Florida Awareness Level
Hazardous Materials
Training Program

Student Note-Taking & Activities Guide

Developed by the
Florida Division of Emergency Management
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U.S. Department of Transportation
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Acronyms
Acknowledgments

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Video credits found within the accompanying DVD/Video
Student Activities

Unit 1
ACTIVITY 1.1 – Preparation for Response

Your instructor will provide your group with an employer Emergency Response Plan (ERP) for hazardous materials emergencies and a copy of the Local Emergency Planning Committee (LEPC) plan. Using these documents and the information provided in Unit 1, complete the following information with other members of your group.

What agencies are available in your community to assist with a hazardous materials emergency?

Who do you notify to activate the hazardous materials ERP?

In your agency, who is designated as the incident commander at hazardous materials emergencies?

What medical facilities in your area will accept hazardous materials patients?

Who can order a mandatory evacuation during a hazardous materials emergency?

What federal OSHA regulation was developed to ensure first responder safety during hazardous materials emergencies?
List the seven mechanisms of harm that can be present during a hazardous materials emergency.

Which of these mechanisms do you think could be present at a vehicle accident involving a gasoline tank truck?
Student Activities

Unit 2
### ACTIVITY 2.1 - Shipping Papers Matrix

<table>
<thead>
<tr>
<th>Transport Mode</th>
<th>Name of Papers</th>
<th>Location of Papers</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highway</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Rail</td>
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<td>Air</td>
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<td></td>
</tr>
<tr>
<td>Pipeline</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
ACTIVITY 2.2 - Material Safety Data Sheets (MSDSs)

The instructor will provide you with an MSDS to review with the purpose of recognizing and identifying hazardous materials at fixed facilities. The main objective is for you to be able to identify the material and its’ hazardous characteristics and to realize that special protective clothing is required for response.

The class will be broken into teams of 4 – 5 students each. Using the following MSDS, complete the following questions and be prepared to discuss your findings and any questions that your group may have concerning MSDSs. Take 10 minutes to gather the answers to these questions.

1. What is the name of the product?

2. What are the hazardous components of the material?

3. What would be the effects on a person who inhaled this product?

4. Do you have the proper personal protective equipment as part of your normal work uniforms to enter a spill area involving this product? What type of protection is necessary?

5. Can you identify a guide page in the Emergency Response Guidebook for this product?
INSERT Vorite MSDS 7 pages
ACTIVITY 2.3 - Clues to the Presence of Hazardous Materials

Working individually, review each of the following 10 situations and identify which of the six basic clues to the presence of hazardous materials can be found. Also identify any other clues that you can find which would likely indicate the presence of hazardous materials.

You have 10 minutes to review all 10 situations!

Remember your six basic clues!
- Occupancy and Location
- Container Shape and Size
- Placards and Labels
- Shipping Papers and Facility Documents
- Markings and Colors
- Human Senses

Situation # 1
You are a law enforcement officer who has been sent to a reported vehicle accident. The accident has occurred on one of the community’s major through streets. The dispatcher advised you that the accident is a truck vs a car with multiple injuries.

Questions
- Which, if any, of the six basic clues are present?
- What other clues can you find to indicate the possible presence of hazardous materials?

Situation # 2
You are an EMT on an ambulance who has been dispatched to a public swimming pool to assist a person who is suffering from shortness of breath. While you are responding, the dispatcher notifies you that subsequent calls indicate that there are at least three other people complaining of shortness of breath.

Questions
- Which, if any, of the six basic clues are present?
- What other clues can you find to indicate the possible presence of hazardous materials?
### Situation # 3

You are an employee of the community’s public works department. You are sent to investigate complaints of a pungent and irritating odor emitting from an underground lift station in an industrial area of your community.

### Questions

1. Which, if any, of the six basic clues are present?

2. What other clues can you find to indicate the possible presence of hazardous materials?

### Situation # 4

You are an employee of the community’s public works department. You are sent to investigate complaints of a pungent and irritating odor emitting from an underground lift station in an industrial area of your community.

### Questions

1. Which, if any, of the six basic clues are present?

2. What other clues can you find to indicate the possible presence of hazardous materials?

### Situation # 5

You are an employee of the community’s public works department. You are sent to investigate complaints of a pungent and irritating odor emitting from an underground lift station in an industrial area of your community.

