

*NFIRS 5.0 Self Study Program
Hazardous Materials Module: NFIRS 7*

Objectives

After completing the HazMat Module the student will be able to:

1. Describe when the HazMat module is to be used.
2. Demonstrate how to complete the HazMat Module and identify appropriate other modules given the scenario of a hypothetical incident.

Pre-Test #7 - Hazardous Materials (HazMat)
Module

1. A Basic Module must be completed if the HazMat Module is completed.
 - (a) True
 - (b) False

2. The HazMat Module is a required NFIRS Module.
 - (a) True
 - (b) False

3. The number of civilian injured as a result of contact or exposed to a hazardous material is recorded as Casualties on the Basic Module.
 - (a) True
 - (b) False

4. The Hazardous Materials Module can be used to record more than one hazardous material involved at the incident.
 - (a) True
 - (b) False

5. The reportable HazMat Incident can be any incident type.
 - (a) True
 - (b) False

*Using the
Hazardous
Materials*

Using the Hazardous Materials Module

Use the “Optional” Hazardous Materials Module when the Basic Module (Block H₃ – Hazardous Materials Release) indicates “other” for hazardous material. Its purpose is to document reportable HazMat incidents. A reportable HazMat incident is one in which specialized HazMat resources were dispatched or used, or should have been dispatched or used, for assessing, mitigating, or managing the situation. The HazMat Module is also used when an incident involves a release or spill of hazardous materials that exceeds 55 gallons.

NOTE: Nothing in the NFIRS reporting system definition is meant to alter compliance with state or local HazMat reporting requirements. In states with mandatory reporting, the state program manager determines which optional modules (EMS, Hazmat, Wildland, etc.) are to be submitted to the state.

The HazMat module permits hazardous materials incidents to be profiled in depth for incident management analysis and response-strategy development. It collects relevant information on:

- Hazardous materials identification
- Container information
- Release amounts and location
- Actions taken
- Mitigating factors

If more than one hazardous material is involved, complete one module for each HazMat released. Note that the term release is intended to include a spill.

Section A

Section A: FDID, State, Incident Number, Incident Date, Exposure Number, Haz Number

This information is essentially the same as the information in the Basic Module with the exception of the “HazMat Number (Haz Number).” As noted above, if more than one HazMat was involved, complete one module for each HazMat released.

NFIRS 5.0 SELF STUDY PROGRAM
HAZARDOUS MATERIALS (HAZMAT) MODULE: NFIRS 7

A	<input type="text"/> FDID ☆	<input type="text"/> State ☆	<input type="text"/> MM <input type="text"/> DD Incident Date ☆	<input type="text"/> YYYY	<input type="text"/> Station	<input type="text"/> Incident Number ☆	<input type="text"/> Exposure ☆	<input type="text"/> Haz No ☆	<input type="checkbox"/> Delete <input type="checkbox"/> Change	NFIRS - 7 HazMat
----------	--------------------------------	---------------------------------	---	---------------------------	---------------------------------	---	------------------------------------	----------------------------------	--	-----------------------------

Sequentially number each HazMat released in the field “Haz Number” in Section A. Begin with “01” for the first chemical, “02” for the second, and so forth. In an automated system, some systems may allow you to enter a date element one time and it will automatically fill in all fields where that information is required in Section A. When using hard copies you will have to enter the Section A information for every module.

Section B

Section B: HazMat ID

B	HazMat ID	<input type="text"/> UN Number	<input type="text"/> DOT Hazard Classification	<input type="text"/> CAS Registration Number	<input type="text"/> Chemical Name ☆	<input type="text"/>
----------	------------------	-----------------------------------	---	---	---	----------------------

The purpose of Section B is to identify the specific hazardous materials involved in an incident as accurately as possible. Several different identification systems have been developed that can aid fire department personnel with identifying hazardous materials.

- UN Number (United Nations Standards for the Identification of Hazardous Materials)
- DOT Hazard Classification (Department of Transportation Classification)
- CAS Registration Number (Chemical Abstract Service Classification)
- Chemical Name

Not all of these systems are needed to identify the hazardous materials. In fact, in an automated NFIRS system, many of these data elements are cross-referenced in the database. By entering one piece of information, the system will automatically fill some or all of the other HazMat identification fields.

Example:

If you enter the CAS Registration Number, the NFIRS Client Tool Software System will fill in all other HazMat ID fields. No further lookup is necessary.

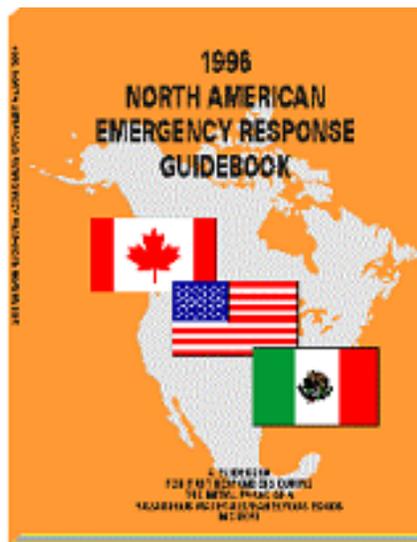
Chemicals are listed in the U.S. Fire Administration publication Hazardous Materials Guide for First Responders.

In some cases, it may take more than one piece of information to accurately identify a hazardous material.

Example:

The UN Number does not necessarily identify a specific chemical. To accurately identify the chemical, it must be used in conjunction with the chemical or trade name for that specific chemical.

The **UN Number** is a four-digit number assigned to the hazardous material that conforms to United Nations (UN) standards for the identification of hazardous materials in international transportation. These numbers may be found in a variety of reference materials. The North American Emergency Response Guidebook (NAERG) published by the Research and Special Programs Administration, U.S. Department of Transportation (DOT) is one reference.



The Hazardous Materials Guide for First Responders published by the U.S. Fire Administration is another important reference document. In some cases, a single UN

Number will be assigned to several materials with similar properties. Not all hazardous materials have been assigned UN Numbers.

The primary hazards associated with various hazardous materials categories are described by the **DOT Hazard Classification System**. Hazardous materials warnings should appear on placards or labels on the materials during transportation. Since many materials have multiple hazards, the DOT hazard classification may not describe all of the potential hazards faced by emergency responders at a HazMat incident.

The DOT hazard classification consists of a single digit hazard-class code followed by a decimal point and a single digit code for the division. For the purpose of documentation, this two-part hazard class/division code has been converted to a two-digit code. The proper entry in this field is the two-digit code that corresponds with the hazard classification and division as found on a placard or label of the hazardous material.

FIREFIGHTER SAFETY ACT OF 1990

Public Law 101-446, the Firefighter Safety Study Act of 1990, directs the Fire Administrator of the United States Fire Administration to consult and coordinate a review of information available to responders with the government agencies, private sector firms, and first responders. The goal of these efforts is to improve the accuracy and suitability of response guidance so that safer and more effective responses to hazardous materials incidents can be conducted at the state and local levels.

The Hazardous Materials Guide for First Responders is the result of an extensive study of available hazardous materials response resources for first responders undertaken by the United States Fire Administration (USFA) as part of the Firefighter Safety Study Act. The study concluded that, while several excellent and technically accurate resources are available, none are directed to the specific needs of the first responder trained at the Awareness or Operations Levels of Training; the training levels of most first responders.

