

Safety and Health Management Systems

(Prepared under OSHA Grant #46E3-HT36)

Course Objectives:

- Understand the elements of a safety and management system
- Understand the legal responsibility to provide a safety and health management system
- Be able to develop and implement a safety and health management system

I. Anatomy of an Accident

- A. Unplanned
- B. Usually Results in the Disruption of the Task
- C. Loss of Economics
- D. May or May Not Result in Injury or Death (Near Miss)
- E. Unsafe Act
- F. Unsafe Condition
- G. Almost All Accidents are a Result of a Combination of an Unsafe Act and/or Unsafe Condition

II. Accident/Incident Investigation- All Incidents, Whether a Near Miss or an Actual Injury- Related Event, Should be Investigated by Trained Personnel. Near Miss Reporting and Investigation Allow you to Identify and control Hazards Before they Cause a More Serious Incident. Accident/Incident Investigations are a Tool for Uncovering Hazards that Either were Missed Earlier or have Managed to Slip Out

of the Controls Planned for them.

- A. Definitions:
 - 1. Accident: An Undesired Event that Results in Personal Injury or Property Damage
 - 2. Incident: An Incident is an Unplanned, Undesired Event that Adversely Affects Completion of a Task
 - 3. Near Miss: Near Miss Describe Incidents Where No Property was Damaged and No Personal Injury Sustained, but Where, Given a Slight Shift in Time or Position, Damage and/or Injury Easily Could have Occurred
- B. The Investigation Should Answer Six Key Questions
 - 1. Who
 - 2. What
 - 3. Where
 - 4. When
 - 5. Why
 - 6. How
- C. Implications of Accident Investigations
 - 1. Primary Purpose of an Accident Investigation to Determine Causes and to Establish Procedures to Prevent Reoccurrences

III. Definitions

- A. Construction Work
- B. Employer

- C. Qualified
- D. Competent Person
- E. Authorized Person

IV. Subpart C

- A. Horizontal Requirements for Construction
- B. Safety Training and Education
- C. Employer Responsibility
- D. Recordkeeping and Reporting of Injuries
- E. Fire Protection and Prevention
- F. Housekeeping
- G. Illumination
- H. Sanitation
- I. Personal Protective Equipment
- J. Acceptable Safety and Health Standards
- K. Incorporation by Reference

V. Multi-employer Policy- On Multi-employer Worksites Both Construction and Non-Construction, Citations Normally Shall be Issued to Employer Whose Employees are Exposed to Hazards (the Exposing Employer). Additionally, the Following Employers Normally Shall be Cited, Whether or not Their Own Employees are Exposed.

- A. The Employer Who Actually Creates the Hazard (the Creating Employer)
- B. The Employer Who is Responsible, by Contract or Through Actual Practice, for Safety and Health Conditions on the Worksite; i.e.,

the Employer Who has the Authority for Ensuring that the Hazardous Condition is Correct (the Controlling Employer)

- C. The Employer Who has the Responsibility for Actually Correcting the Hazard (the Correcting Employer)
- D. The Exposing Employer- Prior to Issuing Citations, It Must First be Determined Whether the Available Facts Indicate that the Exposing Employer has a Legitimate Defense to the Citation:
 - 1. The Employer Did Not Create the Hazard
 - 2. The Employer Did Not have the Responsibility or the Authority to have the Hazard Corrected
 - 3. The Employer Did Not have the Ability to Correct or Remove the Hazard
 - 4. The Employer Can Demonstrate that the Creating, the Controlling and/or the Correcting Employers, as Appropriate, have Been Specifically Notified of the Hazard to Which His/Her Employees are Exposed
 - 5. The Employer has Instructed His/Her Employees to Recognize the Hazard
 - a. Where Feasible, an Exposing Employer Must have Taken Appropriate Alternative Means of Protecting Employees from the Hazard
 - b. When Extreme Circumstances Justify It, the Exposing Employer Shall have Removed His/Her

