

Tabletop Exercise Instructions

1. Break up into your assigned groups.
2. Read and discuss the tabletop exercise narrative.
3. Discuss applicable issues *using only the information presented*. (In other words, don't read too much into the scenario.) Answer the questions on the reverse side of the worksheet. Record your group's findings on the worksheet and prepare to share your answers with the rest of the class.
4. There is no "school solution" and there are no right answers (but there may be a few wrong ones).
5. If you want more information, ask for it (you may not get it but you can still ask!).

Response resources available.

First in units:
SLDMFD Engine 3

Units enroute (ETA 3 minutes):
SLDMFD Battalion Chief

Units immediately available:
SLDMFD Engine 1
SLDMFD Squad 3 (Hazmat Team)
SLDMPD units (3, 1 person each)
SLDMPD motor officers (2)
SLDMPD Sergeant
CHP units (2, 1 person each)
SLDMFD EMS (2 BLS ambulances)

Other units available (ETA 10 min.):
SLDM Public Works (1 Maint. Supvr., 1 Equip. Operator and 2 Laborers)
SLDMFD Public Education Specialist (Designated Dept. IO)
SL County Env. Health Dept. REHS (2)

Other resources available:
CHP (1 Sergeant and 2 Traffic Officers)
SL County Engineering Dept. (various)
CalTrans personnel (various)

Mutual aid units available:
None!

Exercise Scenario

Narrative Information:

At 1015 on Friday, October 19th employees at Santa Luisa Uniform Supply accidentally mixed a drain opener chemical and a laundry destainer solution. The company is located at 414 Petroni Place in Santa Luisa del Mar. (Grid H-3)

A plumber treated a floor drain with a liquid drain cleaner. After the plumber left the building, some employees spilled about 5 gallons of destainer on the floor in the laundry area. The destainer went into a floor drain that had just been treated with an unknown amount of the liquid drain opener. The reaction between the chemicals apparently produced a gas with a pungent odor. The employees notified a supervisor who directed them to evacuate the building and report to the designated assembly area. The supervisor then called 911 to report the incident and left the building with the rest of the employees. There have been no other 911 calls from this incident.

An SLDMFD engine arrived three minutes later from Fire Station 3. They noticed a bleach-like smell as they drove to the scene. They found the company employees waiting patiently at the corner of Petroni Place and Calaveras Street. None of the employees appeared injured. Several were busy chatting on their cell phones.

The area is largely industrial and commercial (see map). The weather is 62°F with clear sunny skies. The winds have been variable and erratic but are currently 5 to 8 miles per hour *from* the south *to* the north.

Questions:

Based on the above narrative, break into your Groups and discuss the following issues/questions. Record your Group's findings on each question. Complete any required paperwork.

You may receive other questions and updates to this scenario later.

(Questions are on the reverse side.)

Tech Ref Tabletop Exercise – Industrial Accident

You have 30 minutes to complete the following.

1. What substance is most likely causing the odor? What are the hazards from this substance?
2. Is there a risk to nearby businesses from this incident? Be prepared to explain your reasoning for this decision.
3. Fill out Sections I-III (less blocks 17 & 18) of the ICS 208 after you complete your hazard assessment.

Scenario Update

Narrative Information:

The duty battalion chief has arrived at the command post. The manager of the business comes to the command post to discuss the situation. She states the laundry destainer is a liquid solution of sodium hypochlorite and provides you with an SDS for that product. She says a plumber they called to fix a clogged drain applied the drain opener. She doesn't have an SDS for that product but does have some written information the plumber gave to the company EH&S person.

SLDMFD Hazmat Squad 3 arrived three minutes ago from Fire Station 3. They are now at the incident scene and are preparing to make their first entry. They have requested a briefing from the Tech Ref person.

The weather is unchanged.

Questions:

Based on the above narrative, break into your Groups and discuss the following management issues/questions. Record your Group's findings on each question. Complete any required paperwork.

(Questions are on the reverse side.)

Tech Ref Tabletop Exercise – Industrial Accident

You have 30 minutes to complete the following.

1. What entry objectives do you recommend for the hazmat team?
2. How can you tell whether or not the substance causing the problem has spread beyond the company involved?
3. The Hazmat Group Supervisor would like to use Level-B PPE for the initial entry. Do you agree with this? Be prepared to explain your reasoning for this decision.

Instructor Guidance

Exercise Objectives:

Demonstrate the ability to collect and interpret hazard and response information from sources such as printed reference material, technical resources, computer databases and monitoring equipment.

Given a simulated emergency response to a release of hazardous materials, demonstrate how to estimate the potential outcomes within the endangered area.

Given a simulated emergency response to a release of hazardous materials, demonstrate the ability to write incident response objectives.

Identify the potential action response options (defensive, offensive and non-intervention) available.

Demonstrate the ability to approve an appropriate level of personal protective equipment commonly to use in a hazardous materials incident.

Identify government and private sector resources available to assist in an emergency response to a release of hazardous materials and state their jurisdiction, authority, capabilities and the procedures to access these resources.

Suggested Findings – Initial Scenario

1. What substance is most likely causing the odor? What are the hazards from this substance?

The SDS for the laundry destainer says to avoid ammonia and acids. The information sheet for the drain opener says it's made up of "powerful" sulfuric acid. The SDS for the laundry destainer lists "chlorine and chlorine dioxide" as products of decomposition. Most likely the two products combined and produced one or both of these gases. (They have a similar odor.) That would account for the pungent odor and the bleach-like odors reported. The sulfuric acid is a corrosive and damage body tissues on contact. The chlorine and chlorine dioxide are toxic gases.

2. What is the risk to nearby businesses from this incident? Be prepared to explain your reasoning for this decision.

Not much. Most of the gases coming out of the drain will be trapped in the building. If the doors to the various rooms are shut then the gas will tend to stay in the room where it was released. Some of the gas will leak out into the air but the wind will disperse it quickly. People may be able to smell the gas outside of the building due to the very low odor threshold of chlorine.

3. Fill out Sections I-III (less blocks 17 & 18) of the ICS 208 after you complete your hazard assessment.

Use the reference material provided and any reference sources available to fill in the applicable blocks.

Suggested Findings – Updated Scenario

1. What entry objectives do you recommend for the hazmat team?

Review the objectives and discuss them with the class participants. Compare and contrast the objectives the different groups come up with. They should have an objective that addresses responder safety regarding entry into a partially unknown atmosphere. They may want to have an objective related to monitoring the air in the building for chlorine.

2. How can you get information on whether or not the substance causing the problem has spread beyond the company involved?

They can monitor for chlorine around the building and downwind of the building. Responders could also track complaints from nearby businesses and residences. Chlorine has an easily recognizable odor. Question for the groups: Would it be a good idea to put out a public announcement asking people if they smell anything strange in the area? (Probably not!)

Responders should be able to monitor for chlorine with either a meter or colorimetric tubes. Chlorine dioxide would be a problem. Few hazmat teams would have a meter that has a chlorine dioxide sensor. Hazmat teams will have colorimetric tubes but not all of the companies that make colorimetric tubes make a tube for chlorine dioxide.

3. The Hazmat Group Supervisor would like to use Level-B PPE for the initial entry. Do you agree with this? Be prepared to explain your reasoning for this decision.

The applicable OSHA regulations permit this. (Some people would hesitate to allow this for an entry into an enclosed space.) The primary route of entry for chlorine and chlorine dioxide is inhalation. Level-B would provide adequate protection against this. It would also protect against the small amount of acid and destainer present.