This book provides important information for the initial response to both transportation and fixed facility incidents. It has been designed to present the first responder with the maximum amount of useful key information in a limited amount of space. As with any reference, it cannot include all the information that might be useful or discuss all situations that might occur; nor can it replace the training and experience of individual responders. The information contained in this book has been reviewed by several sources and is as technically accurate as possible. For major incidents it will be necessary to obtain more detailed information from other resources as well as more advanced expertise from those with more extensive training.

DOT Hazard Classification Codes

Class 1 - Explosives

- 11** Division 1.1 Explosives with mass explosion hazard
- 12** Division 1.2 Explosives with projectile hazard
- 13** Division 1.3 Explosives w/ predominant fire hazard
- 14** Division 1.4 Explosives with no significant blast
- 15** Division 1.5 Very insensitive explosives; blasting
- 16** Division 1.6 Extremely insensitive detonating articles

Class 2 – Gases

- 21** Division 2.1 Flammable gases
- 22** Division 2.2 Non-flammable
- 23** Division 2.3 Gases toxic by inhalation
- 24** Division 2.4 Corrosive gases (Canada)

Class 3 - Flammable/Combustible Liquids

- 30** Flammable/Combustible Liquids

Class 4 - Flammable Solids

- 41** Division 4.1 Flammable solids
- 42** Division 4.2 Spontaneously combustible materials
- 43** Division 4.3 Dangerous when wet materials

Class 5 - Oxidizers and Organic peroxides

- 51** Division 5.1 Oxidizers
- 52** Division 5.2 Organic peroxides

Class 6 – Toxic materials and Infectious Substances

- 61** Division 6.1 Toxic materials
- 62** Division 6.2 Infectious substances

Class 7 - Radioactive materials

- 70** Radioactive materials

Corrosive materials

- 80** Corrosive materials

Class 9 - Miscellaneous dangerous goods

- 91** Division 9.1 Miscellaneous dangerous goods (Canada)
- 92** Division 9.2 Environmentally hazardous substances (Canada)
- 93** Division 9.3 Dangerous wastes (Canada)

By itself, the DOT hazard class and division does not identify a specific chemical. To do so, it must appear in conjunction with the CAS Number or chemical or trade name.

The **CAS Registration Number** is the identification number assigned to a chemical by the Chemical Abstract Service (CAS) of the Chemical Abstract Society. This number may be found in reference materials, on Material Safety Data Sheets (MSDS), and on some product labels. Not all hazardous materials have an assigned CAS Number.

In an automated system, entry of the CAS Registration Number should fill in all other HazMat ID fields without any further lookup.

The **Chemical Name** is the standard chemical or trade name by which the hazardous material is commonly known. Products from different manufacturers with similar chemical ingredients may have different trade names.

The proper entry in this field is the chemical or trade name of the hazardous material as shown on the MSDS, product label, packaging, or container.

Example:

A common herbicide used for household applications may be entered by the trade name "Weed-B-Gone™," or by the chemical name "2,4-Dichlorophenoxyacetic acid (2-4D)."

Section C

Section C: Container Information

Section C identifies the type or configuration of the container used to transport and/or store the hazardous material and the amount of material the container was designed to hold. Complete information on the types of containers involved in HazMat incidents will provide guidance to regulators that establish container design requirements, and will aid in prevention and code-development efforts.

Block C₁

C₁ Container Type

 Container Type

More hazardous materials? Use additional sheets.

Block C₁, “Container Type”, refers to the type or configuration of the container, equipment, or facility used to transport and/or store the hazardous material. Enter the two-digit code for the corresponding container type from the list provided in the NFIRS Handbook or the Quick Reference Guide (QRG).

Block C₂ & C₃

C₂ Estimated Container Capacity

--	--	--	--	--	--	--	--	--	--	--	--

 Capacity: by volume or weight

C₃ Units: Capacity Check one box

VOLUME		WEIGHT	
11	Ounces	21	<input type="checkbox"/> Ounces
12	Gallons	22	<input type="checkbox"/> Pounds
13	Barrels: 42 gal.	23	<input type="checkbox"/> Grams
14	Liters	24	<input type="checkbox"/> Kilograms
15	Cubic feet		
16	Cubic meters		

Enter the estimated amount of material the container was designed to hold, by volume or weight, in Block C₂. Report the container capacity as two data elements. One is a numeric entry and expresses quantity. The other defines the unit of measure—either volume or weight. Check the appropriate box in Block C₃. Both must be reported for the data to be meaningful.

Block E₂

E₂ Released Into
<input type="text"/>
Released into

The purpose of Block E₂ is to provide information on the general environmental impact and, when used in conjunction with other data elements, how extensive that impact is. This field identifies the general region(s) of the environment contaminated by the hazardous material after its release.

<p style="text-align: center;">Released Into</p> <p>Enter the code that best describes the environment contaminated by the hazardous material.</p> <ol style="list-style-type: none">1. Air2. Water3. Ground4. Water and ground5. Air and ground6. Water and air7. Air, water, and ground8. Confined, no environmental impact - not released into air, water, ground
--

NOTE: If more than one hazardous material is involved in the incident, the remainder of the module is completed only for the first (most significant) material involved.

Section F

Section F: Released From and Population Density

Block F₁

F₁ Released From:
Check all applicable boxes
<input type="checkbox"/> Below grade
1 <input type="checkbox"/> Inside/on structure
2 <input type="checkbox"/> Outside of structure

Block F₂

Record physical location from where the hazardous material was released in Block F₁. Was it below grade? Was it inside or outside a structure? If the release was inside (or on) a structure, record which story it occurred on?

F₂	Population Density
1	<input type="checkbox"/> Urban
2	<input type="checkbox"/> Suburban
3	<input type="checkbox"/> Rural

Provide a general description of the population density in the area adjacent of the hazardous materials release in Block F₂. Was the release in an urban, suburban, or rural area?

Section G

**Section G: Area Affected, Area Evacuated,
Estimated Number of People Evacuated, and
Estimated Number of Buildings Evacuated**

Information on the area affected by a hazardous materials release, when used in conjunction with other data elements, will assist in understanding the magnitude of the release. In turn, this information can be used to guide future training and incident management efforts.

Block G₁

G₁	Area Affected
1	<input type="checkbox"/> Square Feet
2	<input type="checkbox"/> Blocks
3	<input type="checkbox"/> Square Miles
<input type="text"/> , <input type="text"/>	
Enter measurement	

Block G₁ records the size of the area or space directly affected by the hazardous material release. Report the area affected as two data elements. The first defines the unit of measurement (square feet, blocks, or square miles). The second is a numeric entry that expresses the actual measurement. Both must be reported for the data to be meaningful.

Block G₂

G₂	Area Evacuated	<input type="checkbox"/> None
1	<input type="checkbox"/> Square Feet	<input type="text"/> , <input type="text"/>
2	<input type="checkbox"/> Blocks	Enter
3	<input type="checkbox"/> Square Miles	Measurement

Block G₂, Area Evacuated, records the amount of area or space evacuated as a result of the hazardous material release or potential release.

Block G₂ is also reported as two data elements. The first defines the unit of measurement and the second is the numeric expression of the measurement. Again, both entries must be made for the data to be meaningful.

Block G₃

G₃	Estimated Number of People Evacuated
	<input type="text"/> , <input type="text"/>

Block G₃ documents the estimated number of people evacuated due to the hazardous material release or potential release.

Block G₄

G₄	Estimated Number of Buildings Evacuated
	<input type="text"/> , <input type="text"/> <input type="checkbox"/> None

Block G₄ notes the estimate number of the buildings evacuated as a result of the hazardous material release or potential release.

