



HAZARDOUS MATERIALS OPERATIONS

PRACTICAL SKILLS CERTIFICATION EVALUATION PACKET (NFPA Standard 470, 2022 Edition)

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HAZARDOUS MATERIALS OPERATIONS PRACTICAL SKILLS JOB PERFORMANCE REQUIREMENTS (NFPA 470, 2022 Edition)			
Skill Sheet #	NFPA Section #	Tasks	Initial Certification Skill Requirement: 1 Mandatory 2 Random
<u>HMO 1</u>	7.2.1, 7.3.1, 7.4.1, 7.6.1	Hazardous Materials Spill/Leak Control	Mandatory (1 <u>or</u> 2)
<u>HMO 2</u>	7.2.1, 7.3.1, 7.4.1, 7.6.1	Hazardous Materials Fire	Mandatory (1 <u>or</u> 2)
<u>HMO 3</u>	9.2.1	Don/Doff PPE and Respiratory Protection	Random
<u>HMO 4</u>	7.4.1, 7.6.1, 9.2.1, 9.6.1	Product Control Measures	Random
<u>HMO 5</u>	7.4.1, 7.5.1, 9.2.1	Emergency Decontamination	Random
<u>HMO 6</u>	7.6.1, 9.2.1	Decontamination	Random

Skill Sheet Packet Instruction

Purpose of the Skill Sheets

All skills listed in this packet are consistent with the 2022 edition of the [NFPA 470: Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications](#). The Alaska Fire Standards Council (AFSC) provides these skill sheets as the basis for Hazardous Materials Operations testing and certification.

For certification purposes, the final skill examination will consist of a series of mandatory skill stations and a selection of random skills from this packet. Candidates will be required to successfully complete selected practical skills during final certification examinations at the Operations level.

Description & Use

1. These skills sheets are designed for use by the Training Officer and Hazardous Materials Operations candidate. Use of this packet throughout an accredited training program will assist in verifying candidate competency and completion of the [Hazardous Materials Operations Training Record](#).
2. For eligibility to complete the final certification examination, a candidate must demonstrate competency in all skills during training and satisfactorily complete all items on the Hazardous Materials Operations Training Record document.
3. This packet is designed to encompass the requisite skills for Hazardous Materials Operations instruction and final testing for certification. Accreditation Managers/Training Officers and Hazardous Materials Operations course instructors should utilize this evaluation packet during a course to prepare candidates for the certification exam. These skills sheets should be given to every Hazardous Materials Operations candidate at the beginning of a training course and used throughout the course for ongoing evaluation by the instructor. For a candidate's final skills evaluation, she or he must successfully perform each skill while being evaluated on performance competency by an AFSC examination representative.
4. The final skills examination will consist of skills selected from this packet. Skills are selected from the mandatory and random skills categories. This packet contains a list of all mandatory and randomly selected skills that are used for the final examination.
5. Random skill stations will be selected using a test management system within the AFSC office. The random skill stations are selected prior to the test date. The Certifying Officer will notify candidates which skills they will be required to complete at the start of the practical skills portion on the date of the examination.
6. The completion of the Hazardous Materials Operations Training Record establishes a candidate's eligibility to test. This document must be fully completed and signed by the Accreditation Manager/Training Officer or designee for each candidate before a candidate can begin the final skills examination. The Hazardous Materials Operations Training Record and the practical skills evaluation sheets shall become a permanent part of the candidate's local training record, and this information shall be kept on file in accordance with department accreditation procedures.

