

A STUDY ON THE IMPORTANCE OF HEALTH AND SAFETY ENVIRONMENT IN A FOOD INDUSTRY

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Abstract: Generally speaking, everyone thinks that food safety means, the safety precaution and measure to be carried out in the Food processing, but also it means cultivating safety culture in the work place in all the departments in coordination with the safety department in an industry to avoid accident. This paper deals with the view how the safety training is provided to the employees in various departments in an industry- Food Industry. The expert says that at least 80% of industrial accidents are caused by unsafe act on the part of employees and not by unsafe condition. Considered few departments like Human Resource Department, Research and Development Department, Production Department and Safety Department – orientation⁽¹⁾, education training and supervision of the health and safety rules in each of these departments are discussed. Eight components of health and safety program⁽²⁾ are listed. Overview of different methodology of educating safety rules to the employee in various departments. Outline of the awareness program for workers on the issue of safety, health and work environment and safety precaution to be carried out in an industry by the management on the subject of safety, health (Safety welfare, personal, medical) and personal development.

Key words: safety rules, orientation training, education, safety precaution.

Introduction:

A commitment to health and safety is one of the best ways for a food processing operation to protect its greater resource- its people. Such a commitment can create better work environment, help to retain good workers, increase worker participation in decision making

and improve productivity. A well managed workplace safety program can benefit the company in countless ways. For any Food Industries in order to achieve their goals, safety programs are developed with outlining their policies and procedures regarding employee health and safety. Each and every individual

must become familiar with the program and enforce the procedures, and become an active participant in this workplace safety program.

Work place accidents can have a tremendous impact on injured workers, their co-workers and their families, in term of pain and suffering disability, stress and loss or change of employment. For small food industry accident can also cause financial devastating. Direct cost⁽¹⁾ may include claim cost, increased insurance premium and some of indirect costs are damage to property, the cost of finding and training temporary employees and production interruption leading to loss.

In a Food industry many different specialists ⁽³⁾, such as engineers (electrical, mechanical and civil), trainers, work planners and supervisors, may be required to assist the professional health and safety practitioner (Safety Engineer) to ensure that there are satisfactory health and safety standards within the organization

2. What is Workplace Safety?

The process of protecting employees from work related illness and injury. It starts by the development of a company Environmental, Safety and Health Policy statement and

implementation of a work place safety plan and program.

Ac-ci-dent (ak-si-duhnt) noun - An unexpected, unplanned, uncontrollable and undesirable event.

3. Basic Principles of Good Safety Management:

- Management Commitment
- Documented Safety Philosophy
- Safety Goals and Objectives
- Committee Organization for Safety
- Line Responsibility for Safety
- Supportive Safety Staff
- Rules and Procedures
- Audits and Safety Communications
- Safety Training
- Accident Investigations
- Motivation.

4. Departments in an Industry: Every organization is made up of different department and each contributes to the running of the business.

The most common among them few are:-

- Human Resource Management
- Food Processing Department
- Research and Development Department

- Safety Department.

4.1 Human resource Management: The role of Human Resource Department is in charge of recruiting, training and dismissal of employees in an organization. While recruitment and training, all new employees are assigned to attend the organization Safety Orientation Session ⁽²⁾ prior to starting works within their assigned area. This session will be conducted under the direction of the Safety Director (officers) and in coordination with Human Resources. Upon completion of the Safety Orientation Session, each new employee will be required to acknowledge that they have received, understand and will abide by the organization safety Program.

