International Council of Industrial Security & Safety Management

Monthly Newsletter **September 2017**

Disaster Management

Industrial health not only increases the profitability and productivity or the organization, it also increases the trust and confidence of investors and the common people at large. Market perceptions and credibility is known to have changed drastically soon after industrial accidents. Prudent management, therefore, lays emphasis on disaster mitigation, management and recovery plans.

Industry needs to be ready to not only handle disaster in any form but should also needs to be capable of foreseeing them and keep such eventualities as part of their planning. The rapid pace of progress allows less opportunity for learning by trial, making it necessary to get design and operating procedure right from the first time. With this philosophy, the industries must also plan for the faster recovery, should at all a disaster occur. Public concern at multiple injuries and deaths from spectacular events such as a major explosion invariably leads to calls for additional control. It is therefore important particularly for projects involving the storage and use of hazardous chemicals to address both on-site and off-site safety when deciding on safety measures to be applied. Rapid growth in industrial field has brought a significant increase in number of people both workers and members of general public whose life could endanger at any point of time by accident involving hazardous materials and processes.

this issue...

Are you ready for disaster?

Industries are in the business of profit making and are fully aware that sustainable activities can only result into profitability caused by increasing productivity. Therefore, industries are acutely aware of their onus to provide safe working conditions and work practices. Their guiding principal may be "Ready for the worst and Hope for the best!". Even when any contingency is most unlikely, the industry needs to be ready to face. Therefore, the consistent answer for the question – Are we ready for disaster" cannot be anything other than - "Yes". Rhetoric's apart, industries need to identify responses for following questions:

- How to prepare?
- What is needed?
- Are employees ready to face or flee?
- When employees are fleeing, what management needs to do?
- When employees are facing, what management needs to ensure?

Answers to above questions will greatly shape the Disaster Management Plant which must have following major considerations –

Identification of major hazard installations – The Management should find out the most hazardous and critical areas within the industrial facility and listed should be on priority basis.

As per this priority, only the hazard will be tackled and multiple events' control is required to be attended to during disaster management.

Information about installation – Information regarding design operation and salient features will require to be shared with all the parties involved in disaster management including Hazard Specialist to the installation.

Such information is required to be shared with Governmental bodies not only for license and inspection purpose but also for generating their desired responses in case of eventualities.

The safety status and hazardous assessment to discover process failures and vulnerabilities is required to be carried out.

Action inside the industrial activity – Management has the primary responsibility of operating maintaining the safe plant.

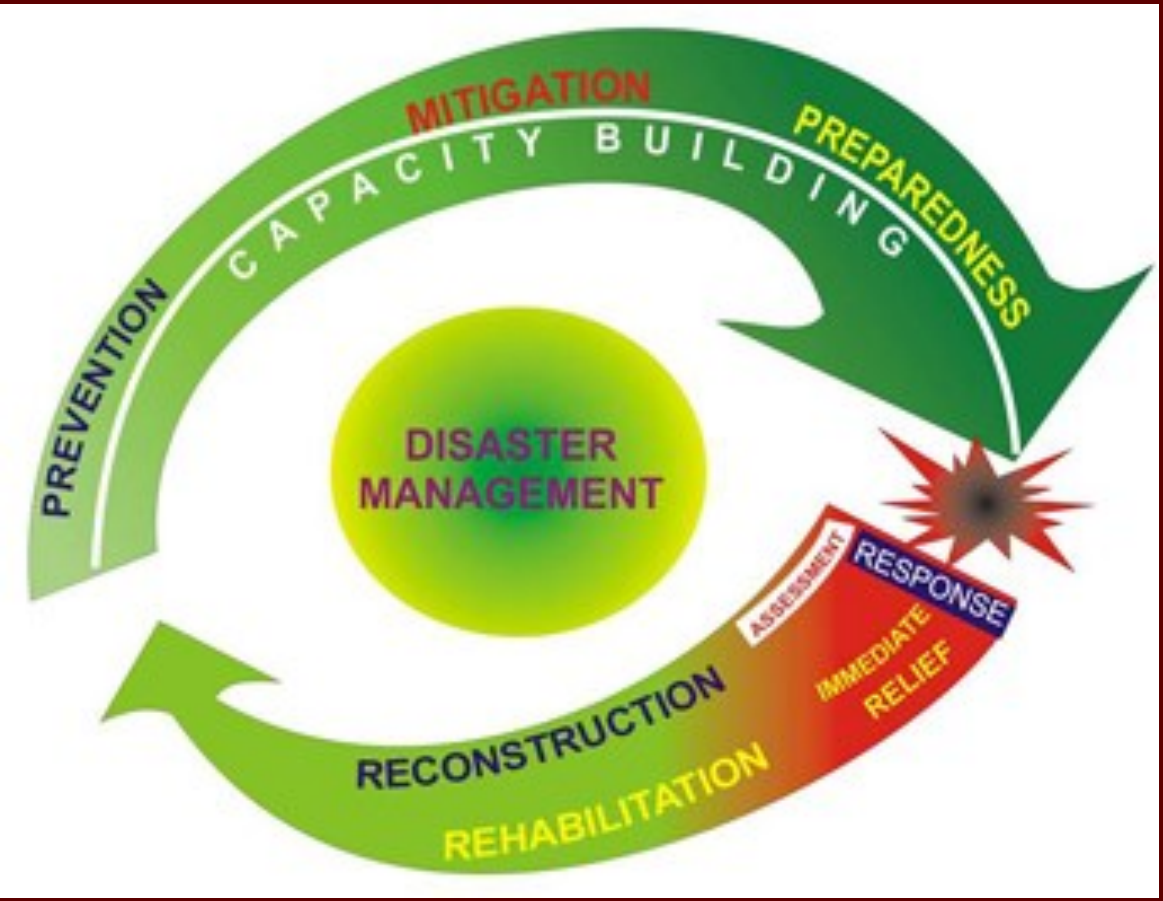
A sound safety policy is required.

