendency to over-simplify often leads us to mistakenly pinpoint a single cause. The truth is, there are almost always a number of causes in sequence that bring about an accident. The idea of

multiple causes is that many factors combine in a random fashion to cause accidents. Let's look at a common accident in terms of multiple causes. An employee falls from a defective stepladder.

- Why was a defective ladder not discovered during routine inspections?
- Why did the supervisor allow its use?
- If the injured employee knew it was defective, why did the employee go ahead and use it?
- Was the employee properly trained?
- Was the employee reminded of the proper safe practices?
- Was the ladder properly marked with safety cautions?
- Did the supervisor examine the job beforehand?

The answers to these and other questions could lead to the following types of corrections:

- An improved inspection procedures
- Improved training
- A better definition of job responsibilities
- Better pre-job planning by supervisors

As with any accident, we must find the basic causes and remove them if we hope to prevent a recurrence. Citing only the unsafe act of "climbing a defective ladder" and an unsafe condition we call "defective ladder" will not help much. When we look only at one act and one condition, we are dealing with symptoms, not causes.

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Chapter 4
Safety and Health Inspections

Definition:

A safety and health inspection is a systematic and regular physical inspection of the work environment designed to detect unsafe or unhealthy conditions which could result in employee injuries or illnesses, equipment damage, or production disruptions.

Safety and health inspections are of two types: Incidental and Planned. **Incidental inspections** are casual and informal and involve “keeping the eyes open” for unsafe conditions as employees go about their daily routines. **Planned inspections** are deliberate and formal, with written checklists used to assure that specific items or conditions are covered and records are maintained.

Basic Concepts/Background:

Safety and health inspections are fundamental to the process of identifying unsafe conditions. An unsafe condition is any condition that could or does contribute to an accident.

Unsafe conditions are continuously being created or resulting from the following:

- Unsafe design
- Normal physical wear and tear process
- Environmental process
- Actions of employees
- Acts of God

Results of not correcting unsafe conditions may include:

- Accidents
- Employee attitude and behavior problems
- OSHA citations
- Litigation

Therefore, all employees must be trained to recognize and correct unsafe conditions.

Inspection Development:

1. Develop a safety and health inspection by applying the following steps:
 - A. Define inspection areas.
 - Identify boundaries in a work area so there are no overlaps or “gray” locations for each employee having area inspection responsibilities.

B. Decide what items to inspect, such as cranes, forklifts, chemical storage, etc.

Refer to:

- Regulatory standards
- Safety and health professional(s)
- Company accident investigation reports
- Employee input

C. Decide the unsafe condition for each item to be inspected. Some resources that can be used are:

- Safety and health professional expertise
- Regulatory Standards
- American National Standards Institute (ANSI) Standards
- Industry Standards
- Work Group Standards

D. Decide how often items require inspection. Sources for this information are:

- Regulatory requirements
- Experience (normal wear and tear)
- Inspection records, especially preventive maintenance inspection records
- Severity potential

E. Decide who should inspect each item:

Most inspections can be conducted by anyone so long as they are trained in the inspection procedures and standards. There are a few exceptions that require a **certified** specialist. Check local municipality and state codes. Examples are elevators, boilers, certain types of cranes, etc.

F. Review inspection inventory on a regular basis to keep it updated. The following examples are reasons to update inspection inventories.

- Facility safety and health professionals should alert operations and staff functions on changes to safety and health regulatory standards.
- Changes as a result of an accident investigation. When an unsafe condition is a contributing factor, the inspection inventory and the inspection checklist should be reviewed for possible updating.
- Changes in or modifications to equipment could cause inspection items to be added or deleted.

2. Using the Inspection Inventory

- A. Organizes a planned safety inspection program.
- B. Identifies safety and health standards for training inspectors.
- C. Establishes accountability.

3. Including Housekeeping with Inspections: Basic Guidelines

- A. An old truism: “Show me a facility with poor housekeeping and I’ll

show you a facility that has problems in other business areas.”

