



# **Hazardous Materials Awareness and Operations**

**NFPA 470**

***Hazardous Materials/Weapons of Mass Destruction (WMD)***

***Standard for Responders***

**2022 Edition**

## Hazardous Materials Awareness Responder Skill Sheets

NFPA 470, Chapter 5	Task:	<b>JPR</b> <u>Initial Certification Requirement:</u> <b>100% of All JPRs</b> <u>Renewal JPR Requirement:</u> <b>Meet the Performance Outcome of</b> <b>100% of all JPRs</b> <b>(Including all subsections)</b>
1	Recognize and Identify Hazardous Materials/WMD Incidents and Collect Hazard Information.	5.2.1
2	Isolate the Hazard Area and Initiate the Notification Process.	5.3.1, 5.4.1



## SKILL SHEET # 1

### Recognize and Identify Hazardous Materials/WMD Incident

<b>JPR: 5.2.1 NFPA 470, 2022 Edition</b>	<b>Tasks:</b> Recognize and identify a Hazardous Materials/WMD and hazards involved in a hazardous materials/WMD incident.
<b>Performance Outcome</b>	Given a Hazardous Materials or WMD simulated incident, the candidate shall identify indicators of the problem and provide a scene size up and make the appropriate notifications.
<b>Equipment Required:</b> A hazardous materials scenario, approved reference resources, appropriate PPE, binoculars, ERG and SDS or shipping papers, pictures of placards, labels and NFPA 704 markings, container identification charts or other transportation markings. .	
<b>Critical Skills are identified by a bold type “C”.</b> Any critical skill that is not completed is considered a failure of the entire Skill Sheet.	
<b>Safety:</b> A safety violation is grounds for automatic failure. All proctors present shall review the safety violation.	

<b>STEPS FOR SKILL COMPLETION</b>	<i>Initial</i>		<i>Retest</i>	
	Yes	No	Yes	No
1. State the required equipment needed (Full PPE, ERG, binoculars).				
<b>C</b> 2. Ensure uphill/upwind in a safe location.				
3. Obtain information from bystanders or those involved, if available.				
4. Provide an on scene size up.				
5. Verbalize indicators of a HM/WMD incident.				
6. Utilize an ERG, SDS, manufacturer documents or shipping papers, identify the materials involved in the incident, the primary hazard (explosion, fire or health) and any additional potential hazards.				
<b>Total</b>			Score needed to pass	
			5	

Candidate Name	Candidate Signature	Date
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## SKILL SHEET # 2

### Protective Actions and Notifications

<b>JPR: 5.3.1, 5.4.1</b> <b>NFPA 470, 2022 Edition</b>	<b>Task:</b> Isolate the Hazard Area and Initiate the Notification Process.			
<b>Performance Outcome</b>	Given a Hazardous Materials/WMD simulated incident the candidate shall isolate and deny entry to the hazard area and initiate notifications and communicate necessary information to appropriate agencies.			
<b>Equipment Required:</b> Full PPE, binoculars, ERG and SDS or shipping papers, pictures of placards, labels, or NFPA 704 markings, container identification charts, or other transportation markings, radio (or phone) and attached worksheet.				
<b>Critical Skills are identified by a bold type “C”.</b> Any critical skill that is not completed is considered a failure of the entire Skill Sheet.				
<b>Safety:</b> A safety violation is grounds for automatic failure. All proctors present shall review the safety violation.				
<b>STEPS FOR SKILL COMPLETION</b>	<i>Initial</i>		<i>Retest</i>	
	Yes	No	Yes	No
1. State the required equipment needed (Full PPE, ERG, binoculars).				
<b>C</b> 2. Ensure uphill/upwind in a safe location.				
3. Utilize an ERG and SDS, or shipping papers to determine initial protective actions and isolation distances.				
4. Isolate the area and deny entry.				
5. Direct exposed people to a predetermined location for decon and medical care as necessary.				
6. Notify appropriate state/local agencies per AHJ SOPs.				
7. Give a status update via a mobile or handheld radio.				
<b>Total</b>	<b>Score needed to pass</b>			<b>6</b>

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## Hazmat Awareness Worksheet for Skill Sheet #2

<b>JPR: 5.3.1, 5.4.1</b> <b>NFPA 470, 2022 Edition</b>	<b>Task:</b> Initiate protective actions at the scene of a Hazardous Materials/WMD incident.
<b>Performance Outcome</b>	Given a Hazardous Materials/WMD simulated incident you shall initiate protective actions, establish initial isolation distances and notify appropriate state and local agencies.