Grading Criteria

1. It is expected that all of the listed skill sheet elements will be taught and evaluated by the Hazardous Materials Operations instructor throughout a course. During the final skills exam, the candidate must be prepared to perform all of the skills listed in this packet. There are no specific critical points designated within the practical skill sheets. The Certifying Officer (CO) will require the candidate to repeat a practical skill station if all of the listed skill items on a selected sheet are not completed by the candidate.
2. This packet contains skill requirements that involve the demonstration of hazardous materials skills within "simulated" scenarios related to fire ground activities. When applicable, skill sheets specifically describe when simulated fire conditions are permitted for certification testing.
3. There are critical performance items that must be followed for satisfactory performance. Examples of *unsatisfactory* performance can include:
 - a. Exceeding limitations: time, safety, and equipment limitations

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- b. Inadequate/insufficient personal protective equipment
- c. Lack of skill accuracy and task completion as defined on the skill evaluation sheet
- d. Poor judgment in skill performance (i.e.- wrong application of tool or equipment or safety violation)
- e. Failure to appropriately apply related knowledge or skill requirements
- f. Not competent in the specified task or skill steps
- g. Outcome of the specified task is in doubt (i.e.- incorrectly performed or did not accomplish skill evaluation criteria)
- h. Need for Evaluator intervention (i.e.- imminent health or safety risk to candidate or others)
- i. Failure to adhere to basic safety principles or guidelines

Artificialities of Training and Testing

Training and testing for Hazardous Materials Operations can only approximate on-the-job activities. There are certain artificialities to training and testing that the candidate must be able to adapt to. Candidates must be aware that actual emergency situations cannot be completely duplicated during final examination scenarios. For the best possible outcome during final skills examination, Hazardous Materials Operations instructors must prepare the candidates to competently perform the skills listed in this packet throughout a training course.

Final Skills Evaluation

The AFSC designated Certifying Officer (CO) conducts the final evaluation and utilizes the practical skills evaluation sheets during the final examination process. Throughout the final examination, the CO has overall test site authority and is required to perform his or her duties as outlined in the [Certification Policy Manual](#).

For preparation of the final examination the designated CO must coordinate with the Accreditation Manager/Training Officer or designee, to ensure an adequate test site location is available. The Accreditation Manager/Training Officer is responsible for preparation of all test site equipment/materials and arranging designated evaluators for the date of the practical examination. The CO must verify that all required elements are adequate for testing and will approve all designated evaluators. Designated evaluators shall receive training appropriate for the test site and are required to complete an [Evaluator Code of Ethics Compliance](#) agreement before testing begins.

The CO shall verify completion of the final examination packet.

Additional Notes:

1. During the final practical examination, it is expected that an appropriate uniform, or full personal protective equipment (PPE) shall be worn unless otherwise indicated within the skill evaluation sheet.
2. During some scenarios, a candidate may be instructed to perform other firefighter/hazardous materials tasks not directly related to the specific skill sheet evaluation being tested. It is expected that the candidate shall perform all related skills correctly.
3. Some skills may include a time limit. An evaluator may use a digital or analog watch/stopwatch for final skills evaluation. Prior to the start of the practical examination, the CO must inspect and approve all timing devices used during final skills evaluations.
4. Some skills require that equipment or documentation be used within the final skills examination. Unless otherwise indicated, it is permissible for the candidate to prepare or assemble the required equipment or paperwork at any time provided that this does not interfere with the core skill, task, or evolution.
5. Candidates must be prepared to complete skills under a variety of conditions. Training and skills practice are often done during optimum conditions, but candidates must be prepared to adapt to changing conditions that can occur in actual fire ground situations. The evaluator ultimately determines if the candidate has met the criteria specified on the skill(s) being evaluated.
6. For final examination, the performance of a skill, task, or evolution is not required to be done in the exact order of the steps (as outlined on the skill sheet), unless it is critical to a particular task. For example, a person must don turnout gear before donning an SCBA.
7. Some scenarios may involve skills that must be performed as a team. During final skills examinations evaluators and candidates must be cognizant that each team member is evaluated separately to ensure individual criteria is met. An individual candidate may be required to repeat a task if they do not satisfy the skill sheet requirements.

if working as a member of a team.

8. Some skills may require that a candidate verbalize information about a particular task or procedure. In such cases, any question(s) from the evaluator to the candidate must be limited to those that satisfy the criteria listed on the skill sheet. A question cannot exceed the scope of Hazardous Materials Operations requirements.