Section H

H	HazMat Actions Taken
	Enter up to three actions taken
<input type="text"/>	<input type="text"/>
	Primary Action Taken (1)
<input type="text"/>	<input type="text"/>
	Additional Action Taken (2)
<input type="text"/>	<input type="text"/>
	Additional Action Taken (3)

There are particular actions taken at a hazardous material release incident scene by personnel specifically trained and equipped to mitigate the hazards that might arise. In this section you can document up to three of the most significant hazmat actions taken.

Note: Actions taken by fire service personnel who are not specifically trained and equipped to mitigate hazardous material incidents are recorded in the Basic Module.

Section I

Section I: Fire or Explosion Involved With a Release

I	If fire or explosion is involved with a release, which occurred first?
1	<input type="checkbox"/> Ignition
2	<input type="checkbox"/> Release
	U <input type="checkbox"/> Undetermined

The purpose of this section is to collect information on the causal relationship of events occurring in situations involving fire or explosion in conjunction with a hazardous material release. Based on the box marked, it may be possible to show which occurred first—the release or the fire/explosion.

Section J: Cause of Release

J	Cause of Release ☆
1	<input type="checkbox"/> Intentional
2	<input type="checkbox"/> Unintentional release
3	<input type="checkbox"/> Container/containment failure
4	<input type="checkbox"/> Act of nature
5	<input type="checkbox"/> Cause under investigation
U	<input type="checkbox"/> Cause undetermined after investigation

Use Section J to document the general cause of the release or threatened release of a hazardous material. Aggregate information on the cause of releases can be used to guide prevention and enforcement efforts.

Example:

A hazardous material release resulting from a rusted drum would be recorded as "Container/containment failure."

Section K

Section K: Factors Contributing to Release

K Factors Contributing to Release	
Enter up to three contributing factors	
<input type="text"/>	<input type="text"/>
Factor Contributing To Release (1)	
<input type="text"/>	<input type="text"/>
Factor Contributing To Release (2)	
<input type="text"/>	<input type="text"/>
Factor Contributing To Release (3)	

Record the factors present at the time and location of the incident that contributed to the release or threatened release in this section. You can enter up to three of the most significant contributing factors and their accompanying codes.

Section L

Section L: Mitigating Factors or Impediments

L Factors Affecting Mitigation	
Enter up to three factors or impediments that affected the mitigation of the incident	
<input type="text"/>	<input type="text"/>
Factor or impediment (1)	
<input type="text"/>	<input type="text"/>
Factor or impediment (2)	
<input type="text"/>	<input type="text"/>
Factor or impediment (3)	

If there were factors that impeded the fire department's mitigation of the release or threatened release, record the three primary ones present at the time and location of the incident in Section L. This information is of particular importance in cases where delays in mitigating the incident may have contributed to the severity of the incident.

Section M

Section M: Equipment Involved in Release

M	Equipment Involved In Release
	<input type="checkbox"/> None
<input type="text"/>	<input type="text"/>
Equipment involved in release	
Brand	<input type="text"/>
Model	<input type="text"/>
Serial Number	<input type="text"/>
Year	<input type="text"/>

Record data about equipment that either failed, or while working properly, allowed the release or threatened release of hazardous materials in Section M. Write a description on the lines provided and enter a code for the equipment, along with the relevant brand, model, serial number, and year.

NOTE: The code set table used for this data element is the same set that is used for EQUIPMENT INVOLVED IN IGNITION in the Fire Module. Use the codes listed for that data element in the Quick Reference Guide.

Information on the type of equipment involved in the release can be used to guide prevention, enforcement, and product design efforts. Specific information on the year, brand, and serial number will assist in product recall efforts.

Section O

Section O: HazMat Disposition

O	HazMat Disposition ☆
1	<input type="checkbox"/> Completed by fire service only
2	<input type="checkbox"/> Completed w/ fire service present
3	<input type="checkbox"/> Released to local agency
4	<input type="checkbox"/> Released to county agency
5	<input type="checkbox"/> Released to state agency
6	<input type="checkbox"/> Released to federal agency
7	<input type="checkbox"/> Released to private agency
8	<input type="checkbox"/> Released to property owner or manager

Use Section O to indicate whether the fire department completed the handling of the HazMat incident or, instead, it was released to another agency. This information helps identify the extent of fire department involvement in resolving the particular hazmat incident. The section also provides information about how frequently other agencies or contractors are used for incident mitigation.

Section P

Section P: HazMat Civilian Casualties

In this section, record data on the number of civilians killed or injured as a result of their contact with or exposure to hazardous materials that have been spilled or released. This information will provide a concise measure of the scope of human costs associated with HazMat incidents.

P	HazMat Civilian Casualties
	Deaths Injuries
	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

Make one entry to record the number of civilian deaths and the number of civilian injuries as a result of their contact or exposure to the hazardous material.

The Civilian Fire Casualty Module (NFIRS-4) should NOT be used for this purpose unless the release resulted in a fire and the civilian(s) were injured or killed as a result of the fire. Instead, the optional EMS Module (NFIRS-6) can be used

for each non-fire service person killed or injured as a result of contact with or exposure to hazardous materials.

Complete the Fire Service Casualty Module (NFIRS-5) for each fire service member killed or injured as a result of contact with or exposure to hazardous materials.

Summary

SUMMARY

The optional HazMat Module is used to document reportable HazMat incidents. For an incident to be reportable, it generally requires that specialized HazMat resources either were or should have been dispatched or used. An incident is also reportable when releases or spills of hazardous materials that exceeds 55 gallons.

The need to comply with state or local HazMat reporting requirements is not altered by the completion of this module.

Accurate data from the HazMat Module can provide in-depth information that can be used for management analysis and also for response-strategy development.

EXAMPLE: CHLORINE LEAK INCIDENT

Directions: Read the call information in the example below. Then look at the completed Hazardous Materials Module Form. Look at each section and follow along with the proper use of the information as applicable to the Hazardous Materials Module.

At 1705 hours, Department FDID # TR10 is called to an incident at a commercial building which stores chlorine and other similar products. A vapor has been observed coming from a first-floor window. Engines 1 and 3, HazMat Unit 1, and Battalion 3 are dispatched and arrive on the scene at 1718 hours. The weather is cloudy, with wind conditions at 15 miles per hour, steady, coming from the south. It is 80 degrees Fahrenheit.

The building is almost 25 years old, constructed of noncombustible masonry walls. The roof is metal with composition covering. A 120-unit apartment building is located approximately 500 feet northwest of the commercial building. There are no other exposures.

Units find a chlorine leak is of major proportions. The vapor cloud is growing as the fire department personnel arrive affecting an area around the building of 100 square-feet. An employee reports that the seal at the bottom of a 100-cubic foot chlorine gas tank has failed, and most of the gas has already escaped. Three employees have collapsed in the parking lot, breathing with difficulty but conscious. EMS Unit 12 was dispatched. Upon arrival at the scene, Unit 12 evacuated the building and moved approximately 50 employees outside the 100-foot radius from the building.

The units on the scene conducted a primary search and did not locate any other victims. The HazMat Unit initiated vapor control and control of run-off. The EMS Unit treated the three employees for moderate chlorine gas inhalation and transported them to a local hospital, where they recovered after several days.

The residents of the apartment building were alerted but the wind remained constant and evacuation was not necessary.

The gas tank leaked until all gas was released. No other tanks were affected. The incident, reported as # 9900034, was declared secure at 1935.