Employees from the Job to Avoid Citation

6. If an Exposing Employer Meets All these Defenses, that Employer Shall Not Be Cited

VI. STD 3.1-1 (May 1996: Appendix A)

SUBJECT: Citation Policy Regarding 29 CFR 1926.20, 29 CFR 1926.21 and Related General Safety and Health Provisions

PURPOSE: This Instruction Clarifies the Citation Policy for 29 CFR 1926.20, General Safety and Health Provisions, 29 CFR 1926.21, Safety Training and Education, 29 CFR 1926.23, and Medical Attention, and 29 CFR 1904.2, Record Keeping Requirements

- A. Management Commitment and Leadership
 1. Policy Statement: Goals Established, Issued, and Communicated to Employees
 2. Program Revised Annually
 3. Participation in Safety Meetings, Inspections; Agenda Items in Meetings
 4. Commitment of Resources is Adequate
 5. Safety Rules and Procedures Incorporated into Site Operations
 6. Management Observes Safety Rules
- B. Assignment of Responsibility
 1. Safety Designee on Site, Knowledgeable, and Accountable
 2. Supervisors (Including Foremen) Safety and Health Responsible

Understood

3. Employees Adhere to Safety Rules

C. Identification and Control of Hazards

1. Periodic Site Safety Inspection Program Involves Supervisors

2. Preventative Controls in Place (PPE, Maintenance, Engineering Controls)

3. Action Taken to Address Hazards

4. Safety Committee, Where Appropriate

5. Technical References Available

6. Enforcement Procedures by Management

D. Training and Education

1. Supervisors Receive Basic Training

2. Specialized Training Taken When Needed

3. Employee Training Program Exists, is Ongoing, and is Effective

E. Record Keeping and Hazard Analysis

1. Records Maintained of Employee Illnesses/Injuries, and Posted

2. Supervisors Perform Accident Investigations, Determine Causes and Propose Corrective Action

3. Injuries, Near Misses, and Illnesses are Evaluated for Trends, Similar Causes; Corrective Action Initiated

F. First Aid and Medical Assistance

1. First Aid Supplies and Medical Service Available

2. Employees Informed of Medical Results

3. Emergency Procedures and Training, Where Necessary

VII. Elements of a Safety and Health Program

- A. Management Commitment and Employee Involvement
 1. State Clearly a Worksite Safety and Health Policy
 2. Establish and Communicate Clear Goals and Objectives
 3. Provide Visible Top Management Involvement in Implementing the Program
 4. Encourage Employee Involvement in the Program and in Decision Affecting Their Safety and Health
 5. Assign and Communicate Responsibility for all Aspects of the Program
 6. Provide Adequate Authority and Resources to Responsible Parties
 7. Hold All Employees Accountable for Meeting Their Responsibilities
 8. Review and Evaluate Program Operations Periodically and At least Annually
- B. Worksite Analysis
 1. Hazard Identification
 - a. Conduct Baseline and Periodic Safety and Health Inspections
 - b. Analyze planned and new Facilities, Processes, Materials and Equipment
 - c. Perform Routine Job Hazard Analyses

2. Provide for Regular Site Safety and Health Inspections
3. Provide a Reliable System for Employees, Without Fear of Reprisal, to Notify Management about Apparent Hazardous Conditions and to Receive Timely and Appropriate Responses
4. Provide for Investigation of Accidents and “Near Miss” Incidents, so that Causes and Means for Preventing Repetitions are Identified
 - a. Thorough Analysis Required
5. Analyze Injury and Illness Records
 - a. Patterns May Be Revealed

C. Hazard Prevention and Control

1. Establish Procedures for Timely Correction or Control of Hazards
2. Provide for Facility and Equipment Maintenance
 - a. Plan, Schedule and Track Preventive Maintenance
3. Plan and Prepare for Emergencies, and Conduct Training and Drills as Needed
 - a. Depends on Severity and complexity of Emergencies
Which may Arise
4. Establish a Medical Program Which Includes Availability of First Aid on Site and Physician and Emergency Care Nearby
 - a. Nature of Services Needed Depends on Seriousness of Injuries/Health Hazard Exposures Which May Occur