**EQUIPMENT REQUIRED:** Department of Transportation Emergency Response Guidebook (ERG).

**CONDITIONS:** Proctor will identify the hazardous material for the candidate to complete the following task steps. Suggested chemicals are: anhydrous ammonia, chlorine, fluorine, hydrogen sulfide, sodium cyanide or hydrogen cyanide.

No.	Task Steps	
1	UN number:	
2	Small Spill/Release - Initial Isolation Distance:	
3	Large Spill Initial Isolation Distance:	
4	Protective Action Distance (Night):	
5	Guide Number:	
6	Identify the health hazards:	
7	Identify the fire hazards:	
8	Identify the protective clothing:	

## Hazardous Materials Operations Responder Skill Sheets

NFPA 470 Chapters 7 & 9	Task:	JPR Initial Certification Requirement: 100% of All JPRs Renewal JPR Requirement: Meet the Performance Outcome of 100% of all JPRs (Including all subsections)
1	Identify Potential Hazards	7.2.1
2	Identify Tactics	7.3.1
3	Action Plan Implementation	7.4.1
4	Personal protective equipment	7.4.1, 9.2.1
5	Emergency Decontamination	7.5.1
6	Progress Evaluation and Reporting	7.6.1
7	Product Control	7.4.1, 9.2.1, 9.6.1



## SKILL SHEET # 1

### Identify Potential Hazards

<b>Standard: 7.2.1 NFPA 470, 2022 Edition</b>	<b>Tasks:</b> Identify potential hazards at a Hazardous Material/WMD incident.				
<b>Performance Outcome</b>	Given a Hazardous Materials or WMD simulated incident, the candidate shall identify the scope of the problem, container types, materials, location and physical state (form) of release and surrounding conditions. The candidate will give a scene size up and make the appropriate notifications.				
<b>Equipment Required:</b> A Hazardous Materials scenario, approved reference resources, appropriate PPE, binoculars, ERG and SDS or shipping papers, pictures of placards, labels and NFPA 704 markings, container identification charts or other transportation markings.					
<b>Critical Skills are identified by a bold type “C”.</b> Any critical skill that is not completed is considered a failure of the entire Skill Sheet.					
<b>Safety:</b> A safety violation is grounds for automatic failure. All proctors present shall review the safety violation.					
<b>STEPS FOR SKILL COMPLETION</b>		<i>Initial</i>		<i>Retest</i>	
		Yes	No	Yes	No
1. Identify container types at a Hazardous Materials/WMD incident.					
<b>C</b> 2. Identify materials at a Hazardous Materials/WMD incident.					
3. Identify location and physical state (form) of release at a Hazardous Materials/WMD incident.					
4. Identify surrounding conditions at a Hazardous Materials/WMD incident.					
5. Collect hazard and response information.					
6. Communicate with facility representatives, pipeline operators or carrier representatives.					
7. Describe the likely behavior of the Hazardous Materials or WMD and its container.					
<b>Total</b>				<b>Score needed to pass</b>	
				<b>6</b>	

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## SKILL SHEET # 2



### Identify Tactics

<b>Standard : 7.3.1 NFPA 470, 2022 Edition</b>	<b>Task:</b> Identify the tactics for a Hazardous Materials/WMD incident.			
<b>Performance Outcome</b>	The candidate will identify the action tactics for a Hazardous Materials/WMD incident, given an incident and an assignment, so that response information is collected; strategies, tactics, safety precautions and approved PPE is identified and an action plan is developed.			
<b>Equipment Required:</b> Hazardous Materials incident scenario, response assignment, policies and procedures, approved references and approved PPE.				
<b>Critical Skills are identified by a bold type “C”.</b> Any critical skill that is not completed is considered a failure of the entire Skill Sheet.				
<b>Safety:</b> A safety violation is grounds for automatic failure. All proctors present shall review the safety violation.				
<b>STEPS FOR SKILL COMPLETION</b>	<i>Initial</i>		<i>Retest</i>	
	Yes	No	Yes	No
1. Identify strategies and tactics based on the scope of the problem and available resources.				
<b>C</b> 2. Identify and take safety precautions.				
3. Identify whether approved PPE is suitable for the incident conditions.				
4. Identify emergency decontamination needs based on the scope of the problem.				
<b>Total</b>	<b>Score needed to pass</b>			<b>3</b>