**NFIRS 5.0 SELF STUDY PROGRAM
HAZARDOUS MATERIALS (HAZMAT) MODULE: NFIRS 7**

A	FDID <input type="text" value="TR100"/> ☆	State <input type="text" value="WI"/> ☆	Incident Date <input type="text" value="10"/> <input type="text" value="26"/> <input type="text" value="2002"/> ☆	Station <input type="text" value="001"/> ☆	Incident Number <input type="text" value="9900034"/> ☆	Exposure <input type="text" value="000"/> ☆	Haz No <input type="text" value="00"/> ☆	<input type="checkbox"/> Delete <input type="checkbox"/> Change	NFIRS - 7 HazMat
----------	---	---	---	--	--	---	--	--	-----------------------------

B	UN Number <input type="text" value=""/>	DOT Hazard Classification <input type="text" value="23"/>	CAS Registration Number <input type="text" value=""/>	Chemical Name <input type="text" value="Chlorine"/> ☆
----------	---	---	---	---

C1 Container Type <input type="text" value="2"/> <input type="text" value="1"/> Container Type <div style="border: 1px solid black; padding: 5px; width: fit-content;"> More hazardous materials? Use additional sheets. </div>	C2 Estimated Container Capacity <input type="text" value="000"/> , <input type="text" value="000"/> , <input type="text" value="100"/> Capacity: by volume or weight C3 Units: Capacity Check one box <table style="width:100%;"> <tr> <td>VOLUME</td> <td>WEIGHT</td> </tr> <tr> <td>11 <input type="checkbox"/> Ounces</td> <td>21 <input type="checkbox"/> Ounces</td> </tr> <tr> <td>12 <input type="checkbox"/> Gallons</td> <td>22 <input type="checkbox"/> Pounds</td> </tr> <tr> <td>13 <input type="checkbox"/> Barrels: 42 gal.</td> <td>23 <input type="checkbox"/> Grams</td> </tr> <tr> <td>14 <input type="checkbox"/> Liters</td> <td>24 <input type="checkbox"/> Kilograms</td> </tr> <tr> <td>15 <input checked="" type="checkbox"/> Cubic feet</td> <td></td> </tr> <tr> <td>16 <input type="checkbox"/> Cubic meters</td> <td></td> </tr> </table>	VOLUME	WEIGHT	11 <input type="checkbox"/> Ounces	21 <input type="checkbox"/> Ounces	12 <input type="checkbox"/> Gallons	22 <input type="checkbox"/> Pounds	13 <input type="checkbox"/> Barrels: 42 gal.	23 <input type="checkbox"/> Grams	14 <input type="checkbox"/> Liters	24 <input type="checkbox"/> Kilograms	15 <input checked="" type="checkbox"/> Cubic feet		16 <input type="checkbox"/> Cubic meters		D1 Estimated Amount Released ☆ <input type="text" value="000"/> , <input type="text" value="000"/> , <input type="text" value="100"/> Amount released: by volume or weight D2 Units: Released Check one box <table style="width:100%;"> <tr> <td>VOLUME</td> <td>WEIGHT</td> </tr> <tr> <td>11 <input type="checkbox"/> Ounces</td> <td>21 <input type="checkbox"/> Ounces</td> </tr> <tr> <td>12 <input type="checkbox"/> Gallons</td> <td>22 <input type="checkbox"/> Pounds</td> </tr> <tr> <td>13 <input type="checkbox"/> Barrels: 42 gal.</td> <td>23 <input type="checkbox"/> Grams</td> </tr> <tr> <td>14 <input type="checkbox"/> Liters</td> <td>24 <input type="checkbox"/> Kilograms</td> </tr> <tr> <td>15 <input checked="" type="checkbox"/> Cubic feet</td> <td></td> </tr> <tr> <td>16 <input type="checkbox"/> Cubic meters</td> <td></td> </tr> </table>	VOLUME	WEIGHT	11 <input type="checkbox"/> Ounces	21 <input type="checkbox"/> Ounces	12 <input type="checkbox"/> Gallons	22 <input type="checkbox"/> Pounds	13 <input type="checkbox"/> Barrels: 42 gal.	23 <input type="checkbox"/> Grams	14 <input type="checkbox"/> Liters	24 <input type="checkbox"/> Kilograms	15 <input checked="" type="checkbox"/> Cubic feet		16 <input type="checkbox"/> Cubic meters		E1 Physical State When Released 1 <input type="checkbox"/> Solid 2 <input type="checkbox"/> Liquid 3 <input checked="" type="checkbox"/> Gas U <input type="checkbox"/> Undetermined E2 Released Into <input type="text" value="2"/> Released into
VOLUME	WEIGHT																														
11 <input type="checkbox"/> Ounces	21 <input type="checkbox"/> Ounces																														
12 <input type="checkbox"/> Gallons	22 <input type="checkbox"/> Pounds																														
13 <input type="checkbox"/> Barrels: 42 gal.	23 <input type="checkbox"/> Grams																														
14 <input type="checkbox"/> Liters	24 <input type="checkbox"/> Kilograms																														
15 <input checked="" type="checkbox"/> Cubic feet																															
16 <input type="checkbox"/> Cubic meters																															
VOLUME	WEIGHT																														
11 <input type="checkbox"/> Ounces	21 <input type="checkbox"/> Ounces																														
12 <input type="checkbox"/> Gallons	22 <input type="checkbox"/> Pounds																														
13 <input type="checkbox"/> Barrels: 42 gal.	23 <input type="checkbox"/> Grams																														
14 <input type="checkbox"/> Liters	24 <input type="checkbox"/> Kilograms																														
15 <input checked="" type="checkbox"/> Cubic feet																															
16 <input type="checkbox"/> Cubic meters																															

Complete the remainder of this form only for the first hazardous material involved in this incident. F1 Released From: Check all applicable boxes <input type="checkbox"/> Below grade 1 <input checked="" type="checkbox"/> Inside/on structure <input type="text" value="001"/> Story of release 2 <input type="checkbox"/> Outside of structure	F2 Population Density 1 <input checked="" type="checkbox"/> Urban 2 <input type="checkbox"/> Suburban 3 <input type="checkbox"/> Rural	G2 Area Evacuated <input type="checkbox"/> None 1 <input checked="" type="checkbox"/> Square Feet <input type="text" value="0"/> , <input type="text" value="100"/> 2 <input type="checkbox"/> Blocks Enter Measurement 3 <input type="checkbox"/> Square Miles	H HazMat Actions Taken Enter up to three actions taken <input type="text" value="13"/> <input type="text" value=""/> Confinement Primary Action Taken (1) <input type="text" value="22"/> <input type="text" value=""/> Control runoff Additional Action Taken (2) <input type="text" value="28"/> <input type="text" value=""/> Protect civilians Additional Action Taken (3)
G1 Area Affected 1 <input checked="" type="checkbox"/> Square Feet 2 <input type="checkbox"/> Blocks 3 <input type="checkbox"/> Square Miles <input type="text" value=""/> , <input type="text" value=""/> Enter measurement		G3 Estimated Number of People Evacuated <input type="text" value="000"/> , <input type="text" value="050"/>	I If fire or explosion is involved with a release, which occurred first? 1 <input type="checkbox"/> Ignition U <input type="checkbox"/> Undetermined 2 <input type="checkbox"/> Release

