

# Hazardous Materials Operations

## PRODUCT CONTROL MS 9.6 SKILL SHEETS



The following skills sheets are meant to be printed double-sided. This allows the candidate to view the instructions and description without viewing the steps. (REVISED 09/2024)

*Evaluators are the FST on-site representative for IFSAC skills exams and are responsible for evaluating a candidate's ability to perform specific skills in a structured testing situation. In rare occasions where enough evaluators are not available, FST may approve an evaluator who participated in the training process, as long as they do not evaluate the subject(s) they taught. Evaluators will only notify candidates of pass/fail status of a skill station if the candidate asks. All discussions between evaluators and the candidate about skill evaluations and scoring must be conducted after the candidate has completed the skill testing station, and in a location that will provide privacy from other candidates to ensure confidentiality. Evaluators complete the testing station skills sheets for each candidate and are encouraged to include comments on the performance of the test. The evaluator/s will sign the skill sheet after they administer the exam. The candidate will sign the skill sheet after ALL skills have been performed in acknowledgment that there is a failing of a skill. Evaluators and candidates can refer any problems or questions that develop during the testing process to the Lead Evaluator.*



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**FIRE SERVICE TRAINING**

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## Hazardous Materials Operations – MS 9.6

Perform defensive actions

### Skill Sheet 1

<b>Standard:</b> NFPA 470, 2022 edition <b>Objective:</b> 9.6.1	<b>Task (read aloud):</b> Perform selected defensive actions.
<b>Candidate directive (read aloud):</b> Given a simulated hazardous materials spill or leak you will properly demonstrate a method of defensive control actions selected by the evaluator.	
<b>NFPA requisite skill 9.6.1:</b> Selecting and using PPE, selecting and performing product control techniques to confine/contain the release with limited risk or personal exposure, using approved control agents and equipment on a release involving hazardous materials/WMD, using remote control valves and emergency shutoff devices on cargo tanks and intermodal tanks in transportation and containers at fixed facilities, and performing product control techniques.	
<b>Required equipment:</b> Full PPE, Loose soil or absorbent, absorbent pads, booms, selection of shovels and brooms, short pieces of pipe for dams, photo of a remote shutoff valve on a cargo container or fixed facility.	
<b>Required personnel:</b> 0 assistants	



## Hazardous Materials Operations – MS 9.6

Perform defensive actions

### Skill Sheet 1

Standard: NFPA 470, 2022 edition Objective: 9.6.1		Task: Perform selected defensive actions.			
NO.	TASK STEPS	FIRST TEST		RETEST	
		Pass	Fail	Pass	Fail
1.	Select and don the appropriate PPE based on the contaminant.				
2.	Damming/Diking/Diverting/Dilution/Absorption/Retention: <i>Evaluator chooses a listed method.</i> A) Construct a retention. B) Construct a dike. C) Construct a diversion dam. D) Apply absorbent pads, booms, or other absorbent material. E) Demonstrate appropriate dilution procedure. F) Construct an overflow dam. G) Construct an underflow dam. Describe operating a remote shutoff valve on a cargo tank, intermodal tank or containers at fixed facilities.				
3.	Determine the status and effectiveness of defensive actions taken to accomplish the response objective.				
4.	Provide an update to incident command				
	<b>Did candidate complete skill swiftly, safely, and with confidence?</b>				

Evaluator/candidate comments:

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Candidate's signature

I acknowledge **NOT** passing this skill station.



## Hazardous Materials Operations – MS 9.6

Vapor dispersion

### Skill Sheet 2

<b>Standard:</b> NFPA 470, 2022 edition <b>Objective:</b> 9.6.1	<b>Task (read aloud):</b> Correctly utilize vapor dispersion as a product control solution.
<b>Candidate directive (read aloud):</b> Given a hazardous materials scenario with a simulated vapor release your task is to perform vapor dispersion.	
<b>NFPA requisite skill 9.6.1:</b> Selecting and using PPE, selecting and performing product control techniques to confine/contain the release with limited risk or personal exposure, using approved control agents and equipment on a release involving hazardous materials/WMD, using remote control valves and emergency shutoff devices on cargo tanks and intermodal tanks in transportation and containers at fixed facilities, and performing product control techniques.	
<b>Required equipment:</b> Simulated vapor release, Full PPE, SCBA, Pumper, hoseline, fog nozzle, gas monitoring equipment.	
<b>Required personnel:</b> 1 assistant	