Poor housekeeping is an attitude indicator.

- Basic housekeeping promotes orderliness.
 - All things should have an assigned place for storage.
 - All things should be stored in their assigned places in accordance with defined standards of orderliness.

- Housekeeping promotes cleanliness.
 - Cleanliness standards should be clearly defined and enforced.
 - The source of housekeeping problems should be identified and corrected.
- The unavoidable conditions are regularly cleaned.
- Good housekeeping promotes high morale and good attitudes.
- Good housekeeping eliminates conditions that cause accidents.

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Chapter 5

Safety and Health Meetings

Definition

A safety and health meeting is a planned, periodic gathering of a group of employees for the purpose of providing training, communication and discussion on safety and health topics.

- All employees should attend the meetings.
- The meeting should be held monthly.

Open discussion among the employees and active participation should be strongly encouraged (i.e., employees should be encouraged to take turn in leading the meetings).

Basic Concepts/Background:

Safety and health meetings can be valuable to the employees and to the MPA. For example, they can provide a forum for explaining safety procedures, explaining the importance of wearing personal protective equipment, increasing the awareness of accident causes and types, and creating a climate that helps to improve employee morale. They can also serve as a meaningful forum for problem-solving, training, demonstrations, etc. as associated with safety and health activities.

However, safety and health meetings must be well organized, not hastily thrown together. Otherwise, the meetings will lack direction and will succeed only in wasting time. Audits have revealed that safety meetings require special attention.

Procedures for application:

1. How to Properly Conduct a Safety and Health Meeting

First, establish objectives for the meeting, and at the beginning of the meeting, let the attendees know what they are, i.e., what are the reasons for the meeting today. When conducting a safety and health meeting, the leader should choose subjects of interest and concern to employees and demonstrate true interest in the topic through body language, eye contact, and tone of voice.

Visual aids are recommended to give meetings added impact. These can be flip charts, videos, or live demonstrations -- anything that reinforces the topic being discussed. Each facility is encouraged to provide role-playing opportunities in its safety meetings.

The leader should create an atmosphere of open group participation. Employees may want to contribute their own knowledge and experience, and this should be encouraged. To conclude the meeting, briefly summarize what has been discussed and the action decided on. The final summary will help motivate employees to remember and use what they learned and create a sense of expectation for the next meeting.

2. Establishing a Standard Time and Location

If possible, the day and time of safety and health meetings should be consistent. The meeting location is also important. It should be quiet so that all employees can hear at a normal conversation level, plus be well lighted, properly ventilated, and temperature controlled. Appropriate equipment such as flip charts, a chalk board, a screen, projectors, audio visual, etc., should be available.

3. Meeting Length

A safety and health meeting's length should be flexible -- content is more important than its length. The speaker should notify attendees of the meeting's expected length.

4. Agendas and Minutes

An agenda should be based on specific objectives that are developed to meet the needs of the group and department.

Several examples of items to discuss at Safety and Health meeting are described in the next two pages.

- Providing an update and discussion of the organization's safety and health objectives.
- Reviewing the injuries experienced since last meeting through reports.
- Review job procedures in a meeting.

- Demonstrate safe work practices by using volunteers who have been briefed and are prepared. Again, the demonstration should be relevant to most of the people at the meeting.
- Video/slides, etc. should be used only if there is time for discussion and if it relates to the group and its safe work practices.
- Give each employee an opportunity to report a condition(s) that is perceived to be unsafe. Review the corrective action status of each unsafe item reported at the last meeting.
- Use the safety and health meetings to train employees for involvement in safety and health activities where applicable.
- Safety and health meetings can provide an ideal setting for required regulatory training such as hazard communications, MSDS, hearing conservation, etc., if it pertains to the whole group.

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Chapter 6

Accident Investigation

Definition

An accident investigation is a systematic approach designed to uncover the underlying causes of accident and develop workable corrective actions to prevent the incident from recurring.