J Cause of Release ☆ 1 <input type="checkbox"/> Intentional 2 <input type="checkbox"/> Unintentional release 3 <input checked="" type="checkbox"/> Container/containerment failure 4 <input type="checkbox"/> Act of nature 5 <input type="checkbox"/> Cause under investigation U <input type="checkbox"/> Cause undetermined after investigation	K Factors Contributing to Release Enter up to three contributing factors <input type="text" value="54"/> <input type="text" value=""/> Other part failure/Leak Factor Contributing To Release (1) <input type="text" value=""/> <input type="text" value=""/> Factor Contributing To Release (2) <input type="text" value=""/> <input type="text" value=""/> Factor Contributing To Release (3)	L Factors Affecting Mitigation Enter up to three factors or impediments that affected the mitigation of the incident <input type="text" value="NN"/> <input type="text" value=""/> None Factor or impediment (1) <input type="text" value=""/> <input type="text" value=""/> Factor or impediment (2) <input type="text" value=""/> <input type="text" value=""/> Factor or impediment (3)
---	--	---

M Equipment Involved In Release <input checked="" type="checkbox"/> None <input type="text" value=""/> Equipment involved in release Brand <input type="text" value=""/> Model <input type="text" value=""/> Serial Number <input type="text" value=""/> Year <input type="text" value=""/>	N Mobile Property Involved in Release <input checked="" type="checkbox"/> None <input type="text" value=""/> Mobile property type <input type="text" value=""/> Mobile property make <input type="text" value=""/> Year Model <input type="text" value=""/> State License Plate Number <input type="text" value=""/> DOT Number/ ICC Number	O HazMat Disposition ☆ 1 <input type="checkbox"/> Completed by fire service only 2 <input type="checkbox"/> Completed w/ fire service present 3 <input type="checkbox"/> Released to local agency 4 <input type="checkbox"/> Released to county agency 5 <input type="checkbox"/> Released to state agency 6 <input type="checkbox"/> Released to federal agency 7 <input type="checkbox"/> Released to private agency 8 <input checked="" type="checkbox"/> Released to property owner or manager P HazMat Civilian Casualties Deaths <input type="text" value="000"/> Injuries <input type="text" value="000"/> NFIRS-7 Revision
---	--	---

EXERCISE SCENARIO 7-1: CARGO TANK ROLLOVER

Directions: Read the call information in the exercise below. Use the information provided to complete the Hazardous Material Module form. Compare your work to the answers provided on the subsequent completed Hazardous Material Module form. If your answers are different from the ones provided, read over the Hazardous Material Module again.

At 0630 hours on Monday, May 8, 1998, Buckley Fire Communications Center (FDID TR100) was notified that a cargo tanker had overturned on the southbound off-ramp from the 5th Street Bridge to Highway 287, Buckley, WI 12345. The Communication Center assigned the number 9802436 to the incident and dispatched two engines and one truck company (each with a crew of three), a rescue unit (two crew members), and a battalion chief. While enroute, the dispatcher advised responding units that numerous calls were being received from the residential subdivision south of the incident. Citizens were reporting a foul odor and individuals that were having difficulty breathing.

At 0636 hours, Engine 2 with a crew of 4 arrived on the scene and reported that a 6,000-gallon MC-307 cargo tanker had rolled on its side and was spilling its load down the street and into the river. Engine 2 further reported that the tanker had a placard bearing the UN ID #1092. The DOT Emergency Response Guide was used to identify the material as Acrolein, Inhibited. The truck driver was trapped in the vehicle and considered to be either unconscious or dead. Engine 2 requested that the Gorman County Hazardous Materials Response Team (FDID 08900) and a private ambulance with 2 personnel be dispatched.

Upon his arrival at 0640 hours, the Battalion Chief ordered an evacuation of, at least, 600 feet in all directions. He also requested the police department to evacuate a downwind area 1 1/2 miles in width and 3 miles in length. Approximately 200 homes in this sub-urban area were affected by the evacuation order. The BC also requested that six more private ambulances with 2 persons each be dispatched to a staging area and ordered both highways shut down to traffic. Two additional engines with a crew of 3 each were dispatched to assist with the evacuation. Fire department personnel established a decontamination area and deployed protective hose-lines while awaiting the hazmat response team.

About 30 minutes later, the two-unit, twelve-member HazMat response team arrived and assumed operational control of the incident. (Their incident number was 9800226.) Over the next six hours, the hazmat team contained the spill by placing dikes in the street, absorbent booms in the river, and stopped the leak by securing the dome cover. The driver (who apparently died from inhalation of the vapors) was removed, decontaminated, and released to the coroner. The incident was declared under control at 1310 hours.

Eventually, the tanker was off-loaded by a private contractor and was righted. A vacuum truck and absorbent materials provided by a private contractor were used to remove the remaining chemical hazard from the street and river. It was estimated that 1,000 gallons of

Acrolein was released as a result of the incident. A total of sixteen civilians and two police officers complaining of respiratory distress were transported to the hospital by private ambulances. Fire department personnel suffered no casualties. The HazMat team left the scene at 1525 hours and the last fire department unit cleared the scene at 1530 hours. Upon investigation, the State Police determined that the driver lost control of the tanker when he was exiting onto the off-ramp at an excessive speed. Part of the problem was that the brakes failed to operate properly.

**NFIRS 5.0 SELF STUDY PROGRAM
HAZARDOUS MATERIALS (HAZMAT) MODULE: NFIRS 7**

A	FDID <input type="text" value="TR11010"/> <input type="checkbox"/> Delete	State <input type="text" value="WI"/> <input type="checkbox"/> Change	Incident Date <input type="text" value="05/08/1998"/> <input type="checkbox"/>	Station <input type="text" value="001"/> <input type="checkbox"/>	Incident Number <input type="text" value="9802436"/> <input type="checkbox"/>	Exposure <input type="text" value="001"/> <input type="checkbox"/>	Haz No <input type="text" value=""/> <input type="checkbox"/>	NFIRS - 7 HazMat
----------	---	---	--	---	---	--	---	-----------------------------

B	UN Number <input type="text" value="1092"/>	DOT Hazard Classification <input type="text" value="23"/>	CAS Registration Number <input type="text" value=""/>	Chemical Name <input type="text" value="Acrolein"/>
----------	---	---	---	---

C1 Container Type <input type="text" value="42"/> Container Type <div style="border: 1px solid black; padding: 5px; width: fit-content;">More hazardous materials? Use additional sheets.</div>	C2 Estimated Container Capacity <input type="text" value="000"/> , <input type="text" value="006"/> , <input type="text" value="000"/> Capacity: by volume or weight	D1 Estimated Amount Released <input type="checkbox"/> <input type="text" value="000"/> , <input type="text" value="001"/> , <input type="text" value="000"/> Amount released: by volume or weight	E1 Physical State When Released 1 <input type="checkbox"/> Solid 2 <input checked="" type="checkbox"/> Liquid 3 <input type="checkbox"/> Gas U <input type="checkbox"/> Undetermined
	C3 Units: Capacity Check one box VOLUME WEIGHT 11 <input type="checkbox"/> Ounces 21 <input type="checkbox"/> Ounces 12 <input type="checkbox"/> Gallons 22 <input type="checkbox"/> Pounds 13 <input type="checkbox"/> Barrels: 42 gal. 23 <input type="checkbox"/> Grams 14 <input type="checkbox"/> Liters 24 <input type="checkbox"/> Kilograms 15 <input checked="" type="checkbox"/> Cubic feet 16 <input type="checkbox"/> Cubic meters	D2 Units: Released Check one box VOLUME WEIGHT 11 <input type="checkbox"/> Ounces 21 <input type="checkbox"/> Ounces 12 <input checked="" type="checkbox"/> Gallons 22 <input type="checkbox"/> Pounds 13 <input type="checkbox"/> Barrels: 42 gal. 23 <input type="checkbox"/> Grams 14 <input type="checkbox"/> Liters 24 <input type="checkbox"/> Kilograms 15 <input type="checkbox"/> Cubic feet 16 <input type="checkbox"/> Cubic meters	E2 Released Into <input type="text" value="7"/> Released into