Technical inspections, maintenance, plant modifications, training and selection of suitable person may be carried out according to sound procedures of the accident should be investigated and report submitted to authorities for introspection.

Lessons should be learnt from the accident in mere cases.

"Disaster Management is war-like exercise and like war, it decides not who is right, but, who is left!"

Categories of Major Hazards



Events involving flammable materials

I. Major Fires without danger of explosion, prolonged high thermal radiation and smoke

II. Fire threatening items of plant containing hazardous substances, potential spread of fire, explosion or release of toxic substances

III. Explosion with little or no-warning

IV. Hazards from blast wave, flying debris and high level thermal radiation

Events involving toxic materials

I. Slow or intermittent release of toxic substances

II. Items of plant threatened by fire

III. Hazards from potential loss of containment

IV. Rapid release of limited duration due to plant failure. Massive release of toxic substances due to failure of storage or process vessel

Worst Event Considered

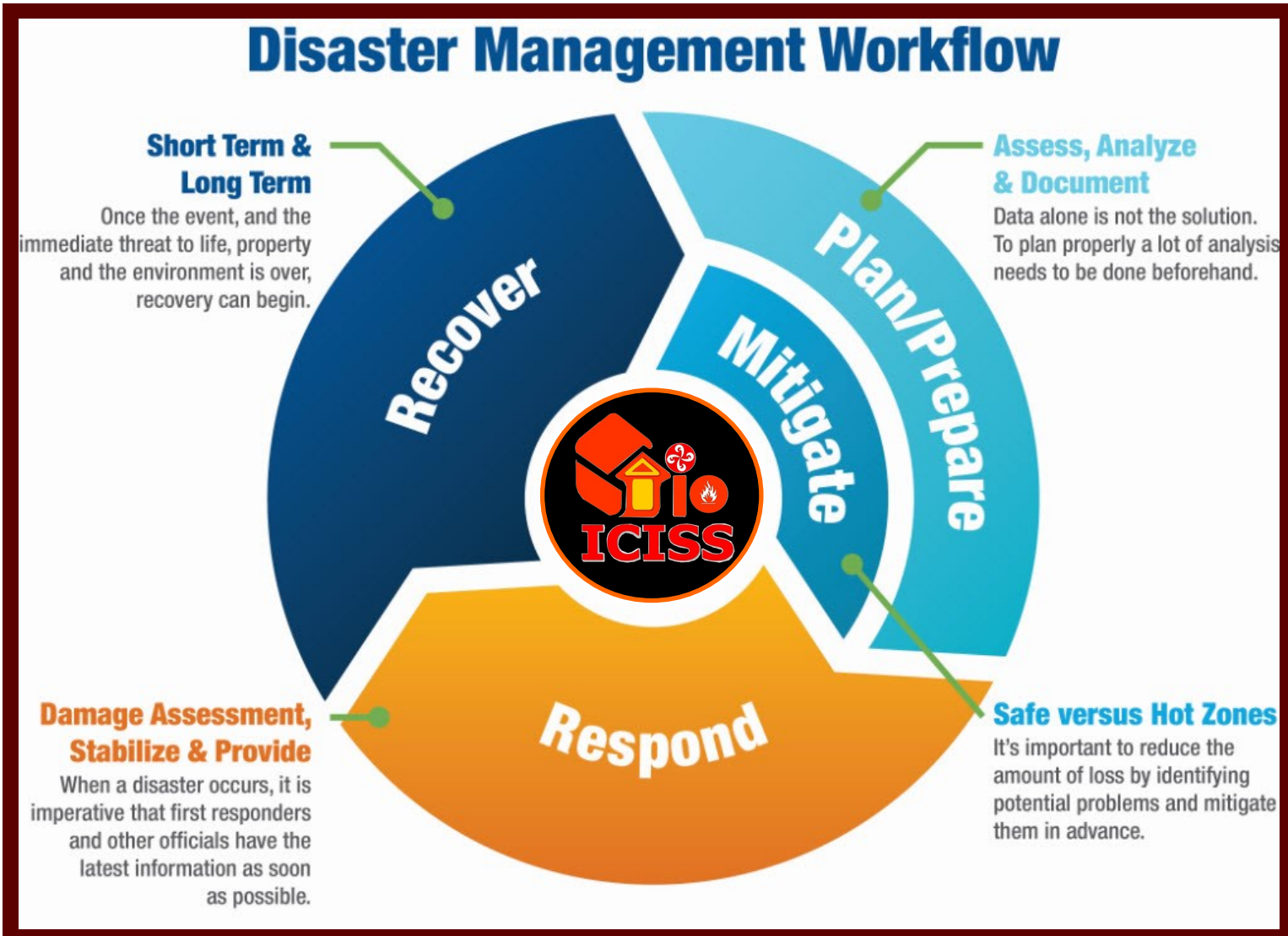
While planning is being made for disaster management the worst scenario should be visualized and accordingly plan should base on following two factors:

