

Using the Table Top Exercise Technique to Improve Your Organization's Emergency Response Preparedness

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Introduction

This paper describes the effort to use a common industry practice, the Table Top Exercise, as a means to improve emergency response preparedness in an industrial setting. The primary focus of this paper will be the sharing of how to design and implement several scenarios that can be universally applied in a manufacturing or office setting. The inspiration for this paper came from the request of a company president to develop a mini-Table Top Exercise process that could be used during 30-minute safety meetings.

The exercise design process has been used for many years to train employees in emergency response preparedness. This process can be very time consuming because there are four main exercise elements (Orientation Seminar, Table Top Exercise, Functional Exercise, and finally the Full-Scale Exercise). Each successive exercise element requires more time and resources.

In recent years management has cultivated the perspective of wanting employees to do more work with fewer resources while producing a higher quality product in less time. Safety training is being thought of in the very same way. This paper will address how to adapt this process into a very cost effective, results oriented, time managed approach, which compliments the way management wants their business run. Safety meetings that are well planned can be very effective and time friendly. An Orientation Seminar coupled with a mini-version of the tried and proven Table Top Exercise technique can be used to meet these goals.

The steps used to create each of these exercises are basically the same. Select the team, brainstorm possible scenarios, review procedures, identify exercise responsibilities, list detailed exercise objectives, develop the scenario, conduct an Orientation Seminar, conduct the mini-Table Top Exercise, complete the critique, convey the lessons that were learned to everyone within the organization and use an audit or assessment to confirm that the training has been learned. The process is then repeated with a different scenario.

The Orientation Seminar and the mini-Table Top Exercise can be used effectively for site-wide exercises involving universal scenarios such as severe weather, evacuations, hazardous vapor releases, threatening phone calls, etc. The list can become very long. This paper will

review how to develop the Orientation Seminar and the mini-Table Top Exercise for an evacuation, a hazardous vapor release, and a severe weather situation.

The exercise design process will be described but emphasis will be placed on the effective use of the Orientation Seminar and the mini-version of the Table Top Exercise as the tools for improving emergency response preparedness in any work setting.

To use this mini-process most effectively, an Orientation Seminar should be conducted about two months prior to the mini-Table Top Exercise. This approach gives the employees time to verify that the elements of the exercise objectives are in place in the procedures before the scenario is presented.

The evacuation scenario will focus on communications, assembly points, and employee accounting. The cause of the evacuation could be a fire, a chemical spill, or a power failure inside the building.

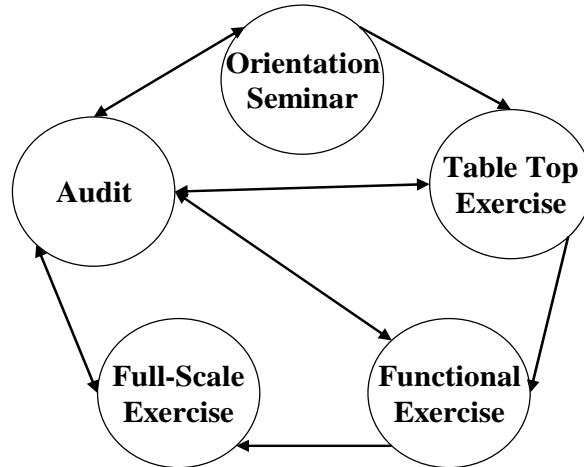
The hazardous vapor release scenario will focus on informing employees of the emergency, activation of hazardous vapor release shelters, occupancy of these shelters, and communications within the shelters.

The severe weather scenario will focus on actions by employees when various weather announcements are made, such as, severe thunderstorm watches, severe thunderstorm warnings, and tornado warnings. Each of these announcements should elicit a different response from the employees. The employees must also have a tornado shelter with enough capacity for everyone in the work area. A means of communication must also be provided in the shelter. The exercise will determine if appropriate elements are in place in the procedure to adequately address the scenario.