### Questions

1. Which, if any, of the six basic clues are present?

2. What other clues can you find to indicate the possible presence of hazardous materials?
Situation # 6

You are an Emergency Medical Technician who has been dispatched to an industrial accident at a major manufacturing facility. On your arrival you observe a yellowish colored cloud coming from the building. This gas cloud is visible from several hundred feet from the building. A security guard meets you and advises you that a chlorine tank is leaking in the building and several employees have not been accounted for.

Questions

Which, if any, of the six basic clues are present?

What other clues can you find to indicate the possible presence of hazardous materials?

Situation # 7

You are an Emergency Medical Technician who has been dispatched to an industrial accident at a major manufacturing facility. On your arrival you observe a yellowish colored cloud coming from the building. This gas cloud is visible from several hundred feet from the building. A security guard meets you and advises you that a chlorine tank is leaking in the building and several employees have not been accounted for.

Questions

Which, if any, of the six basic clues are present?

What other clues can you find to indicate the possible presence of hazardous materials?

Situation # 8

You are an Emergency Medical Technician who has been dispatched to an industrial accident at a major manufacturing facility. On your arrival you observe a yellowish colored cloud coming from the building. This gas cloud is visible from several hundred feet from the building. A security guard meets you and advises you that a chlorine tank is leaking in the building and several employees have not been accounted for.

Questions

Which, if any, of the six basic clues are present?

What other clues can you find to indicate the possible presence of hazardous materials?
Situation # 9

You are a law enforcement officer that has been sent to a residential area to investigate complaints of suspicious activities. You arrive to find a single family residence in a well-kept middle to upper income residential area. The caller, a neighbor, meets you and states that there have been unusual odors and heavy amounts of visitors coming and going from the residence at all hours. From the caller’s home you can observe several 55 gallon drums in the backyard and persons exiting the subject residence to smoke cigarettes and then immediately go back inside.

Which, if any, of the six basic clues are present?

What other clues can you find to indicate the possible presence of hazardous materials?

Situation # 10

Which, if any, of the six basic clues are present?

What other clues can you find to indicate the possible presence of hazardous materials?
Student Activities

Unit 3
ACTIVITY 3.1 - Finding the Proper Guide Page

Working independently, use the information on the following pages to properly select the appropriate guide page from the U.S. DOT Emergency Response Guidebook (ERG). Provided are six examples of information that can be used to select a proper ERG guide page. This information could be in the form of an identification number, product name or placard. Take 10 minutes to review each piece of information and determine the appropriate ERG guide page and material hazard class information from the top of each selected ERG guide page.

NOTE: Based upon the information provided, you may or may not be able to answer all of the questions asked.

Once you have completed this activity, your instructor will discuss the process.
1. Product name: "Sulfur Tetrafluoride"

What is the ID Number? ________

What is the proper guide #? _____

Is the product highlighted in the indexes to indicate that there are protective actions distances? _______

From the top border of the guide page, what is the hazard class or type of material involved?

__________________________

2. Identification #1613

What is the product name?

________________________________

What is the proper guide #? _____

Is the product highlighted in the indexes to indicate that there are protective actions distances? _______

From the top border of the guide page, what is the hazard class or type of material involved?

__________________________

3. Placard or Label

What is the Identification #? ________

What is the product name?

________________________________

What is the proper guide #? _____

From the top border of the guide page, what is the hazard class or type of material involved?

__________________________
4. Product name: "Gasoline"

What is Identification #? ________

What is the proper guide #? _____

Is the product highlighted in the indexes to indicate that there are protective actions distances? ________

From the top border of the guide page, what is the hazard class or type of material involved?

__________________________

5. Product name: Sulphuryl Fluoride

What is the proper guide #? _____

Is the product highlighted in the indexes to indicate that there are protective actions distances? ________

From the top border of the guide page, what is the hazard class or type of material involved?

__________________________

6. Placard or Label:

What is the Identification #? ________

What is the proper guide #? _____

What is the product name?

__________________________

From the top border of the guide page, what is the hazard class or type of material involved?

__________________________
Activity 3.2 - Determining Protection Measures

Instructions: Work independently. Read the following situations and answer the questions presented based upon information found in the ERG.