- Relative likelihood of the event
- Consequence of the event

Relative likelihood may be very low but if consequences of the event are great, the planning needs to be the best. Similarly, if relative likelihood of the event is very high even while consequences of the event are marginal, still preventive actions are required to be very effective. In fact, even when both the factors inversely relate to each other the plan requires to be given very serious consideration.

Link with preventive maintenance schedules:

Emergency planning must have linkage with preventive maintenance schedules as often potential causes of accidents are addressed in maintenance schedule if meticulously planning.



What Is Contingency?

In simple words it is chance, happening or possibility. These words though carry hardly any meaningful purpose for a common folk, but are of paramount interest for the persons related with an industry.

Persons may be performing their assigned tasks carefully, safely and with all their skills and mental alertness but still there happens something unwanted of no-one's fault resulting in either loss of production, dislocation of machinery, injuries to persons, loss of life or extensive damage to the property of the industry concerned.

Thus the unwanted happening, which dislocates the part of the entire activities of an industry, is called Contingency.

Characteristics of Disasters

What Is Emergency?

Emergency is an accident or event, which causes or threatens to cause –

- Hazard to life
- Substantial damage to property
- Disruption in supply chain

The top-most consideration safety of customers, suppliers and the general public while restoring production / supply is the ultimate goal.

First requirement in case of emergency is to contain the disaster & evolve make safe operation.

Many agencies are involved in emergency control plan namely; Fire Services, Medical, Police, Civil Defense etc., & requires an organized approach to the problems.

Objectives of Emergency Planning

Whereas all above elements focus on prevention of occurrence of major accident, emergency planning aims at the reduction of consequences of major accident. Its assumption that absolute safety cannot be guaranteed therefore in setting up planning a distinction is made between on-site and off-site planning. A well structured and clear plan is one which is best well prepared safety report and which can be quickly and effectively implied during occurrence of major accident. The objectives of an Emergency Plan are –

- to localize the emergency and if possible eliminate it,
- to minimize the effect of the accident on people and property

The elimination requires prompt action by the workers and emergency staff including fire fighting and related equipment. Minimizing the effect may include rescue, rehabilitation and giving information to people living nearby.

Identification & assessment of hazard: This stage is crucial to both on-site and off-site emergency planning and requires management to systematically identify what emergencies could arise in the plant. These should range from small incidents which could be dealt with the plant personnel without outside help to the largest event for which it is prudent to have a plan as without external help such events cannot be managed. Experience have shown that for every occasion that the full potential of an accident is realized, there are many occasions when some lesser event occur or when a developing incident is made safe before reaching full potential.