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## SKILL SHEET # 3

### Action Plan Implementation

<b>Standard : 7.4.1 NFPA 470, 2022 Edition</b>	<b>Task:</b> Action plan implementation.			
<b>Performance Outcome</b>	The candidate shall establish and maintain scene control, recognize and preserve evidence, inspect, don, work in, go through decontamination and doff approved PPE. Isolate contaminated tools, equipment and PPE, conduct emergency decontamination as needed. Clean, disinfect and inspect approved tools, equipment and PPE.			
<b>Equipment Required:</b> Hazardous Material/WMD scenario, an assignment with limited potential of contact with hazardous material/WMD, policies and procedures, scope of problem, tools and approved PPE.				
<b>Critical Skills are identified by a bold type "C".</b> Any critical skill that is not completed is considered a failure of the entire Skill Sheet.				
<b>Safety:</b> A safety violation is grounds for automatic failure. All proctors present shall review the safety violation.				
<b>STEPS FOR SKILL COMPLETION</b>	<i>Initial</i>		<i>Retest</i>	
	<b>Yes</b>	<b>No</b>	<b>Yes</b>	<b>No</b>
1. Establish and maintain scene control.				
2. Recognize and preserve evidence.				
3. Choose, inspect, don, work in, and go through decontamination while wearing, and doffing approved PPE.				
4. Isolate contaminated tools, equipment, and PPE.				
5. Conduct emergency decontamination.				
6. Clean, disinfect, and inspect approved tools, equipment, and PPE.				
<b>Total</b>	<b>Score needed to pass</b>		<b>6</b>	

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## SKILL SHEET # 4



### Personal Protective Equipment

<b>Standard : 7.4.1, 9.2.1 NFPA 470, 2022 Edition</b>	<b>Task:</b> Correctly select, don, work in and doff approved PPE at a Hazardous Materials/WMD incident.
<b>Performance Outcome</b>	The candidate shall successfully select, inspect, don, work in, go through decontamination and doff approved PPE at a Hazardous Materials/WMD incident given a mission specific assignment in an IAP that requires use of PPE. The candidate shall ensure exposures and personnel are protected and hazards are avoided or minimized, PPE is maintained and stored consistent with AHJ policies and procedures and NFPA 1891, and documentation is completed.
<b>Equipment Required:</b> Mission specific assignment, scope of the problem, strategies and tactics, policies and procedures, access to Hazardous Materials Technician, an allied professional, an emergency response plan or standard operating procedures, PPE and policies and procedures.	
<b>Critical Skills are identified by a bold type “C”.</b> Any critical skill that is not completed is considered a failure of the entire Skill Sheet.	
<b>Safety:</b> A safety violation is grounds for automatic failure. All proctors present shall review the safety violation.	

<b>STEPS FOR SKILL COMPLETION</b>	<i>Initial</i>		<i>Retest</i>	
	Yes	No	Yes	No
<b>C</b> 1. Select appropriate PPE for the assignment.				
2. Inspect and don PPE.				
3. Complete assigned task in PPE.				
4. Go through decontamination (emergency and technical).				
5. Doff PPE.				
6. Store, maintain or dispose of PPE appropriately.				
7. Complete any reports and documentation per AHJ.				
<b>Total</b>	<b>Score needed to pass</b>			<b>6</b>