Policy

1. All accidents will be investigated.
2. The Injury and Illness Investigation form will be used.
3. All investigation will include non-supervisory participation.

Basic concepts:

An accident investigation includes:

- *Injury*
- *Illness*
- *Equipment Damage*
- *Property Damage*
- *Product Damage*
- *Near-miss Events*

Conducting a proper accident investigation requires:

- *Investigative Skills*
- *Analytic Skills*
- *Facilitation Skills*
- *Managerial Skills*
- *Proper Attitude*

The following attitudes are detrimental to the investigative process:

- Unless someone is severely injured, the incident should not be investigate
- Most accidents are not preventable; that why they are called accidents.
- The prevention effort is directly related to the magnitude of loss, or
- The prevention effort is only necessary when the accident is severe enough.

Procedures

1. Notification of an accident

- Employee will advise supervisor of accident, if medically able.
- Report will be completed by employee and sent immediately to Safety & Risk Management Department.
- Employee will be treated medically; this is the top priority.

2. Pre-Investigation

- A. Notify all who should attend investigation.
- B. Establish who the witnesses are and interview each one.
- C. If possible, do not disturb the accident scene or take pictures or video.
- D. Decide where to conduct investigation.
 - If possible, at the accident scene.
 - If possible, reenactment of the accident can sometimes help to clarify what, how, when, and where type questions. Be extremely cautious when reenacting.

- After visiting the scene, decide on a place to conduct the investigation which is free of noise and interruptions.

3. Conducting the Investigation

A. Accidents should be investigated as soon as practical.

B. Delay the questioning of an injured employee until he or she is medically able, both physically and mentally.

C. Guidelines for conducting investigation are as follows:

- Introduce those present.
- State the purpose of the investigation.
- Describe accident.
- Get statement of employees directly involved, if available.
- Ask the employees questions to find out what the employee was doing, how the employee was doing the task, and what happened.
- Get statement from witnesses.
- Summarize the facts that have been established.
- Resolve any conflicts if possible.
- Based on facts gathered, identify all the contributing causes of the accidents.

Applying knowledge from Chapter 3, Causes of Accidents,

develop a list of unsafe acts and conditions. The “why” questions

should always be asked in an accident investigation. Each “why” question can usually be followed by another “why” question. This process continues until the investigator is certain that all the root causes of the accident have been identified.

- Establish corrective actions. Discuss with investigation team how to prevent each root cause from reoccurring. Assign a responsible person and a date to correct.
- Close the investigation.

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Chapter 7

Safety and Health Committees

Definition

- Safety and health committees are used to gain insight, to provide input, and to develop corrective actions for safety and health issues.

Committees may be permanent or “as needed.”

Basic Concepts:

- A safety and health committee should be viewed as an accident prevention tool.
- Committee members may volunteer or be selected by management or union depending upon the circumstances.
- Membership should represent the organization including employees from management and labor.
- Committee members should define goals, objectives, and actions.
- A safety and health committee provides an excellent opportunity for employees to participate in the decision making process.
- All safety and health committees should maintain minutes of the meetings and provide periodic reports to upper management.

Permanent Safety and Health Committees

All organizations should establish a committee that meets periodically to discuss safety and health issues that may affect the employees and the work environment. The basic concepts mentioned above should apply. Activities of this committee may include the following:

- Review accidents and accident statistics.
- Identify unsafe conditions and behaviors.
- Propose improvements to safety procedures.
- Participate in facility inspections.
- Attend accident investigations.
- Review personal protective equipment requirements.
- Conduct safety meetings.
- Propose safety training.
- Develop guidelines for safety recognition.
- Etc.

“As-Needed Safety and Health Committees”

An “as-needed” committee will be convened to examine or study an issue relating to safety or health. An example is that a committee is formed to review and make recommendations regarding the current personal protective equipment policy. The basic concepts described above apply to the “as-needed” committee.