Essential Components of Disaster Management

1. **Disaster Reduction Plan**

   While planning, all the managements are better advised not to look for Crisis Reactive Perspective as only the crisis pro-active approach the loss of life and damage to property. Broadly, emergency management plan should consist of:

   - Disaster Reduction Program
   - Planning and implementation on how to prevent emergencies from occurring

2. **Disaster Response Plan**

   This is development application in case an emergency occur and includes training of the first responder.

3. **Disaster Recovery Plan**

   This includes creation of specialized business recovery machinery as it is very essential for the industrial and chemical health of organization not only to respond to disaster but also to ensure resumption of normal business activities as far as possible.

The Disaster Risk Management Cycle

Identification & Assessment of Hazard

This stage is crucial to both on-site and off-site emergency planning and requires management to systematically identify what emergencies could arise in the plant.

These should range from small incidents which could be dealt with the plant personnel without outside help to the largest event for which it is prudent to have a plan as without external help such events cannot be managed.

Experience have shown that for every occasion that the full potential of an accident is realized, there are many occasions when some lesser event occur or when a developing incident is made safe before reaching full potential.

Surveillance of Maintenance Staff and their routine

Maintenance staff needs constant motivation and their performance closely observed. They have to be not only quality conscious but also punctual in maintaining the schedule.

Their work habits must reflect their safety consciousness, resourcefulness and presence of mind as in most of the cases the maintenance staff happen to be first responder to any emergency situation.

The nominated person must know their specific responsibility separate from their day-to-day activities in case of emergency situation

Types of Planning Needed

On-site Emergency Planning

- Formulation of plan & emergency services
- Alarm & communication mechanism
- Appointment of personnel & definition of duties
- Emergency control centers
- Action on site
- Planning shutdown procedure
- Rehearsing emergency procedure
- Plan appraisal & updating
- District Internal Protection Scheme

Off-site Emergency Planning

- Organization
- Communications
- Specialized emergency equipment
- Specialized knowledge
- Voluntary organizations
- Chemical / metrological information
- Humanitarian arrangements

Ingredients of Readiness

Link with Preventive Maintenance Schedules

Emergency planning must have linkage with preventive maintenance schedules as often potential causes of accidents are addressed in maintenance schedule if meticulously planning.

Report Generation

In case of accidents major or minor or `near misses' reports must be generated giving detailed analysis causes of the accident and corrective and preventive actions. These reports are reflective of the management's desire for improvement and are to be used for studying the patterns of accidents emerging out.

Deviation Analysis

Wherever a deviation takes place, an analysis is required to find out the reasons of the causes and the outcome. Any change or breaches of safe practices are sometimes loaded with potential of accidents. Therefore, even when a deviation is aimed to improve, the safe practices, impact assessment is necessary

Simulation and Training

There is no better way of preparing for the disaster other than simulation disaster and evaluating the response mechanism. Repeated practices, deviation analysis and impact assessment lead to checking the disaster management plan in real conditions and on ground. It is advisable that independent observers are appointed to evaluate the effectiveness of the emergency plan and correctives actions and preventive measures must be considered seriously.

Support by Equipment.

Planning is but only a part of disaster management plan, the most important part is the procurement and provisioning of specialized equipment recognized to tackle the range of disasters identified in the plan. These equipment are required to be kept in perpetual readiness and therefore it is suggested that check lists are prepared to ensure that no equipment remains unserviceable.

Extensive experience in the chemical industry with on-site emergency planning has provided the need and value of rehearsal of emergency procedures. The organization responsible for developing off-site plan should also test its arrangements in conjunction with on-site exercise. Table - top rehearsals have proved successful in such cases although often requiring sufficient elements of reality in the exercise. Mock Drills must be conducted with all the sincerity and importance.

Every member of the Industry needs to be ready to respond to the demands of the safe practices and should be equally ready to face the contingencies.

Disaster Management Program

Emergency management (or disaster management) Program is the organization and management of resources and responsibilities for dealing with all humanitarian aspects of emergencies -

- Preparedness,
- Response, and
- Recovery

- in order to reduce the harmful effects of all hazards, including disasters.

Emergency Response Plan

The actions taken in the initial minutes of an emergency are critical. A prompt warning to employees to evacuate, shelter or lockdown can save lives. A call for help to public emergency services that provides full and accurate information will help the dispatcher send the right responders and equipment. An employee trained to administer first aid or perform CPR can be lifesaving. Action by employees with knowledge of building and process systems can help control a leak and minimize damage to the facility and the environment.

