Risk assessment ensures that accidents do not result in painful injuries. Disasters worldwide have shown that a professional safety management system can lead to improved loss control. Therefore, employers must commit to preventing accidents to minimize injury to employees and damage to physical assets. Responsibility for loss prevention begins with the highest level of management and continues down through every level of supervision and eventually to each and every employee. Identifying and rectifying all associated potential hazards could minimize risks to personnel and property. Certain remedies can help prevent accidents from occurring. Regular feedback, employee involvement, recognition and appreciation change employee behavior. A proactive approach produces an environment with a higher awareness of safety and reducing injuries.

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INTRODUCTION

Lessons learned repeatedly suggest the necessity for a strong safety commitment from senior management. We must reconsider our traditional way of thinking and believing. We may need to make some sacrifice for the safety of our people and facility. Our upbringing and beliefs must not come in the way of running our business. This could result in an unsafe situation and could lead to accidents. Managers must set good leadership examples by giving safety prime importance. Success could be achieved through a sound safety culture that is employee-owned, management-driven and operationally consistent, which maximizes creativity and innovation. Adopt the cultural belief that all incidents are preventable. An employer that institutes a cultural change toward the zero-incident concept is bound to see safety improvement of which the entire workforce can be proud.

SAFETY MANAGEMENT PROGRAM

Disasters worldwide have shown that a professional safety management system can lead to improved loss control.

CORPORATE POLICY

The company must commit to preventing accidents to minimize bodily injury to its employees and damage to its physical assets. The company takes every reasonable measure to provide and maintain a safe and healthy work environment for its employees and to protect the public against foreseeable hazards resulting from operations. Policy declaration is the first and most important program element. The highest authority and corporation management must consider no phase of operation as being of greater importance than that of accident prevention.

RESPONSIBILITIES

It is corporate management’s responsibility to ensure that operating and business plans reflect and are in line with company loss prevention policy. Executive management directs managers and superintendents to develop and administer an effective loss prevention program. All employees learn and follow safe work practices for their willing participation in the program. They report all accidents and near misses, which have lesson-learning potential. The responsibility for loss prevention begins with the highest level of management and continues down through every level of supervision and eventually to each and every employee.

RISK ASSESSMENT PROGRAM

Identifying and rectifying all associated potential hazards could minimize risks to personnel and property. This important program element is the mother of all other programs. A safety task action report identifies unsafe acts. A job safety analysis identifies hazards when employees are exposed to them. Both of these instructions recommend actions to reduce injuries and property damage.

LOSS SOURCES & FIVE-STEP RISK ASSESSMENT

People are the first source of losses. These could be managers, engineers or workers. Second is equipment, whether fixed plant, machines, tools or vehicles. Third are process materials, supplies and products that have physical and chemical hazards. Fourth are surroundings, including buildings, surfaces, lighting, noise, radiation, weather and social or economic conditions, which can affect safe performance of people, equipment and materials. Those who initiate five-step risk assessment to identify hazards evaluate the risk of each exposure, plan how to handle each risk and manage according to plan.

UNSAFE ACTS & CONDITIONS

Unsafe acts and conditions cause incidents. These could be due to operating equipment without authority, failure to warn, failure to secure, operating at an improper speed or removing a safety device, which happened in the Bhopal gas tragedy in India. Common unsafe conditions include inadequate guards, inadequate or improper PPE, defective tools, equipment or materials, restricted movement, inadequate warning system, fire hazards, poor housekeeping, hazardous gases, vapors, dusts, fumes or an oxygen-deficient environment, noise, vibration, radiation, extreme temperatures or inadequate ventilation.

ACCIDENT CAUSES

Root causes of accidents in the process industry are design failure, operational error, equipment failure and maintenance and inspection deficiencies, as was found in the case of a gasoline line failure that resulted in severe business disruption for more than 5 weeks in Arizona, inadequate supervision and training, and natural phenomena and external influences, such as those caused by Hurricane Katrina.
WHAT IS A NEAR MISS?
A near miss is an event that “could have been an accident.” One or more “unsafe conditions” or “unsafe acts” can turn it into an “accident.” An “accident” results in harm, whereas a “near miss” does not.

MANY NEAR MISSES ARE NOT REPORTED
Although we are aware that so many unsafe acts and unsafe conditions lead to minor to major injury and/or property damage, industry experience suggests that the number of accidents reported is much higher than the number of near misses reported.

WHY BE CONCERNED?
This is of major concern because not investigating a near miss is a lost opportunity to prevent an accident. Unsafe situations cause more near misses, and uncorrected unsafe situations cause accidents.

PROMOTE NEAR-MISS REPORTING
People do not report or investigate near misses because employees have a negative mindset. They think that since nothing has happened, why should they bother reporting? They think it is not worth reporting because it is too much of a hassle and the boss might not like it. This negative mindset needs to change to promote reporting of near misses. This could be achieved by ensuring that observation cards do not identify individuals and do not incur penalties. Furthermore, the report should not adversely affect their safety record. This demonstrates employee and management commitment to safety.