## Hazardous Materials Operations – MS 9.6

Vapor dispersion

### Skill Sheet 2

<b>Standard:</b> NFPA 470, 2022 edition <b>Objective:</b> 9.6.1		<b>Task:</b> Correctly utilize vapor dispersion as a product control solution.			
NO.	TASK STEPS	FIRST TEST		RETEST	
		Pass	Fail	Pass	Fail
1.	Select and don the appropriate PPE based on the contaminant.				
2.	Based on the characteristics of the released material, the size of the release, and the topography, determine the viability of a dispersion operation.				
3.	Use the appropriate monitoring instrument, such as a combustible gas indicator, photo-ionization detector, or multi-gas meter, to determine the boundaries of a safe work area.				
4.	Ensure that ignition sources in the area have been removed or controlled.				
5.	Apply a water spray (from firefighting hose lines) from a distance to disperse vapors.				
6.	Monitor the environment and determine the status and effectiveness of defensive actions taken to accomplish the response objective.				
7.	Provide an update to incident command <b>Did candidate complete skill swiftly, safely, and with confidence?</b>				

Evaluator/candidate comments:

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Candidate's signature

I acknowledge **NOT** passing this skill station.



## Hazardous Materials Operations – MS 9.6

Vapor dispersion

### Skill Sheet 3

<b>Standard:</b> NFPA 470, 2022 edition <b>Objective:</b> 9.6.1	<b>Task (read aloud):</b> Correctly utilize foam for vapor suppression as a product control solution.
<b>Candidate directive (read aloud):</b> Given a hazardous materials scenario with a simulated flammable liquid spill your task is to perform vapor suppression.	
<b>NFPA requisite skill 9.6.1:</b> Selecting and using PPE, selecting and performing product control techniques to confine/contain the release with limited risk or personal exposure, using approved control agents and equipment on a release involving hazardous materials/WMD, using remote control valves and emergency shutoff devices on cargo tanks and intermodal tanks in transportation and containers at fixed facilities, and performing product control techniques.	
<b>Required equipment:</b> Simulated chemical spill, Full PPE, SCBA, Pumper, hoseline, fog nozzle, foam eductor, dish soap, gas monitoring equipment.	
<b>Required personnel:</b> 1 assistant	



## Hazardous Materials Operations – MS 9.6

Vapor dispersion

### Skill Sheet 3

<b>Standard:</b> NFPA 470, 2022 edition <b>Objective:</b> 9.6.1		<b>Task:</b> Correctly utilize foam for vapor suppression as a product control solution.			
NO.	TASK STEPS	FIRST TEST		RETEST	
		Pass	Fail	Pass	Fail
1.	Select and don the appropriate PPE based on the contaminant.				
2.	Based on the characteristics of the released material, the size of the leak, and the topography, determine the viability of a vapor suppression operation.				
3.	Use the appropriate gas detection instrument to determine the boundaries of a safe work area.				
4.	Ensure that ignition sources in the area have been removed or safely controlled.				
5.	Apply appropriate type of foam from a safe distance to suppress vapors. (foam will be simulated with water only)				
6.	Have candidate verbalize the following techniques of foam application: A. Rain-down B. Roll-in Bounce-off				
7.	Monitor and determine the status and effectiveness of defensive actions taken to accomplish the response objective.				
8.	Provide an update to incident command				
	<b>Did candidate complete skill swiftly, safely, and with confidence?</b>				

Evaluator/candidate comments:

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I acknowledge **NOT** passing this skill station.





## SKILLS TEST FLOW CHART

### Hazardous Materials Operations – MS 9.6

**MANIPULATED SKILLS TEST PASSED WITH 100% COMPETENCY OF IDENTIFIED TASKS ON THE SKILL SHEET AT AN IDAHO DESIGNATED IFSAC TESTING SITE**

**SKILL SHEET 1: PERFORM DEFENSIVE ACTIONS**

**SKILL SHEET 2: VAPOR DISPERSION**

**SKILL SHEET 3: VAPOR SUPPRESSION**

ONE SKILL WILL BE CHOSEN AT RANDOM BY FST

FST WILL PROVIDE THE TESTING SITE WITH AN ERG TO USE IN TESTING

A copy of all skill sheets can be found on the FST website. [Testing | Idaho Division of Career Technical Education](#)