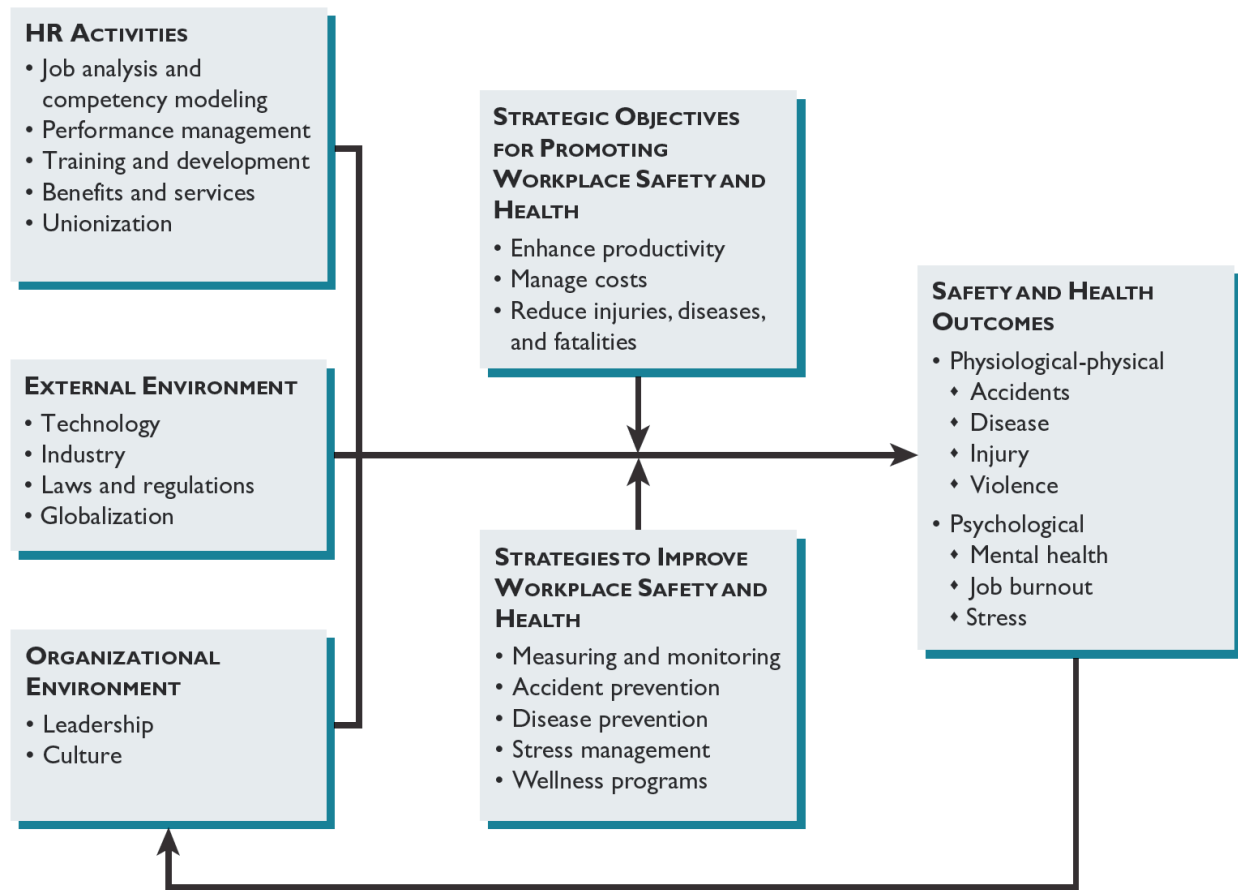
4.1 Safety Orientation Session ⁽³⁾ should include Company History, Safety Program/Policy & Work rules Responsibilities, Safety Education/Training. In addition to this the worker should be educated about the potential workplace hazards such as hazardous materials, worker responsibilities and restrictions, how to report potential hazards and unsafe work conditions, how to get first aid and to report injuries and other incidents, location of

emergency exits, fire extinguishers, first aid kits as well as procedure for rescue and evacuation.

4.2 Processing Department (1) is responsible for processing raw material in to food product effectively. Since the development of the organization is fully depends on this department, must make sure that work has to be carried out **smoothly without any disturbance**. Employees' health and safety are affected not only by their own actions but by those of their co-workers. Training of all workers need supervised, hand – on training in how to safely perform their tasks before they start a job.

Three steps to be followed by the Supervisor while training a new employee:

- Prepare the worker: Detail explanation of the job, including the safety precaution or required personal protective equipment, encourage the worker to ask question and take the time to answer them fully.



- Safety precaution or required personal protective equipment, encourage the worker to ask question and take the time to answer them fully.
- Train the worker: Demonstrate and describe specific procedures, including all safety precaution, keeping record of training, which was trained, when they trained and what they trained was included.
- Check progress and observe the worker on the job: Monitor the worker

performance and safety handling of the equipment for the task assigned to them. Set good examples in areas such as following safe work procedures and using personal protective equipment. The new curriculum was designed to train employees about workplace safety and health. It was based on training needs identified by trade association members and consisted of 10 modules on a variety of safety subjects ranging from driver safety to handling hazardous materials. It

incorporated four different media: manuals laminated prompt cards, videotapes, and posters. Videotapes were developed for the four most-requested content areas: cuts, burns, slips and falls, and lifting injuries. NIOSH ⁽⁴⁾ safety experts reviewed the curriculum for technical accuracy and completeness prior to the start of the study. It should be emphasized that although the new modules contained innovative design features, in the form of graphics and memory aids, the recommended safety procedures were standard for the Food industry.

Some of the most common hazards faced by Food processor workers are:-

- Pushing and lifting heavy bins, tubs, barrels, pumps, hoses, and using mixers and Knives
- Working with Hazardous Chemicals
- Entering confined spaces.

4.2.1 Hazards identification and Risk control ⁽⁵⁾ involves eliminating the hazards entirely or if it not possible minimizing the risk as much as possible.