F1 Released From: Check all applicable boxes <input type="checkbox"/> Below grade 1 <input type="checkbox"/> Inside on structure <input type="text" value=""/> Story of release 2 <input checked="" type="checkbox"/> Outside of structure	F2 Population Density 1 <input type="checkbox"/> Urban 2 <input checked="" type="checkbox"/> Suburban 3 <input type="checkbox"/> Rural	G2 Area Evacuated <input type="checkbox"/> None 1 <input type="checkbox"/> Square Feet <input type="text" value="0"/> , <input type="text" value="003"/> 2 <input type="checkbox"/> Blocks Enter Measurement 3 <input checked="" type="checkbox"/> Square Miles	H HazMat Actions Taken Enter up to three actions taken <input type="text" value="13"/> <input type="text" value="Spill Control"/> Primary Action Taken (1) <input type="text" value="22"/> <input type="text" value="Control runoff"/> Additional Action Taken (2) <input type="text" value="28"/> <input type="text" value="Protect Civilians"/> Additional Action Taken (3)
	G1 Area Affected 1 <input checked="" type="checkbox"/> Square Feet 2 <input type="checkbox"/> Blocks 3 <input type="checkbox"/> Square Miles <input type="text" value=""/> , <input type="text" value=""/> Enter measurement	G3 Estimated Number of People Evacuated <input type="text" value="000"/> , <input type="text" value="096"/>	I If fire or explosion is involved with a release, which occurred first? 1 <input type="checkbox"/> Ignition U <input type="checkbox"/> Undetermined 2 <input checked="" type="checkbox"/> Release
	G4 Estimated Number of Buildings Evacuated <input type="text" value="0"/> , <input type="text" value="200"/> <input type="checkbox"/> None		

J Cause of Release <input type="checkbox"/> 1 <input type="checkbox"/> Intentional 2 <input checked="" type="checkbox"/> Unintentional release 3 <input type="checkbox"/> Container/containerment failure 4 <input type="checkbox"/> Act of nature 5 <input type="checkbox"/> Cause under investigation U <input type="checkbox"/> Cause undetermined after investigation	K Factors Contributing to Release Enter up to three contributing factors <input type="text" value="71"/> <input type="text" value="Collision"/> Factor Contributing To Release (1) <input type="text" value="30"/> <input type="text" value="Human Failure"/> Factor Contributing To Release (2) <input type="text" value=""/> <input type="text" value=""/> Factor Contributing To Release (3)	L Factors Affecting Mitigation Enter up to three factors or impediments that affected the mitigation of the incident <input type="text" value="18"/> <input type="text" value="Release on major Hwy"/> Factor or impediment (1) <input type="text" value="11"/> <input type="text" value="Water table"/> Factor or impediment (2) <input type="text" value=""/> <input type="text" value=""/> Factor or impediment (3)
--	---	--

M Equipment Involved In Release <input checked="" type="checkbox"/> None <input type="text" value=""/> Equipment involved in release Brand <input type="text" value=""/> Model <input type="text" value=""/> Serial Number <input type="text" value=""/> Year <input type="text" value=""/>	N Mobile Property Involved in Release <input checked="" type="checkbox"/> None <input type="text" value="25"/> <input type="text" value="Tank Truck"/> Mobile property type <input type="text" value="MK"/> <input type="text" value="Mack"/> Mobile property make Model <input type="text" value="G200"/> Year <input type="text" value="1990"/> License Plate Number <input type="text" value="12456"/> State <input type="text" value="WI"/> DOT Number/ ICC Number <input type="text" value=""/>	O HazMat Disposition <input type="checkbox"/> 1 <input type="checkbox"/> Completed by fire service only 2 <input type="checkbox"/> Completed w/ fire service present 3 <input type="checkbox"/> Released to local agency 4 <input type="checkbox"/> Released to county agency 5 <input type="checkbox"/> Released to state agency 6 <input type="checkbox"/> Released to federal agency 7 <input checked="" type="checkbox"/> Released to private agency 8 <input type="checkbox"/> Released to property owner or manager
		P HazMat Civilian Casualties Deaths <input type="text" value="001"/> Injuries <input type="text" value="0018"/> NFIRS-7 Revision

EXERCISE SCENARIO 7-2: VEHICLE FIRE ON I-95

Directions: Read the call information in the exercise below. Use the information provided to complete the entire Hazardous Materials Module form and other required forms. Compare your work to the answers provided in Appendix A. If your answers are different from the ones provided, read over the Hazardous Materials Module again.

The Alberta Fire Department (FDID 92188) responded to a vehicle fire on I-95 near mile marker 73 and Exit 2B in Brunswick, Virginia 23351 on May 3. The dispatcher assigned the incident (#5455) to Engine Co. 2 from Shift C. The unit received the alarm at 11:58 p.m. and arrived at the scene in six minutes with a four-person engine crew and a two-person truck crew. Flame and smoke was coming from the vehicle. The owner of the vehicle, Mr. Robert L. Anderson, was driving to Emporia, Virginia to return his son, Joseph, to his mother. Mr. Anderson lives at 1630 Second Avenue, Jarrett, North Carolina 24501. His telephone number is 414-432-0987. He said that his front seat caught on fire. In an effort to extinguish the fire, the car crashed into the guardrail. He called 911 from his cellular telephone. He said that he was driving for two hours and became drowsy from a prescription drug that he took. The vehicle was a 1999 Ford Explorer, Virginia License Plate Number ACZ586, and VIN 1FBEU54X3ABC45634. The firefighters extinguished the fire; it was under controlled at 12:10 a.m. They determined that a burning cigarette caused the fire. The cigarette ignited the seat causing \$26,000 property damage and no content loss to the vehicle. The last unit cleared the scene at 12:35 a.m. FF1 Steve B. LaCivita, Badge No. 230, completed the report after returning to Station No. 1. Captain Ernest Greene, Badge No. 100, was the officer in charge. The fire department keeps records on the location of all responses. The incident was in Census Tract 501.2, District A05. The Virginia Department of Transportation, 23 Washington Street NE, Richmond, VA 23219, manages Virginia highways.

Mr. Anderson, 49-year old, black male, was bleeding from the head. He cut his head when his car hit the guardrail. He was not wearing a safety belt and the airbag in the vehicle did not inflate. Firefighter Steve Cooke, EMT-Basic, approached Officer Morrison at 12:06 a.m. Firefighter Cooke stopped the bleeding. No other treatment was needed. Mr. Anderson overall change in status improved. He was release to the on-scene towing service provider, Ace Towing, at 12:25 a.m. The towing service provider gave Mr. Anderson a ride from the incident

The dispatcher received a second call from a by-stander at the incident. He reported the fire and told the dispatcher that he saw cylinders in the cargo area of the vehicle. At 12 Midnight, the dispatcher notified the fire department and dispatched their two-person Hazardous Materials Truck from Station 2. The fire was out when the unit arrived at the scene. They found three cylinders in the cargo area of the vehicle. The cylinders contained Compressed Oxygen (UN# 1072, CAS Reg. #7782-44-7, DOT Hazard Class 2.2). The largest cylinder was leaking gas. The cylinder was a Type MM with a capacity of 122 cubic feet. The other two cylinders were Type M60 (60 Cu. Ft.). The affected area was 15 square feet. The unit established a hazard control zone of 160 square feet. Even though, the hazard was on Interstate 95 and in an urban center, no

people or buildings had to be evacuated because of the location of the incident. The HazMat Team moved the cylinders and stopped the leak. They estimated that 90 cubic feet of the gas escaped. There were no injuries resulting from the leak. The unit, last to clear the scene, left at 1:05 a.m.