Situation # 1
You arrive at a vehicle accident involving a pressurized tanker truck which has rolled over. A visible vapor cloud is releasing from the tanker and there is a red placard on the tank with the numbers 1075 and the word “Butane” stenciled on the tank. It is 4:00am and the accident has occurred on a major through street with numerous homes and small businesses in the area.

Situation # 2
It is 1:00 AM and you are dispatched to a reported “anhydrous ammonia” leak at a local manufacturing facility. Upon arrival, you are met by a plant worker who states that they were working on the refrigeration system and a leak occurred. A low hanging vapor cloud is stemming from the area of the lean and covers the entire 12+ acres of the plant.

Situation # 3
You are dispatched to a local rail yard for a reported fire. Upon arrival, you observe a tank car on fire with flames coming from the area of the dome. The yard manager tells you that the car contains “Vinyl Acetate”.

Situation # 4
You go to a local industrial area for a reported chemical spill. Upon arrival, you find a stainless steel drum leaking in the middle of the parking lot with a person lying 10 feet downwind of the drum unconscious. It appears that the drum fell off of a truck during unloading. Others in the immediate area are coughing and trying to get the injured person away from the drum, however they are not having any luck getting close to the person as they are overwhelmed by the vapors.
Questions

**Situation 1**
What clues are present to indicate that hazardous materials may be involved?

_________________________________

Which ERG guide page did you select? ____

How large is the initial isolation area? ________________________________

Should you initiate an evacuation? Yes / No

If yes, what is the distance of the evacuation zone? _________________

**Situation 2**
Which ERG guide page did you select? ____

Is the material in the table of initial evacuation distances? Yes / No

How large is your initial isolation area? ________________________________

Should you initiate an evacuation? Yes / No

If yes, what is the distance of the evacuation zone? _________________

**Situation 3**
Which ERG guide page did you select? ____

Is the material in the table of initial evacuation distances? Yes / No

How large is the initial isolation area? ________________________________

Should you initiate an evacuation? Yes / No

If yes, how what is the distance of the evacuation zone? _________________

**Situation 4**
What clues are present to indicate that hazardous materials may be involved?

_________________________________

Which ERG guide page did you select? ____

Is the material in the table of initial evacuation distances? Yes / No

How large is the initial isolation area? ________________________________

Should you initiate an evacuation? Yes / No

If yes, what is the distance of the evacuation zone? _________________
Student Activities

Unit 4
Activity 4.0 - Final Scenarios

Three scenarios are provided on the video tape / DVD and in these instructions. The instructor will read aloud the information concerning each of the scenarios in parts. With each part of the information, complete the questions presented. Once the answers have been completed the instructor will play the video stopping it as necessary for discussion.

Scenario 1

**Recognition, Classification, Identification:**

You are a law enforcement officer who is sent to an industrial park for a reported suspicious person. The caller reported that possible illegal dumping of hazardous waste has occurred. Upon arrival, you observe three 55 gallon drums that have apparently been dumped on the shoulder of the road.

What clues are present to indicate hazardous materials?

_______________________________________________________________

_______________________________________________________________

From a distance you observe that the drums have a red diamond shaped label and with binoculars, you can see the word “flammable” on the label.

Which ERG guide page(s) would you select based on this information?

_________________

Further information later identifies the product as “Acetone”.

Which guide page would you now select? ___________

**Isolation:**

How far would you initially isolate? ________________

Is the product listed in the table of initial protective action distances? Yes / No
Protection:

If the containers were leaking, would you need to evacuate further than the initial isolation area? Yes / No

If yes, how far would you extend the isolation area? ____________

Would sheltering-in-place be an appropriate option for this scenario? Yes / No Explain your answer?

_______________________________________________________________

_______________________________________________________________

_______________________________________________________________

Notification:

In your community, who would you notify in order to meet the needs of this incident?

_______________________________________________________________

_______________________________________________________________

_______________________________________________________________
Scenario 2

Recognition, Classification, Identification:

You are a medic assigned to an advanced life support ambulance. On a rainy Thursday morning you receive a dispatch to an accident involving an automobile and a tanker truck.

What clues are present to indicate hazardous materials may be present?
_______________________________________________________________

When you arrive, you find the car stuck under the tanker truck, the driver of the tanker is ambulatory and uninjured. The driver of the car is trapped and the tanker has a corrosive placard on the side.