Hazardous Materials Operations Final Written and Practical Examinations

Following is a brief outline of the reference materials and documents that are used for a Hazardous Materials Operations final examination:

Hazardous Materials Operations Written Material References

- a. [NFPA 470: Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications, 2022 Edition](#)
- b. Text (any one of the following)
 - IFSTA, *Hazardous Materials for First Responders*, 6th Edition
 - Jones and Bartlett Learning, *Hazardous Materials Awareness and Operations*, 4th Edition
- c. Additional Reference
 - Current version of DOT Emergency Response Guide (ERG) Book
 - Hazardous Materials Operations Practical Skills Evaluation Sheets (*this packet*)

Final Examination Steps

- a. [*Hazardous Materials Operations Training Record](#) review (*this must be completed and signed off by the Accreditation Manager/Training Officer or designee prior to the date of the final examination and reviewed by the CO to ensure all elements are complete*).
- b. Certifying Officer reviews and signs candidate Application for Certification
- c. Candidate completes the written examination administered by the CO
- d. Candidate completes the practical examination administered by the CO.
- e. Certifying Officer reviews completed evaluator skill sheets and transfers information to the [Practical Examination Reporting Form](#) (PERF)
- f. Written exam, Practical Examination Reporting Form, and signed application are forwarded to AFSC.
- g. AFSC Hazardous Materials Operations certificate is issued upon successful completion of the written and practical exam (*within approximately 30 days of test date*)

**Note: The candidate's completed Training Record shall be placed in the candidate's training file in accordance with fire accreditation procedures.*

Acknowledgements

The Alaska Fire Standards Council would like to acknowledge the assistance of the International Fire Service Accreditation Congress and its members who have provided reference and support and the Alaska Responders that assisted with the development and review throughout the revision process.

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PRACTICAL SKILL REQUIREMENTS

HMO-1

Candidate:				Date:			
STANDARD: NFPA 470: 7.2.1, 7.3.1, 7.4.1, 7.6.1			GENERAL SKILL: Hazardous Materials Spill/Leak Control				
TASK: Given a scenario involving hazardous materials, the candidate shall implement a response in accordance with SOP/SOG; evaluate progress to safely meet objectives; survey the incident to identify containers involved; collect hazard and response information; and communicate the status of response through chain of command.							
PERFORMANCE OUTCOME: The candidate shall identify, collect and communicate information; describe potential hazards, harm, and outcomes associated with that behavior and surrounding conditions identified in the scenario provided.							
EQUIPMENT: Emergency Response Guidebook (ERG), Scenario map, scenario description, SDS and/or shipping documents							
CONDITIONS: Given a hazardous materials scenario, the candidate shall:							
No.	TASK STEPS	TEST		RETEST 1		RETEST 2	
		P	F	P	F	P	F
1.	Establish and enforce scene control procedures	☐	☐	☐	☐	☐	☐
2.	Establish means of evidence preservation, as indicated	☐	☐	☐	☐	☐	☐
3.	Initiate incident management system according to National Incident Management System (NIMS)	☐	☐	☐	☐	☐	☐
4.	Determine incident status	☐	☐	☐	☐	☐	☐
5.	Identify the type of container and the product involved, determine material behavior and outcome based on available information, and surrounding conditions	☐	☐	☐	☐	☐	☐
6.	Determine the minimum personal protective equipment required	☐	☐	☐	☐	☐	☐
7.	Describe product control measures as indicated	☐	☐	☐	☐	☐	☐
8.	Identify the Potential Hazard related to this product	☐	☐	☐	☐	☐	☐
9.	Identify the responsible party and how to contact them.	☐	☐	☐	☐	☐	☐
10.	Identify or describe the location of the incident command post	☐	☐	☐	☐	☐	☐
11.	Identify additional resources that are needed for this response.	☐	☐	☐	☐	☐	☐
12.	Determine the need for emergency decontamination	☐	☐	☐	☐	☐	☐
Evaluator:		<i>Retest Evaluator 1:</i>					
		<i>Retest Evaluator 2:</i>					
Comments:							

Certifying Officer Name

Date

Certifying Officer Signature

Overall Skill Sheet Result:

Pass (P): ☐ Fail (F): ☐

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PRACTICAL SKILL REQUIREMENTS

HMO-2

Candidate:	Date:
STANDARD: NFPA 470: 7.2.1, 7.3.1, 7.4.1, 7.6.1	GENERAL SKILL: Hazardous Materials Fire

TASK: Given a scenario involving hazardous materials, the candidate shall implement a response in accordance with SOP/SOG; evaluate progress to safely meet objectives; survey the incident to identify containers involved; collect hazard and response information; and communicate the status of response through chain of command.