The first step when developing an emergency response plan is to conduct a risk assessment to identify potential emergency scenarios. An understanding of what can happen will enable you to determine resource requirements and to develop plans and procedures to prepare your business. The emergency plan should be consistent with your performance objectives.

At the very least, every facility should develop and implement an emergency plan for protecting employees, visitors, contractors and anyone else in the facility. This part of the emergency plan is called "protective actions for life safety" and includes building evacuation ("fire drills"), sheltering from severe weather such as tornadoes, "shelter-in-place" from an exterior airborne hazard such as a chemical release and lockdown. Lockdown is protective action when faced with an act of violence.

When an emergency occurs, the first priority is always life safety. The second priority is the stabilization of the incident. There are many actions that can be taken to stabilize an incident and minimize potential damage. First aid and CPR by trained employees can save lives. Use of fire extinguishers by trained employees can extinguish a small fire. Containment of a small chemical spill and supervision of building utilities and systems can minimize damage to a building and help prevent environmental damage.

Some severe weather events can be forecast hours before they arrive, providing valuable time to protect a facility. A plan should be established and resources should be on hand, or quickly, available to prepare a facility. The plan should also include a process for damage assessment, salvage, protection of undamaged property and cleanup following an incident. These actions to minimize further damage and business disruption are examples of property conservation.

Protective Actions for Life Safety

When there is a hazard within a building such as a fire or chemical spill, occupants within the building should be evacuated or relocated to safety. Other incidents such as a bomb threat or receipt of a suspicious package may also require evacuation. If a tornado warning is broadcast, everyone should be moved to the strongest part of the building and away from exterior glass. If a transportation accident on a nearby highway results in the release of a chemical cloud, the fire department may warn to "shelter-in-place." To protect employees from an act of violence, "lockdown" should be broadcast and everyone should hide or barricade themselves from perpetrator.

Protective actions for life safety include:

- Evacuation
- Sheltering
- Shelter-In-Place
- Lockdown

Your emergency plan should include these protective actions. If you are a tenant in multi-tenanted building, coordinate planning with the building manager.

What ICISSM is All About?

ICISS is purely non-commercial forum for security and safety professionals world-wide! It neither is with any support from any business groups nor is it projected by any business house in the background. All its members have no stake in any solution providing or consultancy firms. Their association with ICISS is totally based on mutual benefit of knowledge sharing and networking.

We welcome all the security and safety professional world over from diverse background and encourage them to interact freely by asking the questions, replying them or by sharing their knowledge and experience. The council also strives to have strategic alliances with similar forums world over for furtherance of its objectives. Formed in 2010, the Council is totally apartisan, apolitical and does not represent any pressure group or interest group.

ICISS strives not to provide surrogate platform for anyone to enhance their respective business interest. It is thus totally professionals' body aimed at, 'professionalizing the professionals'!

We in ICISS believe that having different view than the majority is not bad! In fact we encourage difference of opinion and take every different views as intellectual stimulus to either convince or get convinced – either way both the parties are benefitted! Those who dare to think differently have shown that firstly they can think and secondly they are not overawed by the majority views! Such are the traits of 'Thought Leaders' and they deserve our respect!

For more details on our activities, please visit us at - http://onlineicissm.wix.com/iciss

What ICISSM can do for you?

Consultancy: International Council of Security and Safety Management (ICISS) would be happy in providing consultancy to Corporates on all matters relating to Industrial Security Management from the best security professionals as it has on its panel the very best security professionals from almost all over the world. We have accredited security consultants from India, South Africa, UK, USA, UAE, Belgium, Libya, Yamane and Austria to name few countries. All the security consultants are under oath not to represent any solution provider or system integrator, thus their consultancy and recommendations are most impartial.

On-site Security Survey and Audits: Conducting on-site security surveys and audits is the forte of ICISS. Its specialists have carried out numerous such surveys which were beneficial to clients in improving the security preparedness and also in cost-cutting. .

Contents Delivery: The experts of ICISS help the Clint in developing its plans, prepare manual and prepare various forms and formats to be used for every day security &safety functions. It will also help the Clients to develop the training contents such as write-ups and the presentations. The specific needs of specific niche segment of the industry will also be met by ICISS.

111 – GAIL Society, Sector Pi (I&II), Near Eldeco Riviera, Greater Noida,
Gautam Buddh Nagar, UP
Mails: onlineicissm@gmail.com
Blog: http://captsbtyagi.blogspot.com
Web-site: http://onlineicissm.wixsite.com/iciss

ICISS