Some of the ways to minimize risks are:

- When purchasing or replacing equipment, select an appropriate safety features.
- Modify work process or equipment.
- Develop and implement safe work procedure for hazardous task and should use appropriate personal protective equipment and to follow the safety work procedure.

An example for a work place hazard and the prevention steps:

Sharp tools and broken glass- In food processing industries workers should use sharp instruments that can cause injuries range from minor cuts to loss of finger.

Prevention: Reduce the risk of injuries by following the guidelines; Wear cut-resistance gloves when using sharp instruments and always cut a distance away from the body. Use the right tool for the job, make sure it is sharp and carry in a sheath or holster.

4.2.1.1 Confined Spaces: Hazards -A confined space ⁽⁴⁾ a partially enclosed space that is not intended for human occupancy and that has a restricted entrance or exit. Three of the more common hazards of working in a confined space are –

- Poor air quality from air contaminants, toxic gases, or colorless, odorless gases

- Chemical exposure through skin contact or inhalation of “bad” air
- Fire or explosion hazards if flammable gases or vapors are present.

Prevention: Reduce the risks of injury and death by implementing a Confined Space Entry Program. The guidelines to be follow

- Assign responsibility for administration of the program to a person or persons who are trained to manage it.
- Identify and assess hazards of each confined space,
- Ensure that all workers entering a confined space are properly trained.
- Post signs at the entry points to all confined spaces.



In addition, employers should ensure that there are safe work procedures for entry into and work in confined spaces.

Some of the procedures should follow are:

- Locking out energy sources and isolating adjacent piping

- Verifying precautions and testing the atmosphere prior to entry
- Cleaning, purging, venting and Ventilating the atmosphere
- Using standby persons to check on the well-being of workers.

4.2.1.2 Cold exposure: Hazard-Workers in food processing environments where cryogenic or highly refrigerated processes are conducted are at an increased risk of tissue damage

Prevention-Reduce the risk of overexposure by following the guidelines:

- Minimize exposure to cold environments.
- Wear clothing that has insulating characteristics (for example, cotton, wool, silk, nylon, down, or polyester insulation).
- Wear clothing in loose layers to help sweat evaporated, to help the fabrics breathe and dry.

4.2.1.3 Chemical exposure: Hazard -Many chemicals used in food processing (for example, cleaning solvents and fuel) may cause conditions ranging from minor skin irritation to serious injury and disease. Workplaces that use hazardous materials are required to use the Workplace Hazardous Materials Information System (WHMIS) (4) system. The system uses labels and material safety data sheets (MSDSs) that provide specific information on handling,

storing, and disposing of hazardous materials. Workers must be trained in the WHMIS program and informed of any hazardous materials they are expected to work with.



Prevention: Reduce the risk of exposure by following these guidelines:

- Read labels and MSDSs for chemical products,
- Update the MSDS for each chemical every three years
- Ensure that all containers have proper labeling that identifies the contents.
- Store chemicals in a properly ventilated, locked area, and post warning signs.
- Use personal protective equipment (for example, clothing, rubber gloves, goggles or face shields) as recommended and before removing gloves, washes both hands and gloves. Work in an adequately ventilated area with approved fire protection.

4.2.1.4 Noise exposure: Hazard-Noise in areas such as production or packaging areas may reach harmful levels that can cause hearing loss. Noise-induced hearing loss is the most prevalent occupational disease. Approximately a quarter of a million B.C. workers are exposed to workplace noise sufficient to cause occupational hearing loss. Hearing loss can be gradual, and may happen over a number of years.

Prevention- Determine whether noise levels (4) are likely to result in noise overexposure. Provide workers with education and training related to hearing protection and to Control noise. Provide hearing protection for workers exposed to hazardous noise levels. Post notices of noise hazard areas. Provide annual hearing tests as required by the regulation. Personal protective equipment-Hearing protection devices such as earmuffs are an easy, effective way to protect against exposure to hazardous noise levels.

4.3 Research and Development: Employees work on research and development, use chemicals for sterilizing, sanitizing and testing of a food samples. For preventing contamination (2) in the laboratory, safety training must be given to the employees before they actually begin working. Online training will help the employees to better understand handling and use of

chemicals. Handling equipment is very important for employees and must know how to properly use the equipment. Through online training with product simulations, employees can experience the use of even delicate equipment. Safe handling of laboratory glassware when employees need to use thin glassware for the chemical mixtures can be made into small training modules for easy access when needed. Personal health safety training is required for the employees Food industry. When employees are on the job, they should take care of machinery to avoid possible damage to themselves, equipment and property. Safe practices in handling equipment to avoid accidents and ensuring personal health and safety are important aspects of the job and cannot be undermined.