PERFORMANCE OUTCOME: The candidate shall identify from the scenario provided, the appropriate actions and objectives, safety precautions, PPE and decontamination practices to mitigate the scope of the problem.

EQUIPMENT: Emergency Response Guidebook (ERG), Safety Data Sheet (SDS), and local SOP's/SOG's.

CONDITIONS: Given a hazardous materials scenario, the candidate shall:

No.	TASK STEPS	TEST		RETEST 1		RETEST 2	
		P	F	P	F	P	F
1.	Establish and enforce scene control procedures	☐	☐	☐	☐	☐	☐
2.	Establish means of evidence preservation, as indicated	☐	☐	☐	☐	☐	☐
3.	Initiate incident management system according to National Incident Management System (NIMS)	☐	☐	☐	☐	☐	☐
4.	Determine incident status	☐	☐	☐	☐	☐	☐
5.	Identify the type of container and the product involved, determine material behavior and outcome based on available information, and surrounding conditions	☐	☐	☐	☐	☐	☐
6.	Determine the minimum personal protective equipment required	☐	☐	☐	☐	☐	☐
7.	Describe product control measures as indicated	☐	☐	☐	☐	☐	☐
8.	Identify the Potential Hazard related to this product	☐	☐	☐	☐	☐	☐
9.	Identify the responsible party and how to contact them.	☐	☐	☐	☐	☐	☐
10.	Identify or describe the location of the incident command post	☐	☐	☐	☐	☐	☐
11.	Identify additional resources that are needed for this response.	☐	☐	☐	☐	☐	☐
12.	Determine the need for emergency decontamination	☐	☐	☐	☐	☐	☐

Evaluator:		<i>Retest Evaluator 1:</i>	
		<i>Retest Evaluator 2:</i>	
Comments:			

Overall Skill Sheet Result:

Pass (P): ☐ **Fail (F):** ☐

Certifying Officer Name

Date

Certifying Officer Signature

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PRACTICAL SKILL REQUIREMENTS

HMO-3

Candidate:	Date:
STANDARD: NFPA 470: 9.2.1	GENERAL SKILL: Don/Doff PPE and Respiratory Protection
TASK: Demonstrate the ability to select, don, work in, and doff personal protective equipment (PPE) at a hazardous materials/WMD incident; a mission-specific assignment in an IAP that required the use of PPE	
PERFORMANCE OUTCOME: The candidate shall demonstrate the ability to correctly don PPE, work in a contaminated area, exit the contaminated area, and doff gear in accordance with AHJ procedure.	
EQUIPMENT: Personal protective equipment and decontamination materials according to Authority Having Jurisdiction (AHJ), PPE inspection forms, and local SOP's/SOG's.	
CONDITIONS: Given a simulated hazardous materials environment, the candidate shall demonstrate the ability to complete all task steps.	

No.	TASK STEPS	TEST		RETEST 1		RETEST 2	
		P	F	P	F	P	F
1.	Select the correct PPE for the assignment	☐	☐	☐	☐	☐	☐
2.	Inspect the PPE and verify it is ready for service	☐	☐	☐	☐	☐	☐
3.	Correctly don chemical protective clothing	☐	☐	☐	☐	☐	☐
4.	Correctly don respiratory protection.	☐	☐	☐	☐	☐	☐
5.	Complete doffing procedures in accordance with local AHJ policy and procedure	☐	☐	☐	☐	☐	☐
6.	Remove respiratory protection and place all equipment in a ready state for reuse	☐	☐	☐	☐	☐	☐
7.	Return equipment to service following the proper procedures per AHJ and manufacture recommendations	☐	☐	☐	☐	☐	☐
8.	Complete required reports and documents post use.	☐	☐	☐	☐	☐	☐