Basic Exercise Design Process

As mentioned earlier, the process uses four levels of exercises and additional elements are used in supporting roles. The diagram below shows how these parts interact with each other to form the progressive exercise design process.

Exercise Flow Diagram



The diagram above shows the progression from the Orientation Seminar to the Table Top Exercise to the Functional Exercise and finally to the Full-Scale Exercise. Each exercise is sequential in nature and builds on the previous exercise. If the exercises are taken out of order the technique can deteriorate. At the conclusion of each exercise a critique should be done to discuss actions that were “done well” and to identify areas for “development opportunities.” A path forward is created for the “development opportunities” and a timeline is agreed to for completion. After each exercise is completed and the recommendations implemented, an audit can be considered to confirm compliance.

The Orientation Seminar is intended to focus on training and familiarization with roles, policies, practices, procedures, and responsibilities. They are usually informal, in a conference room setting, and designed to elicit constructive discussion. The general purpose is for participants to evaluate plans and procedures and to resolve questions of coordination and assignment of responsibilities. This strategy reduces the likelihood of someone being surprised or embarrassed by the scenario.

The purpose of the Table Top Exercise is to have participants practice problem solving, resolve questions of coordination, and assignment of responsibilities in a non-threatening format, under minimal stress. The procedure consists of a scenario being presented using sequential messages that are given to a selected individual, group, or to all present. Responses can be written on the bottom of the message form or discussed as a group. At the conclusion of the exercise a self-evaluation is conducted. The goal of the exercise is a pleasant learning experience coupled with improved awareness to possible emergency situations.

The Functional Exercise is designed to test or evaluate the capability of an individual function, or complex activity within a function. It is only applicable where the activity or function can be effectively evaluated in isolation from other emergency management functions. An example of this type of exercise would be a test of a communication capability.

The Full-Scale Exercise is designed to evaluate the operational capability of emergency management systems in an interactive manner over a substantial period of time. It involves the testing of a major portion of the basic elements existing within emergency operations, plans, and organizations in a stressful environment.

The technique described above is modeled after the Federal Emergency Management Agency's "Exercise Design Course G120, August 1995.

The following sections describe how this process was carried out from the first organizational meeting through the final presentation of the lessons learned document to the company management team.

Identifying Need for an Exercise

The need or reason for an exercise can come from many possible sources. The source of the following exercises was originated from a company president but they can come from many diverse areas and for many different reasons. Any person can identify a need that could be best addressed with an exercise. The following table lists the intended purposes for each exercise type.

Orientation	Table Top	Functional	Full Scale
No previous exercise	Practice group problem solving	Evaluate any function	Information analysis
No recent operations	Executive familiarity	Observe physical facilities use	Interagency cooperation
New plan	Specific case study	Test seldom used resources	Policy formulation
New procedures	Specific risk area	Measure resource adequacy	Negotiation
New staff, leadership	Examine manpower contingencies	Inter-jurisdictional relations	Resource and manpower allocation
New industrial risk	Test group message interpretation		Equipment capabilities
New mutual aid agreement	Observe information sharing		Personnel and equipment locations

Design Team Selection

Once support has been gained for the project, the exercise design team is selected. Ideally, one or more representatives from each participating agency/group are needed. A team leader is selected if this wasn't done previously. Each person is acquainted to the technique and the goal of the project.

Type of Exercise and Desired Impact

Once the type of exercise is determined, the team decides who will be impacted. Everyone in the plant will be impacted for these exercises.

Policies, Practices, and Procedures

Design team members are asked to bring a copy of their policies, practices, and procedures that could apply to the exercise for review by the team. These documents are reviewed in detail so that the team can gain an understanding of their scope and applicability for the proposed exercise.

Exercise Objectives

The objectives for each exercise are captured from the existing policies, practices, and procedures that apply to the intended exercise.

Each of these objectives is incorporated into the exercise plan. The reason for going into this detail is to identify the capabilities that each participating group will need to use during the exercise. This information is used during the Orientation Seminar to inform the participants of what they will need to be able to address during the exercise.