**NFIRS 5.0 SELF STUDY PROGRAM
HAZARDOUS MATERIALS (HAZMAT) MODULE: NFIRS 7**

A FDID State Incident Date Station Incident Number Exposure Delete Change No Activity **NFIRS - 1 Basic**

B **Locatio** Check this box to indicate that the address for this incident is provided on the Wildland Fire Module in Section B "Alternative Location Specification". Use only

Street address Intersection In front of Rear of Adjacent to Directions

Number/Milepost Prefix Street or Highway Street Type Suffix

Apt./Suite/Room City State Zip Code

Cross street or directions, as applicable

C Incident Type Incident Type

D Aid Given or Received 1 Mutual aid received 2 Automatic aid recv. 3 Mutual aid given 4 Automatic aid given 5 Other aid given N None

Their FDID Their State Their Incident Number

E1 Dates & Times Midnight is 0000 Month Day Year Hour Min

Check boxes if dates are the same as Alarm Date. Alarm Arrival Controlled Last Unit Cleared

ALARM always required ARRIVAL required, unless canceled or did not arrive CONTROLLED optional, except for wildland fires LAST UNIT CLEARED, required except for wildland fires

E2 Shifts & Alarms Local Option Shift or platoon Alarms District

E3 Special Studies Local Option Special Study ID# Special Study Value

F Actions Taken Primary Action Taken (1) Additional Action Taken (2) Additional Action Taken (3)

G1 Resources Check this box and skip this section if an Apparatus or Personnel form is used.

Apparatus Personnel Suppression EMS Other

Check box if resource counts include aid received resources.

G2 Estimated Dollar Losses & Values **LOSSES:** Required for all fires if known. Optional for non **None** Property \$ Contents \$ **PRE-INCIDENT VALUE:** Optional Property \$ Contents \$

Completed Modules Fire-2 Structure-3 Civilian Fire Cas.-4 Fire Serv. Casualty-5 EMS-6 HazMat-7 Wildland Fire-8 Apparatus-9 Personnel-10 Arson-11

H1 Casualties None **Deaths** **Injuries** Fire Service Civilian

H2 Detector Required for confined fires. 1 Detector alerted occupants 2 Detector did not alert them U Unknown

H3 Hazardous Materials Release N None 1 Natural gas: slow leak, no evacuation or HazMat actions 2 Propane gas: <21 lb. tank (as in home BBQ grill) 3 Gasoline: vehicle fuel tank or portable container 4 Kerosene: fuel burning equipment or portable storage 5 Diesel fuel/fuel oil: vehicle fuel tank or portable storage 6 Household solvents: home/office spill, cleanup only 7 Motor oil: from engine or portable container 8 Paint: from paint cans totaling <55 gallons 0 Other: Special HazMat actions required or spill > 55 gal., Please complete the HazMat form

Mixed Use Property NN Not mixed 10 Assembly Use 20 Education use 33 Medical use 40 Residential use 51 Row of stores 53 Enclosed mall 58 Business & residential 59 Office use 60 Industrial use 63 Military use 65 Farm use 00 Other mixed use

J Property Use Structures 341 Clinic, clinic type infirmary 539 Household goods, sales, repairs 131 Church, place of worship 342 Doctor/dentist office 579 Motor vehicle/boat sales/repairs 161 Restaurant or cafeteria 361 Prison or jail, not juvenile 571 Gas or service station 162 Bar/tavern or nightclub 419 1- or 2- family dwelling 599 Business office 213 Elementary school or kindergart. 429 Multi-family dwelling 615 Electric generating plant 215 High school or junior high 439 Rooming/boardng house 629 Laboratory/science lab 241 College, adult ed. 449 Commercial hotel or motel 700 Manufacturing plant 311 Care facility for the aged 459 Residential, board and care 819 Livestock/poultry storage (barn) 331 Hospital 464 Dormitory/barracks 882 Non-residential parking garage 519 Food and beverage sales 891 Warehouse

Outside 124 Playground or park 936 Vacant lot 981 Construction site 655 Crops or orchard 938 Graded/cared for plot of land 984 Industrial plant yard 669 Forest (timberland) 946 Lake, river, stream 807 Outdoor storage area 951 Railroad right of way 919 Dump or sanitary landfill 960 Other street 931 Open land or field 961 Highway/divided highway 962 Residential street/driveway

Look up and enter a Property Use code only if you have NOT checked a Property Use box: Property Use

NFIRS-1 Revision

**NFIRS 5.0 SELF STUDY PROGRAM
HAZARDOUS MATERIALS (HAZMAT) MODULE: NFIRS 7**

A	FDID <input type="text"/> ☆	State <input type="text"/> ☆	Incident Date <input type="text"/> MM <input type="text"/> DD <input type="text"/> YYYY <input type="text"/> ☆	Station <input type="text"/>	Incident Number <input type="text"/> ☆	Exposure <input type="text"/> ☆	Haz No <input type="text"/> ☆	<input type="checkbox"/> Delete <input type="checkbox"/> Change	NFIRS - 7 HazMat
----------	-----------------------------	------------------------------	--	------------------------------	--	---------------------------------	-------------------------------	--	-----------------------------

B	HazMat ID <input type="text"/>	UN Number <input type="text"/>	DOT Hazard Classification <input type="text"/>	CAS Registration Number <input type="text"/>	Chemical Name <input type="text"/> ☆
----------	--------------------------------	--------------------------------	--	--	--------------------------------------