Evaluator:		<i>Retest Evaluator 1:</i>	
		<i>Retest Evaluator 2:</i>	
Comments:			

Overall Skill Sheet Result:

Pass (P): ☐ **Fail (F):** ☐

Certifying Officer Name

Date

Certifying Officer Signature

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PRACTICAL SKILL REQUIREMENTS

HMO-4

Candidate:	Date:
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STANDARD: NFPA 470: 7.4.1, 7.6.1, 9.2.1, 9.6.1	GENERAL SKILL: Product Control Measures
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TASK: The candidate shall perform assigned tasks of product control with a limited risk of personal exposure.

PERFORMANCE OUTCOME: Working in teams of no more than 3 personnel the candidates will successfully demonstrate each of the abilities identified within the checklist.

EQUIPMENT: Chemical Protective Clothing, self-contained breathing apparatus (SCBA), shovels/hand tools, materials that can be used for absorption, damming, diking, diversion, retention, dispersion and suppression, tarps/salvage cover, sandbags, fire hose, various nozzles: hand line, fog/solid stream combination, foam proportioner/educator, simulated foam product, hose tools, appliances and water supply. Other equipment/materials may be used based on local resources, portable radio, and local SOP's/SOG's.

CONDITIONS: The candidate shall complete the following tasks:

No.	TASK STEPS	TEST		RETEST 1		RETEST 2	
		P	F	P	F	P	F
1.	Establish scene control	☐	☐	☐	☐	☐	☐
2.	Select and wear appropriate PPE	☐	☐	☐	☐	☐	☐
3.	Using approved communications methods communicate to supervisor status (i.e. making entry, status, and exiting)	☐	☐	☐	☐	☐	☐
4.	Selects and performs product control techniques to confine/contain the release with limited risk of personal exposure	☐	☐	☐	☐	☐	☐
5.	Uses approved control agents and/or equipment on a release involving hazardous materials/WMD	☐	☐	☐	☐	☐	☐
6.	Uses remote control valves and emergency shutoff devices as available	☐	☐	☐	☐	☐	☐
7.	Performs product control techniques	☐	☐	☐	☐	☐	☐
8.	Protects exposures and personnel	☐	☐	☐	☐	☐	☐
9.	Avoids or minimizes hazards	☐	☐	☐	☐	☐	☐
10.	Ensures product is controlled	☐	☐	☐	☐	☐	☐
11.	Reports and documents operations	☐	☐	☐	☐	☐	☐
12.	Determines when the response objectives are completed	☐	☐	☐	☐	☐	☐
13.	All steps completed in a safe manner	☐	☐	☐	☐	☐	☐

Evaluator:		Retest Evaluator 1:	
		Retest Evaluator 2:	

Comments:	

Overall Skill Sheet Result:

Pass (P): ☐ **Fail (F):** ☐

Certifying Officer Name

Date

Certifying Officer Signature

ALASKA HAZARDOUS MATERIALS OPERATIONS SKILLS EVALUATION PACKET

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PRACTICAL SKILL REQUIREMENTS