D. Safety and Health Training

1. Ensure that All Employees Understand the Hazards to Which they

May be Exposed

2. Ensure that Supervisors Carry Out Their Safety and Health Responsibilities
3. Ensure that Managers Understand Their Safety and Health Responsibilities

VIII. Checklist

Process Implementation Strategy:

- A. Obtain Top Management "Buy-in" - This is the very first step that needs to be accomplished. Top managers must be on board. If they are not, safety and health will compete against core business issues such as production and profitability, a battle that will almost always be lost. Management needs to understand the need for change and be willing to support it. Showing the costs to the organization in terms of dollars (direct and indirect costs of accidents) that are being lost, and the organizational costs (fear, lack of trust, feeling of being used, etc) can be compelling reasons for doing something different. Because losses due to accidents are bottom line costs to the organization, controlling these will more than pay for the needed changes. In addition, as you are successful you will eliminate organizational barriers such as fear and lack of trust – issues that typically get in the way of all of the organization's goals.

A safety and health change process can very effectively drive change and bring an organization together due to the ability to get buy-in from all levels. This stems

from the fact that most people place a high personal value on their own safety. They view the change efforts as things that are truly being done for them.

- B. Continue Building "Buy-in" for the needed changes by building an alliance or partnership between management, your union (if one exists), and employees. A compelling reason for the change must be spelled out to everyone. People have to understand WHY they are being asked to change what they normally do and what it will look like when they are successful. This needs to be done upfront. If people get wind that something "is going down" and haven't been formally told anything, they will tend to naturally resist and opt out.

Identify key personnel to champion the change. These people must be visible and are the ones to articulate the reasons for the changes. The reasons need to be compelling and motivational. People frequently respond when they realize how many of their co-workers or subordinates are being injured and that they may be next. Management and supervisors also respond when they see the money being lost due to accidents and they realize that their actions toward safety truly influence and define the employee safety culture.

- C. Build Trust - Trusting is a critical part of accepting change and management needs to know that this is the bigger picture, outside of all the details. Trust will occur as different levels within the organization work together and begin to see success.

- D. Conduct Self Assessments/Bench Marking - In order to get where you want to go, it is essential to know where you are starting from. You can use a variety of self-audit mechanisms to compare your site processes with other recognized models of excellence such as Star VPP sites. Visiting other sites to gain first hand information is also invaluable. You can use perception surveys to measure the strengths and weaknesses of your site safety culture. These surveys can give you data from various viewpoints within the organization. For instance, you can measure differences in employees' and managers' perceptions on various issues. This is an excellent way to determine whether alignment issues exist and, if so, what they are. At this stage, it is important to look at issues that surface as symptoms of larger system failures. For example, ask what major system failed to detect the unguarded machine, or why the system failed to notice that incident investigations are not being performed on time, or if workers are being blamed for the failures. Your greatest level of success will come when these larger system failures are recognized and addressed.
- E. Initial Training of management-supervisory staff, union leadership (if present), and safety and health committee members, and a representative number of hourly employees. This may include both safety and health training and any needed management, team building, hazard recognition, or communication training. This provides you with a core group of people to draw upon as resources and also gets key personnel on board with needed changes.

- F. Establish a Steering Committee made up of management, employees, union (if present), and safety staff. This group's purpose is to facilitate, support, and direct the change processes. This will provide overall guidance and direction and avoid duplication of efforts. To be effective, the group must have the authority to get things done.

- G. Develop Site Safety Vision, key policies, goals, measures, and strategic and operational plans. These policies provide guidance and serve as a check-in that can be used to ask yourself if the decision you're about to make supports or detracts from your intended safety and health improvement process.

- H. Align the Organization by establishing a shared vision of safety and health goals and objectives versus production. Upper management must be willing to support by providing resources (time) and holding managers and supervisors accountable for doing the same. The entire management and supervisory staff need to set the example and lead the change. It's more about leadership than management.