NEAR-MISS INVESTIGATION BENEFITS
Near-miss reporting and investigating heightens the awareness of the individual. The major benefit of this is that it uncovers underlying unsafe conditions and acts and allows facilities to eliminate unsafe situations.

REPORTING NEAR MISSES
Have an observation checklist, which provides guidelines for the investigation of near misses as part of the program. However, is use of this checklist really active? Is it implemented with honesty? If not, it could give a false sense of security.

NEAR-MISS REPORTING TIPS
To increase the integrity of the company observation card and the strength of near-miss reporting, it is recommended that the company issue a “no blame” policy statement that would help gain employee confidence and would support the program fairly. Also, initiate an employee awareness campaign to encourage and increase active participation. Reward those who report near misses to motivate them. Share experiences by displaying the findings on a “near-miss” bulletin board and the departmental website. Continued training for near-miss understanding, reporting and investigation should be an ongoing process.

WHY ACCIDENT INVESTIGATION?
Accidents occur where humans are involved. To prevent their recurrence, we need to evaluate potential risks and to take remedial actions before it is too late by communicating and implementing improved work methods.

ACCIDENT CAUSES
Investigation should consider determining employee lack of knowledge or skill, mental or physical defects, attitude and extent of motivation. Additionally, the investigating team would include inadequate engineering, inadequate specifications, inadequate maintenance and inspection, inadequate tools, unsafe conditions, unsafe acts and any poor work standards.

BASIC REMEDIES
Certain remedies can help prevent an accident from occurring. Train and motivate employees, conduct special engineering revisions and a job safety analysis, identify personal and job factors, identify deviations and take corrective actions as needed.

RECOGNITION PROGRAM
The recognition program includes group recognition, individual recognition, safety awareness, safety bulletin boards, special loss prevention displays, bulletins, publications, use of program statistics and facts in safety education and awareness activities, critical safety campaigns and employee safety suggestion programs.

WHAT CHANGED EMPLOYEE BEHAVIOR?
Harvard professors conducted a study to survey the effects of different lighting levels on worker productivity. A group of plant employees who knew they were part of the study was placed in a special room to perform their normal jobs. Output was measured each day as lights were dimmed and brightened. As the lighting was changed, productivity went up, ultimately increasing by nearly 30%. This concluded that no correlation existed between productivity levels and a particular light setting. However, the sense of recognition and achievement workers experienced by being part of the study translated into better job performance. This Hawthorne Effect explains why new initiatives that solicit input from employees often improve performance. Regular feedback, employee involvement, recognition and appreciation can help employees do what you want them to do.

WHAT MOTIVATES EMPLOYEES?
Research suggests that the top satisfier for workers is a sense of accomplishment. Second is recognition for doing a good job. These are the most powerful motivators for people, and that is why we should recognize and celebrate trailing indicators. If you do not, you are missing a major opportunity to motivate people to permanently change their behavior.

What about dissatisfiers? You have probably heard many times, “I do twice the amount of work he does, but...
he makes more money than I do. However, when I screw up one time, I get nailed. When I make a mistake, it is recognized 100% of the time, but when I excel, nothing is mentioned 99% of the time.” Abuse and favoritism can also be a deadly problem.

SMARTCARDS

Many industries use Smartcards to motivate employees and supervisors. Every month, managers give a customized Smartcard to employees. Employees and managers who participate have the chance to win prizes during monthly or weekly training meetings. Each supervisor reads the poster of the month, discusses it with employees and then hands them a Smartcard with two true/false questions. The Smartcard will match the poster displayed that month and will pinpoint the correct behaviors employees are to show. All employees answer the true/false questions, and the supervisors encourage them to call a customized telephone number with their answers. Every call is tracked to reward supervisors with trips and prizes based on their employees showing good participation rates in the program. Can you see how middle managers are involved?

HOW TO ACHIEVE BEHAVIORAL CHANGE

How do we change employee behavior? We do it much the way that any mother does. At age 3, most of us hated green beans and refused all efforts to get us to eat them. Finally, one day, mom got smart and put a bowl of ice cream on the table: “If you eat your green beans, you can have some ice cream.” It worked!

So what did mom do? She first communicated the behavior she wanted (eat green beans) and then positively reinforced you immediately for the behavioral change. You got ice cream on the spot, not a million kid hours later. One hundred years of research in the field of behavioral analysis says that we use a two-step process to change behavior. First, we teach and train employees what we need them to do, and second, we positively reinforce them the instant they demonstrate the behavior we want.

REDUCE INJURIES WITHOUT HIDING

Many companies on the market today offer behavioral change solutions. Broadly, these are split into two camps. The first is a consultancy-led approach. This often has sound theory but is not equipped with the tools to implement the effective positive reinforcement, which is the oxygen of behavioral change.