HMO-5

Candidate:				Date:			
STANDARD: NFPA 470: 7.4.1, 7.5.1, 9.2.1			GENERAL SKILL: Emergency Decontamination				
TASK: The candidate(s) shall perform emergency decontamination at a hazardous materials/WMD incident.							
PERFORMANCE OUTCOME: Given a scenario the candidate shall demonstrate the ability to correctly set up and perform emergency decontamination on a first responder in a safe area, utilizing appropriate PPE, preventing spread of contamination and avoiding hazards.							
EQUIPMENT: PPE, self-contained breathing apparatus (SCBA), water supply, hoses and Emergency Response Guidebook (ERG)							
CONDITIONS: Given a person that has a simulated contamination and a scenario, the candidate shall demonstrate the ability to perform emergency decontamination on a contaminated person or firefighter.							
No.	TASK STEPS	TEST		RETEST 1		RETEST 2	
		P	F	P	F	P	F
1.	Using appropriate PPE and equipment	☐	☐	☐	☐	☐	☐
2.	Select and set up emergency decontamination area in a safe location	☐	☐	☐	☐	☐	☐
3.	Remove contaminated person from hot zone/contaminated area	☐	☐	☐	☐	☐	☐
4.	Flush the contaminated person with water to remove bulk of contamination.	☐	☐	☐	☐	☐	☐
5.	Remove contaminated person's outer most clothing. If applicable remove (helmet, SCBA, gloves and coat, pants and boots	☐	☐	☐	☐	☐	☐
6.	Flush the contaminated person with water once the outer most clothing is removed.	☐	☐	☐	☐	☐	☐
7.	Remove remaining respiratory protection (face piece)	☐	☐	☐	☐	☐	☐
8.	Move decontaminated person to clean environment and/or ambulance	☐	☐	☐	☐	☐	☐
9.	Communicate contaminant information to EMS and/or hospital	☐	☐	☐	☐	☐	☐
Evaluator:		<i>Retest Evaluator 1:</i>					
		<i>Retest Evaluator 2:</i>					
Comments:							
Overall Skill Sheet Result:							
Pass (P): ☐ Fail (F): ☐							

Certifying Officer Name

Date

Certifying Officer Signature

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PRACTICAL SKILL REQUIREMENTS

[HMO-6](#)

Candidate:		Date:	
STANDARD: NFPA 470: 7.6.1, 9.2.1	GENERAL SKILL: Decontamination		

TASK: Demonstrate the ability to undergo decontamination.

PERFORMANCE OUTCOME: The candidate shall demonstrate the ability to undergo decontamination in a decontamination area, separate contaminated tools and equipment, and inspect and reservice tools and equipment.

EQUIPMENT: Decontamination equipment, PPE, tools, equipment, water supply, current Emergency Response Guidebook

CONDITIONS: Given a simulated hazardous materials environment and decontamination, the candidate shall demonstrate the ability to:

No.	TASK STEPS	TEST		RETEST 1		RETEST 2	
		P	F	P	F	P	F
1.	Wearing appropriate PPE, separate contaminated tools and equipment by placing in a designated area.	☐	☐	☐	☐	☐	☐
2.	Enter the decontamination area.	☐	☐	☐	☐	☐	☐
3.	Undergo decontamination according to AHJ or local procedures.	☐	☐	☐	☐	☐	☐
4.	Clean, inspect, and reservice PPE, tools, and equipment.	☐	☐	☐	☐	☐	☐
5.	Perform all steps safely to minimize hazards.	☐	☐	☐	☐	☐	☐
6.	Proceed to medical evaluation or Rehab area.	☐	☐	☐	☐	☐	☐

Evaluator:		<i>Retest Evaluator 1:</i>	
		<i>Retest Evaluator 2:</i>	
Comments:			

Overall Skill Sheet Result:

Pass (P): ☐ **Fail (F):** ☐

Certifying Officer Name

Date

Certifying Officer Signature

PRACTICAL SKILLS TESTING CORRELATION MAP			
HAZARDOUS MATERIALS OPERATIONS PRACTICAL SKILLS JOB PERFORMANCE REQUIREMENTS			
(NFPA 470, 2022 Edition)			
Skill Sheet #	NFPA Section #	Tasks	Initial Certification Skill Requirement: 1 Mandatory 2 Random
HMO 1	7.2.1, 7.3.1, 7.4.1, 7.6.1	Hazardous Materials Spill/Leak Control	Mandatory (1 or 2)
HMO 2	7.2.1, 7.3.1, 7.4.1, 7.6.1	Hazardous Materials Fire	Mandatory (1 or 2)
HMO 3	9.2.1	Don/Doff PPE and Respiratory Protection	Random
HMO 4	7.4.1, 7.6.1, 9.2.1, 9.6.1	Product Control Measures	Random
HMO 5	7.4.1, 7.5.1, 9.2.1	Emergency Decontamination	Random
HMO 6	7.6.1, 9.2.1	Decontamination	Random