- I. Define Specific Roles and responsibilities for safety and health at all levels of the organization. Safety and health must be viewed as everyone's responsibility. Clearly spell out how the organization deals with competing pressures and priorities, i.e., production versus safety and health.

- J. Develop a System of Accountability for all levels of the organization. Everyone must play by the same rules and be held accountable for their areas of responsibility. The sign of a strong culture is when the individuals hold themselves accountable.

- K. Develop Measures and an ongoing measurement and feedback system. Drive the system with upstream activity measures that encourage positive change. Examples include: the number of hazards reported or corrected, numbers of inspections, number of equipment checks, Job Safety Analysis (JSA), prestart-up reviews conducted, etc. While it is always nice to know what the bottom line performance is, i.e., accident rates, overemphasis on rates and using them to drive the system typically only drives accident reporting under the table. It is all too easy to manipulate accident rates, which will only result in risk issues remaining unresolved and a probability for future, more serious events to occur.

- L. Develop Policies for Recognition, rewards, incentives, and ceremonies. Reward employees for doing the right things and encourage participation in the upstream activities. Continually re-evaluate these policies to ensure their effectiveness and to ensure that they do not become entitlement programs.

- M. Awareness Training and Kick-off for all employees. It's not enough for a part of the organization to be involved and know about the change effort. The entire site needs to know and be involved in some manner. A kick-off celebration can be

used to announce "It's a new day," and seek buy-in for any new procedures and programs.

- N. Implement Process Changes via involvement of management, union (if one is present) and employees using a "Plan To Act" process such as Total Quality Management (TQM).

- O. Continually Measure Performance, Communicate Results and Celebrate Successes. Publicizing results is very important to sustaining efforts and keeping everyone motivated. Everyone needs to be updated throughout the process. Progress reports during normal shift meetings (allowing time for comments back to the steering committee) opens communications, but also allows for input. Everyone needs to have a voice; otherwise, they will be reluctant to buy-in. A system can be as simple as using current meetings, a bulletin board, or a comment box.

- P. On-going Support - Reinforcement, feedback, reassessment, mid-course corrections, and on-going training is vital to sustaining continuous improvement.

IX. Assessment Worksheets

- A. Management Leadership and Employee Involvement
 - 1. Clear Worksite Safety and Health Policy
 - 2. Clear Goals and Objectives are Set and Committed

3. Management Leadership/ Example
4. Employee Involvement
5. Assigned Safety and Health Responsibilities
6. Authority and Resources for Safety and Health
7. Accountability
8. Program Review (Quality Assurance)

B. Worksite Analysis

1. Hazard Identification
 - a. Expert Survey
 - b. Change Analysis
 - c. Job Process Analysis
 - d. Inspection- Joint Routine
2. Hazard Reporting System
3. Accident/Incident Investigation
4. Injury/Illness Analysis

C. Hazard Prevention and Control

1. Timely and Effective Hazard Control
 - a. Engineering Controls, Work Practices, Personal Protective Equipment and Administrative Controls
2. Facility and Equipment Maintenance
3. Emergency Planning, Preparation and Equipment
4. Medical Program, Health Providers, Emergency Care

D. Safety and Health Training

1. Employees Taught Hazard Recognition
2. Supervisors Taught Responsibility and Underlying Reasons
3. Managers Taught Safety and Health Program Management

X. Workshops

- A. Students Working in Groups Developing the Four Elements of a Safety and Health Program
- B. Students Working in Groups Developing a Specific Safety and Health Program for their Company

XI. Additional References

- A. Draft OSHA Standard for Safety and Health Programs
- B. OSHA Multi-Employer Worksite Policy
- C. Safety and Health Program Evaluation
- D. 1989 OSHA Safety and Health Program Guidelines
- E. 29 CFR 1926 (Subpart C) Safety and Health Provisions for Construction
- F. STD 3-1.1 Evaluating Safety Programs
- G. Sample Safety and Health Program for Small Business