4.4 Safety Department: Since the Food Industry must have special health and safety procedures in addition to the normal procedures for any other workplace, the safety department has to provide awareness and importance of safety to the entire employee from top to floor.

The main objectives of a Safety officer:-

- Communicating with other departments for ensuring the health and safety in the work place

- Safety inspections and incident investigation
- Regular health and safety meetings
- Inspection of personal protective equipment
- Emergency response plans.

Safety officer has to inspect workplace at least once a month to prevent unsafe working conditions. Inspection is an ongoing task because the work place is always changing. During inspection a check list is prepared to ensure that the inspection is thorough and consistent with previous inspections.

In a food Industry there are different ways of safety inspection⁽²⁾, depending on the objectives of health and safety program. Some of the activities are rarely performed, on-routine and unusual work, which present an increased risk because workers may not be familiar with procedures. Non-production activities such as housekeeping, maintenance and equipment set up and sources of high energy such as electricity, steam, compressed gas, flammable liquids and explosive substances. In food industry most common situation that may involve slipping, tripping or falling hazards or overhead hazards such as falling objects and work involving contact with toxic substances. After inspection, remedies and suggestions to be forwarded to the

respective departments regarding the unsafe work practice immediately.

5. Why do we have safety meetings? - Safety meetings⁽⁵⁾ are an opportunity for management and the safety department to communicate to employees how they can do their jobs safer and better.

Safety meetings are a perfect opportunity for the employee to communicate any safety ideas if they have. If there is any updates regarding the safety precaution that must to discuss in various level for example that an employee may learn something new, about the newest protective equipment, or a smarter way to do your job. Information passed on in a safety meeting has a purpose.....**To stop you or your co-worker from being injured.**

The safety officer should keep a record of each meeting including what was discussed and who attended and post minutes of meeting for everyone to read. He has to present latest inspection report, any incident reports completed during the past month, any new safe work procedures and **minutes for last month's** meeting.

6. First Aid requirements for food Processing Industry: Most food processing industry are considered moderate-risk work place. Effective first aid treatment can reduce the severity of

work – related injuries which help minimize the financial costs associated with extensive medical treatment or the need to replace employees who are unable to work. All the industry must keep a first aid kit on-site and many will also need a first aid attendant.

The type of kit and the need for the first aid attendant depends on three factors:

- The hazard rating for your industry
- The number of workers
- The travel time to the nearest hospital.

7. Emergency Action Plan: The Emergency Action Plan (EAP) is in place to ensure employee safety from fire and other emergency. At the time of an emergency, all employees should know what type of evacuation is necessary and what their role is in carrying out the plan. In some emergencies total and immediate evacuation will be necessary.

8. Key Safety Principles:

- Working safely is a condition of employment.
- Each employee is expected to give consideration to the prevention of injury to self and co-workers.
- Involvement and thinking of all people in the safety process is valued and expected.

- Continual Improvement is the goal.
- Individuals and teams must be recognized for their adherence to and advancement of safety.

9. Responsibilities: Each one has their own role to cultivate safety culture in an Industry.

9.1 Employer: Employer should correct any work place condition and inform the workers about any remaining hazards. Ensure that the workers comply with the requirements of the Regulation and the Act of OSHA ⁽³⁾ and they should know their rights and responsibilities under the regulation and comply with. Provide and maintain protective devices, equipment and clothing and ensure that workers use them. Consult and cooperated with your joint health and safety committee and cooperate with worksafeBC and its officer.

9.2 Employee: Each employee is responsible to follow established policies and procedures. Regular attendance is mandatory for all employees in an organization. Responsibility does not end with just taking care of themselves but also reporting unsafe working conditions to the management. It is the responsibility of each employee to work in a professional and safe manner. Workers need to be involved in the

creation and use of the workplace safety program for it to succeed.

10. Benefits of a Zero Incident Safety Policy:

- Safety standards are communicated to all employees.
- Responsibilities for implementing standards are understood and accepted.
- Records will document how standards and Best Management Practices are met.
- Internal management control.
- Cost Avoidance.
- Improved Quality and Better Productivity.
- Team Building and unsafe behavior stands out
- Unsafe behavior is Unacceptable and Safe Work is influenced through peer pressure
- Consistent planning and task execution

11. Conclusion: Good communication among employers, supervisors and workers on health and safety issues is vital for the success of a workplace safety culture. Each department in the Industry promotes the goal of ZERO INCIDENT PERFORMANCE through planning. Safety Goals must be Communicated- be Realistic and need to reflect the Safety Culture of the organization. Safety Culture requires strong commitment from the top to the bottom of the concern and Safety

must truly be the no.1 priority. It must become an integral part of the business and Safety must become EVERYONE's responsibility.

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