Scenario Development

The team works with the exercise objectives to develop the exercise scenario. Then messages are developed that relate to the objectives. Each message is designed to allow the receiving group to react in a manner associated with their policies, practices, and procedures for this situation. The greatest amount of time is spent developing the scenario. Each message is carefully worded to elicit a response that would follow existing protocol and involve each of the participating groups in varying degrees.

Orientation Seminar

The Orientation Seminar is a very important step that helps ensure a successful Table Top Exercise because it is used to introduce new programs, policies, practices, and procedures. It allows for the review of roles and responsibilities associated with the proposed exercise and serves as the starting point for the exercise process (Table Top, Functional, and Full-Scale). This element is used to review existing policies, practices, and procedures with the participating groups and identify specific exercise objectives that each group would be expected to encounter some time during the exercise. The philosophy of this tactic is to give each group the opportunity to ask questions about what would be expected of them during the exercise and how they would interact with each other before the actual exercise. The Orientation Seminar is conducted about two weeks to two months before the actual Table Top Exercise. The rationale behind this strategy is to give time for each group to review and revise existing procedures, to train on the procedures, and increase the likelihood of each group having a successful exercise. The overall goal for every exercise is to have a “pleasant learning experience, in a non-threatening environment, under minimal stress.” This strategy also reduces the likelihood of a person or group being embarrassed because they did not know what to be prepared to do during the exercise.

Table Top Exercise

The exercise is conducted in a conference room setting. A computer, projector, and screen are used to display the exercise messages, pictures, floor plans, videos, and other necessary aids. The agenda is shown which includes:

- The purpose and definition for the exercise
- The Who, What, When, Where, and Why for the exercise
- The exercise objectives are reviewed for each group
- The exercise is then conducted
- A critique is held which includes a follow-up plan

The protocol for the exercise is explained to the groups and questions can be asked before the exercise starts. Background information such as: setting, weather, location, and any other pertinent information to the exercise are presented at this time.

The preliminary activities are now completed and the first message can be shown on the screen. Each message has an intended purpose. The group gives their response based on existing policies, practices, and procedures. Discussion is permitted at the discretion of the exercise controller. After each message is discussed in detail, the next message is given and the process is repeated until the end of the exercise.

Critique

After the Table Top Exercise is concluded a short break is taken before the critique is started. The following items are discussed:

- The items that were done well
- The opportunities for improvement
- The path forward
 - How can the exercise be improved?
 - What needs to be changed?
 - Was the exercise too detailed, too narrow in scope, too general?
 - How was the timing?

The process described above was used to develop the following exercises.

Mini-Table Top Exercise - Evacuation Scenario

The purpose of this exercise is to have the employees test their department emergency plans when an evacuation announcement is received regarding smoke in the building.

Exercise Objectives

- Emergency notification
- Emergency evacuation

- Evacuation routes
- Assembly point location(s)
- Personnel accounting

Orientation Seminar

The participants are asked to ensure that their procedures are up-to-date and contained the elements necessary to implement an orderly building evacuation. These responsibilities include having emergency escape procedures, primary and secondary emergency evacuation routes, primary and secondary assembly points and an employee accounting procedure. These elements are needed to have a successful Table Top exercise.

Exercise Messages

1. FROM: Emergency Notification System, runner, or personal observation.
TO: Employees at work stations.
TEXT: Smoke is in the building and a work area evacuation is needed. Follow your division procedures.
2. FROM: Emergency Notification System, runner, or personal observation.
TO: Employees at work stations.
TEXT: Evacuate to assembly point. Take proper actions as described in your Division Emergency Plan.
3. FROM: Emergency Notification System, runner, or personal observation.
TO: Employees at work stations.
TEXT: All Clear- return to worksite.
4. At the conclusion of the exercise the participants visit their primary and secondary assembly points.

