Risk Management: Risk Control Methods

An Online Continuing Education Course for Engineers

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Risk Management: Risk Control Methods

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Introduction

This course builds on the Risk Control component outlined in the basic concepts of *The Risk Management Process* course. The control of risk is the logical next step in the risk management process after identifying and analyzing risk factors to which the organization is exposed.

The organization can approach risk control through a strategic, system-wide risk management plan. This plan must result in the most economic financial benefit to the organization's cash flows.

Risk control reduces the financial impact of risk and must be applied to each identified risk factor. There are a variety of risk control methods, and each risk factor must be treated with one or more of these methods.

It is imperative that each risk factor is controlled by the most cost-effective and financial beneficial method or methods.

This course will explore the risk management methods that can be utilized to control the identified risk exposures and will provide an understanding of:

- The seven methods used for risk control,
- The importance of post-loss procedures,
- Claims management,
- Litigation management,
- Disaster recovery, and
- Ownership and monitoring of risk control methods.

Upon completion of this course, the reader will be able to understand the risk control process for applying the risk control method or methods for the identified risk factors to

which the business organization is exposed by utilizing the most cost effective and financially beneficial methods for each risk factor.

Without the implementation of the risk control process, the prior steps in the risk management process will be of no consequence, and future steps will not be able to be initiated or completed.

These risk control methods must then become a part of the overall risk management program for the organization and will thereby assist with the most effective development of the future steps in the risk management process.

Overview

Risk control is a deliberate effort or efforts to minimize the cost, probability, frequency, severity, or unpredictability of loss factors that an organization faces. Safety and loss control programs are a conventional method utilized for risk control and reduction.

All identified risk factors that present a potential for a negative financial impact on the organization must be considered for some risk control method.

Regardless of the potential cause presented for the loss, risk control actions can include, preparing for the damage before it happens using prevention measures, avoidance (discontinuing an operation), reduction (minimize the potential impact of a loss), separation, segregation and/or duplication of procedures, and transfer of loss through contractual arrangements.

> Prevention measures include the use of machine guarding, installation of fire suppression systems, lock out tag out procedures, and use of appropriate personal protective equipment. Any actions that effectively reduce the probability

of a loss or that reduce the impact of a loss would be a prevention measure. Most safety programs require a variety of prevention methods, but a safety program is not the same as a risk management plan.

Avoidance can include acquiring the needed products or components from other sources or as mentioned above, discontinuing the operation altogether. By avoiding the activity or action that exposes the company to a risk factor, the potential of that risk factor occurring is overcome. It is important to note that when avoidance of a risk factor is being considered, the potential exploitation of the risk factor should also be evaluated.

Reduction minimizes the potential magnitude of a loss and can include limiting the quantity or volume of products or components that are exposed to risk exposure. The implementation of a "just in time" inventory policy can be one method of reducing the volume of inventory that could be exposed to potential loss that may result from risk factors such as fire or theft.

Separation is the physical separation of products, components, chemicals or operations that if left in the same location or proximity could result in a loss. An example of separation would be the physical separation of oxygen cylinders and acetylene cylinders in operations involving gas welding. By separating the storage of yet to be used cylinders, the potential of unintended gas leaks from them resulting in a fire or explosion that could ultimately involve the entire storage area for these cylinders is reduced.

Segregation involves having separate facilities (segregation) for various operations. When critical operations are performed at different facilities, the potential of a loss at one facility does not impact the production at the other facility.

Duplication is the providing of back up facilities that are capable of performing identical functions and redundancy. A good example of duplication would be a backup data site that runs parallel with the primary data site, or that can be up

and running rather quickly in the event the primary data site goes down. When considering duplication, it is important to make sure that all raw materials, equipment, and personnel are available for the backup location or that they can be available from alternate sources rather quickly.

Transfer of loss is a contractual arrangement that places the liability from a loss with a third party. High-risk operations are a good example of when a risk should be considered for transfer to others. Depending on the potential financial impact of a risk factor, the consideration of exploitation of the risk factor should also be evaluated before the transfer of loss method is implemented.

It is important to remember that acceptance of risk is a risk handling method. By accepting the risk, the organization is self-funding any losses that are managed by accepting the risk. This requires that the risk manager fully understand the implications of accepting the risk and that the organization is fully capable of absorbing losses that may result from the risk factor financially.

Diversification is another risk control technique that allocates business resources to create multiple lines of business that offer a variety of products and services in different industries. When the potential of exploitation of a risk factor is encountered, it may be possible to structure the exploitation solution as another business venture whereby the impact of a loss from the risk factor only impacts the newly formed business venture while allowing for the potential of a net income stream for the combined organization.

Many smaller businesses are not able to utilize this risk control method, but it is mentioned because of the potential value it can provide to the organization. With diversification, a significant revenue loss from one line of business will not cause irreparable harm to the company's bottom line.

Arranging for post-loss procedures such as claims management, litigation management or disaster recovery programs is also a significant element of risk control. Catastrophic or high profile losses expose the organization to significant exposure to significant financial loss or could have negative effects on brand recognition and brand loyalty.

By applying methods and procedures for the handling of losses and claims after they occur, the financial and brand impact of the loss can often be mitigated or reduced. The bottom line is that when the organization embraces and acts upon empathy and caring for the injured individual, there is a higher potential for reductions in the overall claim cost or settlement.

Prevention

Loss prevention is a technique that is used to limit loss exposures and not to eliminate them. Prevention attempts to minimize the impact of losses that could result from an identified risk factor and not to fully eliminate them.

Prevention is the deliberate actions of the organization to reduce or mitigate losses that could occur from the various risk factors to which the company is exposed. Loss prevention is one of the primary elements of a company's safety and health program. It is important to differentiate between a safety and health program and a risk management program. The risk management program is much broader and will include safety and health program components.

Some of the prevention measures that can be utilized include the use of machine guarding, installation of fire suppression systems, lock out tag out procedures, use of appropriate personal protective equipment and the application of theft reduction methods. Any measures that effectively reduce the probability of a loss or that reduce the impact of a loss would be a prevention measure.

Machine guarding reduces the potential of employee injury by preventing the worker from having their body parts coming into exposures with the machine's risk factors. To be effective, however, the machine guarding must be utilized, and all safety interlocks must be functioning. The safety interlocks are designed to prevent the machine from operating while the interlock is not engaged and the machine guard is not in place.

Fire suppression systems such as automatic sprinkler systems or operation-specific fire control systems are designed and installed to reduce the impact of a fire loss should

one occur. An operation-specific fire control system could include a Halon extinguishing system for a computer room or network server room. These systems must be active, inspected and maintained to ensure proper activation if a fire should occur.

Lockout tag out programs requires that the energy source for a machine or piece of equipment be physically locked in the power off position before the worker starts any repairs or adjustments to the machine.

An example would be to shut off the circuit breaker to a punch press and then to place a lock on the circuit breaker before proceeding to work on the machine. The worker should have the only key to the lock which would prevent someone else from engaging the circuit breaker while the worker is actively working on the machine.

This type of program, when implemented will reduce the potential of serious injuries to workers who are performing work on hazardous machines or in dangerous locations.

Personal protective equipment includes safety glasses, hard hats, protective gloves, safety shoes or boots, safety clothing and the like.

These protective m eing done, the work environment surro d to each.

Safety glasses requ protect the workers from being injured f orkplace. For example, workers and guests g safety glasses in areas where flying s rkers using hand-held grinders.

The storing of inventc to theft. Since there is no way to avoid it, a minimize the loss. This can include patro alarms, and secured storage faciliti