The other camp centers on an incentive-led approach. While this approach has some merit, many solutions are “off the shelf” and can lead to haphazard application to reward the “right” behavior, or even worse, they can lead to rewards being issued for trailing results-based measures.

The recognition concept combines an experienced consulting service with a proven methodology for recognizing and rewarding employees and managers. This is delivered using a Smartcard—you did it right, which is customized to the industry situation, preferences and budget. This improves the ability of supervisors and managers to deliver positive reinforcement effectively, thereby guaranteeing a better chance of improvement.

USE THE PROACTIVE APPROACH

The proactive approach gives you an environment with a higher awareness of safety and fewer or no injuries. Before an injury, nearly 300 near misses occur, escaping injury. These near misses reinforce that it is okay to take chances. However, one more time, lightning strikes and an injury occurs. The proactive approach rewards employees to do it right and alerts to wrongdoing. With the old school approach of counting safe work hours and handing out t-shirts, employees hide injuries or somehow escape them. With the new approach, managers decide what behaviors to reward and do so on a daily basis without abuse or favoritism. Employees must display a particular behavior. Remember, you want lasting behavioral change.

WHY MIDDLE MANAGERS SHOULD BE REWARDED

Once you switch from an “entitlement” program to one that requires action, expect grumbling. Middle managers will complain they have too much to do to reward employees for safe behavior. Overcome these by rewarding middle managers and safety for driving the behavior-based process. Employees who are willing to put extra effort into safety pick up a greater percentage of the rewards available. That is what behavior-based safety is about: being rewarded for doing something.

WHY RECOGNITION PROGRAMS WORK

In a 3-year study published in ASSE’s Professional Safety in 2004, 300 construction firms were tracked. Half of the companies refused to implement a safety reward recognition program. The other 150 companies felt they needed a safety recognition strategy. At the end of the study, the firms that chose to implement safety recognition programs had injury rates that were 50% lower than the firms that refused to try safety recognition programs. Numerous case studies support the same findings with success stories.

CULTURE-BASED APPROACH

We must reconsider our traditional way of thinking and behaving since we may be influenced by our own customs and culture. We must make some sacrifices by compromising them for the safety of our people and facility. Our upbringing and beliefs must not come in the way of running our business—this could result in an unsafe situation and accidents. Generally, as operation’s priority is profitability. However, paying attention to safety as number one pays dividends in all respects. The
company must consider having a world-class safety program with an excellent safety management system that is implemented with full dedication and commitment.

MANAGERS IN THE NEW SAFETY CULTURE
Managers must be active in planning for the safe operations of hazardous tasks. They must ensure the safe execution of tasks as planned. Management ensures that the workforce is well trained to perform hazardous jobs and that they are well supervised to ensure full compliance in required procedures. Managers are good communicators with clear instructions provided, and more importantly, they set a good leadership example by giving safety a prime importance. Although safety is everyone’s business, safety is management’s responsibility.

CONTRACTORS IN A SAFETY CULTURE
Contractor safety is also the proponent organization’s responsibility. Therefore, contractors must be screened, selected and viewed as partners. Their performance is measured to establish their accountabilities. Contractors must accept safety culture requirements.

SIGNS OF CULTURE CHANGE
Management commitment to safety to reduce injury rates must be of highest importance. They would spare time and money to change employees’ attitude toward safety. Do whatever is necessary to heighten employee participation in near-miss reporting freely, seriously and honestly, which could be attained by employing positive reinforcement instantly with a tangible recognition reward.

SAFETY CULTURE CHANGE
In summary, the key to success is through a sound safety culture, which is employee-owned, management-driven and operationally consistent and maximizes creativity and innovation. Its most essential components are management commitment, employee recognition, employee training and hazard analysis with follow-ups for corrections. Adopt the cultural belief that all incidents are preventable. Any management system will work if top management and employees pull together toward the common vision of zero incidents. We must always strive for the best, always look for proven methods and avoid reinventing the wheel. The management system must always be adaptable to enable continuous improvement. Any company that institutes a cultural change toward the zero-incident concept is bound to see safety improvements of which the entire workforce can be proud.

CONCLUSION
Accident potential exists where humans are involved. Accidents result in losses. Company procedures and practices lower accidents if implemented fully and correctly. Consider launching positive reinforcement with a tangible and instant recognition program to achieve employee behavioral change. This is an excellent motivational tool for reducing injuries. This system applies to the construction or hotel industry, hospitals or any contracting companies that should be encouraged to adopt the same philosophy and implementation policy.

If you have a good, workable loss prevention program combined with a recognition program in place, consider this article as a refresher. However, for those who have bits and pieces of the program in place, consider including other applicable missing elements to avoid devastating losses.

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