Mini-Table Top Exercise – Hazardous Vapor Release

The purpose of this exercise is to have the employees test their department emergency plans when a hazardous vapor release announcement was received.

Exercise Objectives

- Emergency notification
- Existence and certification of temporary havens/critical control rooms
- Communication capabilities
- Local and remote shutoff capabilities

Orientation Seminar

The rationale behind the seminar is to ensure that each department has an adequate Hazardous Vapor Release plan in place and that it includes a notification system, certified temporary havens/critical control rooms that are adequate for the number of employees and contractors in the area. Furthermore, these havens must be accessible all the time, have local and remote shutoffs, a phone, and a 2-way radio. Each of these elements is essential for a successful exercise.

Exercise Messages

1. FROM: 24-Hour Contact Center/Division Communications Center.
TO: Employees at work stations.
TEXT: There is a Hazardous Vapor Release that impacts this zone. Proceed to your closest Temporary Haven/Critical Control Room.
2. FROM: 24-Hour Contact Center/Division Communications Center.
TO: Employees at work stations.
TEXT: The Hazardous Vapor Release is expected to last an additional 20 minutes. Please stay in your Temporary Haven/Critical Control Room. Updates will be issued as appropriate.
3. FROM: 24-Hour Contact Center/Division Communications Center.
TO: Employees at work stations.
TEXT: The Hazardous Vapor Release is terminated. Please complete the next two parts of the exercise at this time.
4. Visit your Temporary Haven/Critical Control Room and your Assembly Point at this time. Then return to your normal workstations.

Mini-Table Top Exercise – Severe Weather

The purpose of this exercise is to be sure each division/department has a severe weather procedure in place that would address different severe weather announcements and identify adequate tornado shelters for their workforce. The design team knew that very few divisions had procedures that addressed the different actions required for severe weather watches, severe weather warnings and tornado warnings. Each alert requires a difference level of activity. The seminar setting is ideal for each group to brainstorm how their situations will be handled in their respective areas.

Exercise Objectives

- Severe weather notification to employees by the Plant telephone operators.
- Division notification procedures.
- Severe weather procedures that include sections for severe weather watches, severe weather warnings, and tornado warnings.
- Identify area for tornado shelter.
 - Basement or lower floor

- Away from windows and doors
- Interior of building
- Protected or reinforced area

Orientation Seminar

The rationale for this exercise is to require each department to address the differences between severe weather watches, severe weather warnings, and tornado warnings in their procedures. Improvements are needed throughout this scenario because the tornado warning announcement protocol and subsequent sheltering has not been included in any of the emergency plans.

Exercise Messages

1. FROM: 24-Hour Contact Center/Division Communications Center.
TO: Employees at work stations.
TEXT: A Severe Thunderstorm Watch has been issued for this area. Follow your division procedures.
2. FROM: 24-Hour Contact Center/Division Communications Center.
TO: Employees at work stations.
TEXT: The Severe Thunderstorm Watch has been upgraded to a Severe Thunderstorm Warning. Take proper actions as described in your procedures.
3. FROM: 24-Hour Contact Center/Division Communications Center.
TO: Employees at work stations.
TEXT: The Severe Thunderstorm Warning has been upgraded to a Tornado warning. Take appropriate protective measures as specified in your procedures.
4. FROM: 24-Hour Contact Center/Division Communications Center.
TO: Employees at work stations.
TEXT: The Tornado warning has been terminated. This concludes the exercise.

Conclusion

In this paper I have described how to take the tried and proven Table Top Exercise technique to a less time consuming level in a “mini” format which maximizes the learning in the minimum amount of time. This approach is suitable for basic scenarios but the key to a successful exercise is the effective use of the Orientation Seminar. The Orientation Seminar reveals the “Roadmap to Success” by identifying the elements that will need to be addressed during the exercise. The strategy of sharing what is expected from the participants in the Orientation Seminar increases the likelihood of a successful exercise.

It is my sincere hope that this modified, more cost effective, technique can be used to improve the overall safety in work settings.