Which guide page would you select based on this information?
_________________

With binoculars you can read the four digit identification number on the placard. It reads “1830”. There is a pool of product on the ground with a large vapor cloud rising from it.

What product has been spilled? _________________________________

What guide page would you now select? __________________________

Isolation:

How far would you initially isolate? ________________

Is the product listed in the table of initial protective action distances? Yes / No

Would this be a large spill or a small spill? Large / Small
Protection:

Would you attempt to rescue the trapped victim? Yes / No
Explain your answer.

Would you need to evacuate further than the initial isolation area? Yes / No
If yes, how far would you extend the isolation area?

Would shelter-in-place be an appropriate option for this scenario? Yes / No
Explain your answer?

Notification:

In your community, who would you notify in order to meet the needs of this incident?
Scenario 3

**Recognition, Classification, Identification:**

You work as a trouble shooter for the public utilities company. Your office notifies you and your partner by radio that they have received several complaints about a strong irritating odor coming from one of the water treatment facilities.

What clues are present to indicate hazardous materials may be involved?

_______________________________________________________________

_______________________________________________________________

You arrive at the facility and detect a strong irritating odor coming from one of the chemical storage buildings. The side of the building is marked “Chlorine”. There is a yellow-greenish vapor cloud coming from the building and you know the building stores gaseous chlorine in one ton cylinders.

What guide page would you select? __________

**Isolation:**

How far would you initially isolate? ______________

Is the product listed in the table of initial protective action distances? Yes / No

Would this be a large spill or a small spill? Large / Small

**Protection:**

Would you need to evacuate further than the initial isolation area? Yes / No

If yes, how far would you extend the isolation area? __________

Would shelter-in-place be an appropriate option for this scenario? Yes / No

Explain your answer?

_______________________________________________________________

_______________________________________________________________
Notification:

In your community, who would you notify in order to meet the needs of this incident?

_______________________________________________________________

_______________________________________________________________
ACRONYMS

For the purposes of this training program, the following acronyms apply:

AHJ  Authority Having Jurisdiction
ALS  Advanced Life Support
BLS  Basic Life Support
CBRNE Chemical-Biological-Radiological-Nuclear-Energetic
DOT  Department of Transportation
EAP  Emergency Action Plan
EHS  Extremely Hazardous Substance
EMS  Emergency Medical Service
EOC  Emergency Operations Center
EOP  Emergency Operations Plan
EPA  Environmental Protection Agency
EPCRA Emergency Planning and Community Right-to-know Act
ERG  Emergency Response Guide
ERP  Emergency Response Plan
FDCA Florida Department of Community Affairs
FDEM Florida Division of Emergency Management
FDEP Florida Department of Environmental Protection
FDLE Florida Department of Law Enforcement
FDOH Florida Department of Health
FDOT Florida Department of Transportation
FOG  Field Operations Guide
IAP  Incident Action Plan
IC  Incident Commander
ICP  Incident Command Post
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICS</td>
<td>Incident Command System</td>
</tr>
<tr>
<td>HAZ-MAT</td>
<td>Hazardous Materials</td>
</tr>
<tr>
<td>HAZWOPER</td>
<td>Hazardous Waste Operations and Emergency Response</td>
</tr>
<tr>
<td>LEPC</td>
<td>Local Emergency Planning Committee</td>
</tr>
<tr>
<td>MSDS</td>
<td>Materials Safety Data Sheet</td>
</tr>
<tr>
<td>NFPA</td>
<td>National Fire Protection Association</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organization</td>
</tr>
<tr>
<td>NIMS</td>
<td>National Incident Management System</td>
</tr>
<tr>
<td>NOS</td>
<td>Not Otherwise Specified</td>
</tr>
<tr>
<td>NRP</td>
<td>National Response Plan</td>
</tr>
<tr>
<td>ORM</td>
<td>Other Regulated Material</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Administration</td>
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<tr>
<td>PIO</td>
<td>Public Information Officer</td>
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<td>Regional Domestic Security Task Force</td>
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<tr>
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<td>Standard Operating Guidelines</td>
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<tr>
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<td>State Warning Point</td>
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<tr>
<td>WMD</td>
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