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## SKILL SHEET #5

### Emergency Decontamination

<b>Standard : 7.5.1 NFPA 470, 2022 Edition</b>	<b>Task:</b> Perform emergency decontamination at a hazardous materials/WMD incident of a first responder or victim.			
<b>Performance Outcome</b>	Given a scenario that requires emergency decontamination, the candidate shall demonstrate the ability to correctly set up and perform emergency decontamination so exposures and personnel are protected, safety procedures are followed, hazards are avoided or minimized and appropriate PPE is utilized so victims and responders are decontaminated.			
<b>Equipment Required:</b> Appropriate PPE, a designated emergency decon area, approved tools, equipment and PPE, and a water source.				
<b>Critical Skills are identified by a bold type “C”.</b> Any critical skill that is not completed is considered a failure of the entire Skill Sheet.				
<b>Safety:</b> A safety violation is grounds for automatic failure. All proctors present shall review the safety violation.				
<b>STEPS FOR SKILL COMPLETION</b>	<i>Initial</i>		<i>Retest</i>	
	Yes	No	Yes	No
1. Select an emergency decontamination method.				
<b>C</b> 2. Set up emergency decontamination in a safe area.				
3. Use PPE in the proper manner.				
4. Perform emergency decontamination.				
5. Prevent spread of contamination.				
6. Avoid hazards during emergency decontamination.				
<b>Total</b>	<b>Score needed to pass</b>		<b>5</b>	

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## SKILL SHEET # 6

### Progress Evaluation and Reporting

<b>Standard : 7.6.1 NFPA 470, 2022 Edition</b>	<b>Task:</b> Evaluate and report the progress of the assigned tasks for a Hazardous Materials/WMD incident.			
<b>Performance Outcome</b>	The candidate shall evaluate and report the progress and effectiveness of the implemented strategies and tactics of the IAP during a Hazardous Materials/WMD incident to the Incident Commander or designee.			
<b>Equipment Required:</b> Hazardous Materials/WMD incident, an assignment, policies and procedures, status of implemented strategies and tactics, and communication tools and equipment.				
<b>Critical Skills are identified by a bold type "C".</b> Any critical skill that is not completed is considered a failure of the entire Skill Sheet.				
<b>Safety:</b> A safety violation is grounds for automatic failure. All proctors present shall review the safety violation.				
<b>STEPS FOR SKILL COMPLETION</b>	<i>Initial</i>		<i>Retest</i>	
	<b>Yes</b>	<b>No</b>	<b>Yes</b>	<b>No</b>
1. Determine incident status				
2. Determine whether the strategies are being accomplished.				
3. Use approved communications tools and equipment.				
4. Communicate the status of assigned tasks.				
<b>Total</b>	<b>Score needed to pass</b>			<b>3</b>

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## SKILL SHEET # 7

### Product Control

<b>Standard: 7.4.1, 9.2.1, 9.6.1 NFPA 470, 2022 Edition</b>	<b>Task:</b> Perform product control techniques with a limited risk of personal exposure at a hazardous materials/WMD incident. a. Confine/Contain b. Use control agents c. Remote control valves/emergency shut offs d. Product control techniques
<b>Performance Outcome</b>	The candidate will successfully demonstrate and/or describe each skill identified within the checklist.
<b>Equipment Required:</b> Personal protective equipment, self-contained breathing apparatus (SCBA) and any of the following as needed for the given scenario: shovels, rakes, absorbent materials, adsorbent materials, dirt, sand or hay, plastic sheeting, booms, water source, handlines, foam, short pieces of pipe for dams, remote shutoff valve on a cargo container or fixed facility (or simulation of), and a leaking container.	
<b>Critical Skills are identified by a bold type “C”.</b> Any critical skill that is not completed is considered a failure of the entire Skill Sheet.	
<b>Safety:</b> A safety violation is grounds for automatic failure. All proctors present shall review the safety violation.	

<b>STEPS FOR SKILL COMPLETION</b>	<i>Initial</i>		<i>Retest</i>	
	Yes	No	Yes	No
1. Select and use PPE				
<b>C</b> 2. Perform the following product control techniques:				
Confine/Contain				
a. Use common, available materials.				
b. Avoid contact with the hazardous material.				
c. Ensure drains do not become contaminated.				
Use of Control Agents				
d. Use common, available materials.				
e. Avoid contact with the Hazardous Material.				
f. Ensure drains do not become contaminated.				
g. Ensure Hazardous Material has adhered to medium.				
Remote valve shut-off:				
h. Avoid contact with the Hazardous Material.				
i. Eliminate ignition sources, if applicable.				
j. Manipulate valve as instructed to control the flow of the product.				
Product control techniques				
k. Use common, available materials.				
l. Avoid contact with the Hazardous Material				
m. Ensure product captured is fully controlled and drains/waterways are not contaminated.				
	<b>Score needed to pass</b>		<b>11</b>	

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