C1 Container Type <input type="text"/> Container Type <div style="border: 1px solid black; padding: 5px; width: fit-content;"> More hazardous materials? Use additional sheets. </div>	C2 Estimated Container Capacity <input type="text"/> , <input type="text"/> , <input type="text"/> Capacity: by volume or weight C3 Units: Capacity Check one box <table style="width:100%;"> <tr> <td>VOLUME</td> <td>WEIGHT</td> </tr> <tr> <td>11 <input type="checkbox"/> Ounces</td> <td>21 <input type="checkbox"/> Ounces</td> </tr> <tr> <td>12 <input type="checkbox"/> Gallons</td> <td>22 <input type="checkbox"/> Pounds</td> </tr> <tr> <td>13 <input type="checkbox"/> Barrels: 42 gal.</td> <td>23 <input type="checkbox"/> Grams</td> </tr> <tr> <td>14 <input type="checkbox"/> Liters</td> <td>24 <input type="checkbox"/> Kilograms</td> </tr> <tr> <td>15 <input type="checkbox"/> Cubic feet</td> <td></td> </tr> <tr> <td>16 <input type="checkbox"/> Cubic meters</td> <td></td> </tr> </table>	VOLUME	WEIGHT	11 <input type="checkbox"/> Ounces	21 <input type="checkbox"/> Ounces	12 <input type="checkbox"/> Gallons	22 <input type="checkbox"/> Pounds	13 <input type="checkbox"/> Barrels: 42 gal.	23 <input type="checkbox"/> Grams	14 <input type="checkbox"/> Liters	24 <input type="checkbox"/> Kilograms	15 <input type="checkbox"/> Cubic feet		16 <input type="checkbox"/> Cubic meters		D1 Estimated Amount Released ☆ <input type="text"/> , <input type="text"/> , <input type="text"/> Amount released: by volume or weight D2 Units: Released Check one box <table style="width:100%;"> <tr> <td>VOLUME</td> <td>WEIGHT</td> </tr> <tr> <td>11 <input type="checkbox"/> Ounces</td> <td>21 <input type="checkbox"/> Ounces</td> </tr> <tr> <td>12 <input type="checkbox"/> Gallons</td> <td>22 <input type="checkbox"/> Pounds</td> </tr> <tr> <td>13 <input type="checkbox"/> Barrels: 42 gal.</td> <td>23 <input type="checkbox"/> Grams</td> </tr> <tr> <td>14 <input type="checkbox"/> Liters</td> <td>24 <input type="checkbox"/> Kilograms</td> </tr> <tr> <td>15 <input type="checkbox"/> Cubic feet</td> <td></td> </tr> <tr> <td>16 <input type="checkbox"/> Cubic meters</td> <td></td> </tr> </table>	VOLUME	WEIGHT	11 <input type="checkbox"/> Ounces	21 <input type="checkbox"/> Ounces	12 <input type="checkbox"/> Gallons	22 <input type="checkbox"/> Pounds	13 <input type="checkbox"/> Barrels: 42 gal.	23 <input type="checkbox"/> Grams	14 <input type="checkbox"/> Liters	24 <input type="checkbox"/> Kilograms	15 <input type="checkbox"/> Cubic feet		16 <input type="checkbox"/> Cubic meters		E1 Physical State When Released 1 <input type="checkbox"/> Solid 2 <input type="checkbox"/> Liquid 3 <input type="checkbox"/> Gas U <input type="checkbox"/> Undetermined E2 Released Into <input type="text"/> Released into
VOLUME	WEIGHT																														
11 <input type="checkbox"/> Ounces	21 <input type="checkbox"/> Ounces																														
12 <input type="checkbox"/> Gallons	22 <input type="checkbox"/> Pounds																														
13 <input type="checkbox"/> Barrels: 42 gal.	23 <input type="checkbox"/> Grams																														
14 <input type="checkbox"/> Liters	24 <input type="checkbox"/> Kilograms																														
15 <input type="checkbox"/> Cubic feet																															
16 <input type="checkbox"/> Cubic meters																															
VOLUME	WEIGHT																														
11 <input type="checkbox"/> Ounces	21 <input type="checkbox"/> Ounces																														
12 <input type="checkbox"/> Gallons	22 <input type="checkbox"/> Pounds																														
13 <input type="checkbox"/> Barrels: 42 gal.	23 <input type="checkbox"/> Grams																														
14 <input type="checkbox"/> Liters	24 <input type="checkbox"/> Kilograms																														
15 <input type="checkbox"/> Cubic feet																															
16 <input type="checkbox"/> Cubic meters																															

Complete the remainder of this form only for the first hazardous material involved in this incident. F1 Released From: Check all applicable boxes <input type="checkbox"/> Below grade 1 <input type="checkbox"/> Inside/on structure <input type="text"/> Story of release 2 <input type="checkbox"/> Outside of structure	F2 Population Density 1 <input type="checkbox"/> Urban 2 <input type="checkbox"/> Suburban 3 <input type="checkbox"/> Rural G1 Area Affected 1 <input type="checkbox"/> Square Feet 2 <input type="checkbox"/> Blocks 3 <input type="checkbox"/> Square Miles <input type="text"/> , <input type="text"/> Enter measurement	G2 Area Evacuated <input type="checkbox"/> None 1 <input type="checkbox"/> Square Feet <input type="text"/> , <input type="text"/> 2 <input type="checkbox"/> Blocks Enter Measurement 3 <input type="checkbox"/> Square Miles G3 Estimated Number of People Evacuated <input type="text"/> , <input type="text"/> G4 Estimated Number of Buildings Evacuated <input type="text"/> , <input type="text"/> <input type="checkbox"/> None	H HazMat Actions Taken Enter up to three actions taken <input type="text"/> <input type="text"/> Primary Action Taken (1) <input type="text"/> <input type="text"/> Additional Action Taken (2) <input type="text"/> <input type="text"/> Additional Action Taken (3) I If fire or explosion is involved with a release, which occurred first? 1 <input type="checkbox"/> Ignition U <input type="checkbox"/> Undetermined 2 <input type="checkbox"/> Release
--	--	---	---

J Cause of Release ☆ 1 <input type="checkbox"/> Intentional 2 <input type="checkbox"/> Unintentional release 3 <input type="checkbox"/> Container/containerment failure 4 <input type="checkbox"/> Act of nature 5 <input type="checkbox"/> Cause under investigation U <input type="checkbox"/> Cause undetermined after investigation	K Factors Contributing to Release Enter up to three contributing factors <input type="text"/> <input type="text"/> Factor Contributing To Release (1) <input type="text"/> <input type="text"/> Factor Contributing To Release (2) <input type="text"/> <input type="text"/> Factor Contributing To Release (3)	L Factors Affecting Mitigation Enter up to three factors or impediments that affected the mitigation of the incident <input type="text"/> <input type="text"/> Factor or impediment (1) <input type="text"/> <input type="text"/> Factor or impediment (2) <input type="text"/> <input type="text"/> Factor or impediment (3)
--	---	---

M Equipment Involved In Release <input type="checkbox"/> None <input type="text"/> Equipment involved in release Brand <input type="text"/> Model <input type="text"/> Serial Number <input type="text"/> Year <input type="text"/>	N Mobile Property Involved in Release <input checked="" type="checkbox"/> None <input type="text"/> Mobile property type <input type="text"/> Mobile property make <input type="text"/> <input type="text"/> Year Model <input type="text"/> License Plate Number <input type="text"/> State DOT Number/ ICC Number <input type="text"/>	O HazMat Disposition ☆ 1 <input type="checkbox"/> Completed by fire service only 2 <input type="checkbox"/> Completed w/ fire service present 3 <input type="checkbox"/> Released to local agency 4 <input type="checkbox"/> Released to county agency 5 <input type="checkbox"/> Released to state agency 6 <input type="checkbox"/> Released to federal agency 7 <input type="checkbox"/> Released to private agency 8 <input type="checkbox"/> Released to property owner or manager P HazMat Civilian Casualties Deaths <input type="text"/> Injuries <input type="text"/> NFIRS-7 Revision
---	---	--

Hazardous Materials (HazMat) Module Test

1. Which is not a definition of a REPORTABLE HazMat Incident?
 - (a) Any spill that requires the use of fire department resources
 - (b) Specialized HazMat resources were dispatched or used for assessing, mitigating, or managing the situation.
 - (c) Specialized HazMat should have been dispatched or used for assessing, mitigating, or managing the situation.
 - (d) A release or spill of hazardous materials that exceeds 55 gallons

2. Which identification system is not used in NFIRS to identifying hazardous materials?
 - (a) UN Number
 - (b) DOT Hazard Classification
 - (c) Chemical Name
 - (d) Chemical Identifier

3. The chemical identification system that is printed on placards or labels on the materials during transportation is:
 - (a) UN Number
 - (b) DOT Hazard Classification
 - (c) CAS Registration Number
 - (d) Chemical Name

4. High wind and Release into water table are examples of which data element?
 - (a) Cause of Release
 - (b) Factors Contributing to Release
 - (c) Factors Affecting Mitigation
 - (d) Release Into

5. To record the Estimated Container Capacity and the Estimated Amount of Released what information is needed?
 - (a) Container Type
 - (b) DOT Hazard Classification
 - (c) Amount of materials
 - (d) Units of measure