

National Certification Program Study Guide

February 2010



Hazardous Materials - Technician



NFPA 472,

**Standard for Competence of Responders to Hazardous
Materials/Weapons of Mass Destruction Incidents,
2008 Edition**

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Introduction to Hazardous Materials - Technician Certification

Each individual seeking certification within the Kansas Fire & Rescue Training Institute, the University of Kansas, Certification System must submit an application and the appropriate fee to secure entrance into the system. **Candidates are given one year in which to complete the certification process.** Application forms may be downloaded at: <http://www.continuinged.ku.edu/fire/certification.php>.

A list of current fees may be obtained by calling 785-864-4790 or toll free 1-866-804-8841 or may be downloaded from <http://www.continuinged.ku.edu/fire/certification.php>. Purchase orders from cities or organizations will be accepted. Kansas Fire & Rescue Training Institute will not "bill" individuals for the certification fee. Checks or credit cards are accepted from individuals. Upon receipt of the application and fee, the candidate will be scheduled into a specific exam site as requested or the candidate may select an exam site from the schedule on the KUCE website.

Applicants may register for an exam site at the time of application by completing the appropriate block on the application form. Candidates requesting a specific test site should contact the Kansas Fire & Rescue Training Institute at 785-864-4790 or toll free 1-866-804-8841 to confirm that they have a reserved place at the exam.

Certification candidates are given two (2) attempts at each component, written and practical, **within the twelve month certification period.** If the candidate takes either component of the exam twice without passing, the candidate is required to resubmit a certification application form as well as an additional certification fee before being scheduled to retest a third time.

Candidates failing the written exam are responsible for notifying Kansas Fire & Rescue Training Institute of their desire to retest and enroll at the next scheduled exam that has available space or they may come to the Kansas Fire & Rescue Training Institute in Lawrence, Kansas to take a retest. Written exams will **not** be graded at the test site. Candidates may not take the written exam more than once per day.

Candidates are responsible for **all of the skills** required by the NFPA 472, *Standard for Competence of Responders to Hazardous Material/Weapons of Mass Destruction Incidents*, 2008 edition, during the practical exam. An exact list of specific skills is included in the study guide. **Candidates should be prepared to test on any skill listed in the standard.** The intent of this process is to insure that candidates are prepared to test on skills required by the NFPA 472 – 2008 standard.

Candidates will test three (3) skill sets from the five (5) skill sets listed in this study guide.

Practical skill exams are graded on a pass/fail basis. Candidates must successfully complete all skill stations at an exam site to receive a passing grade for the practical exam. Each candidate is allowed two (2) attempts at each station.

Candidates failing the practical exam are responsible for notifying Kansas Fire & Rescue Training Institute of their desire to retest by preregistering for another regularly scheduled exam. Candidates may not take the practical exam more than once per exam day.

An official picture ID (e.g., driver's license, military ID, etc.) must be shown for admittance to written and practical exams.

Certification Examination Instructions

HazMat - Technician

NFPA 472 – 2008

Prerequisites:

Candidates seeking certification for HazMat Technician within the Kansas Fire & Rescue Training Institute (KFRTI), the University of Kansas, must meet the following:

1. Residency and membership requirements as stated in Section 12, “Certification Policies” of the KFRTI National Certification Program Criteria and Procedures document published by Kansas Fire & Rescue Training Institute (available for download at <http://www.continuinged.ku.edu/fire/certification.php>.)
 2. Verification of the following requirement by the Fire Chief (or designated representative) or employer. For those candidates enrolled in Kansas Community College Hazardous Materials Programs, this verification will be executed by the professor or chief instructor. Verification of these requirements will be executed with the completion of the **HazMat – Technician Local Verification Form** found at the end of this Study Guide (page 19).
 - Proof of mask fit testing to the SCBA mask (model & size) used in the certification test.
 3. Candidate must be competent in all objectives listed in NFPA 472, *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents*, 2008 edition,
 - Chapter 4, *Competencies for Awareness Level Personnel*
 - Chapter 5, *Core Competencies for Operations Level Responders*
 - Section 6.2, *Mission-Specific Competencies: Personal Protective Equipment*
 - Section 6.6, *Mission-Specific Competencies: Product Control*.
 - Chapter 7, *Competencies for Hazardous Materials Technicians*
 4. Candidate must be previously nationally certified NFPA 472 HazMat Operations.
 5. Successful completion of all parts of the HazMat - Technician certification exam will result in national certification in HazMat – Technician.
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Part I - Written Examination:

The HazMat – Technician written certification exam is based on **Requisite Knowledge** objectives listed in the NFPA 472, *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents*, 2008 edition.

1. Candidates are required to score a minimum of 70%.
 2. The certification exam contains one hundred (100) true/false and multiple choice questions covering HazMat – Technician level knowledge requirements as stated in NFPA 472-2008. The candidate will be allowed two (2) hours to complete this portion of the exam.
-

Part II - Practical Skills Examination:

The HazMat - Technician practical skills portion of the certification exam is based on **Requisite Knowledge** and **Requisite Skills** objectives listed in NFPA 472, *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents*, 2008 edition.

1. Candidates will be required to score 100% on all evaluated skills, which are graded on a Pass/Fail basis.
2. The skills evaluation forms are available as part of this study guide.

References & Textbooks:

IFSTA, *Hazardous Materials Managing the Incident*, 3d edition, © 2005.
DOT, *Emergency Response Guidebook*, 2008 edition.
NIOSH, *NIOSH Pocket Guide to Chemical Hazards*, August 2006 edition.
NFPA 472, *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents*, 2008 edition.
NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, 2007 edition.

ICS Form 208HM (Site Safety Plan)

A blank, 3-page ICS Form 208HM (Site Safety Plan) is provided at Page 15 for the candidate's reference. This is the report that will be used during certification testing.

The forms used during certification testing will be provided to the candidate at the site.

Mask Fit Compliance

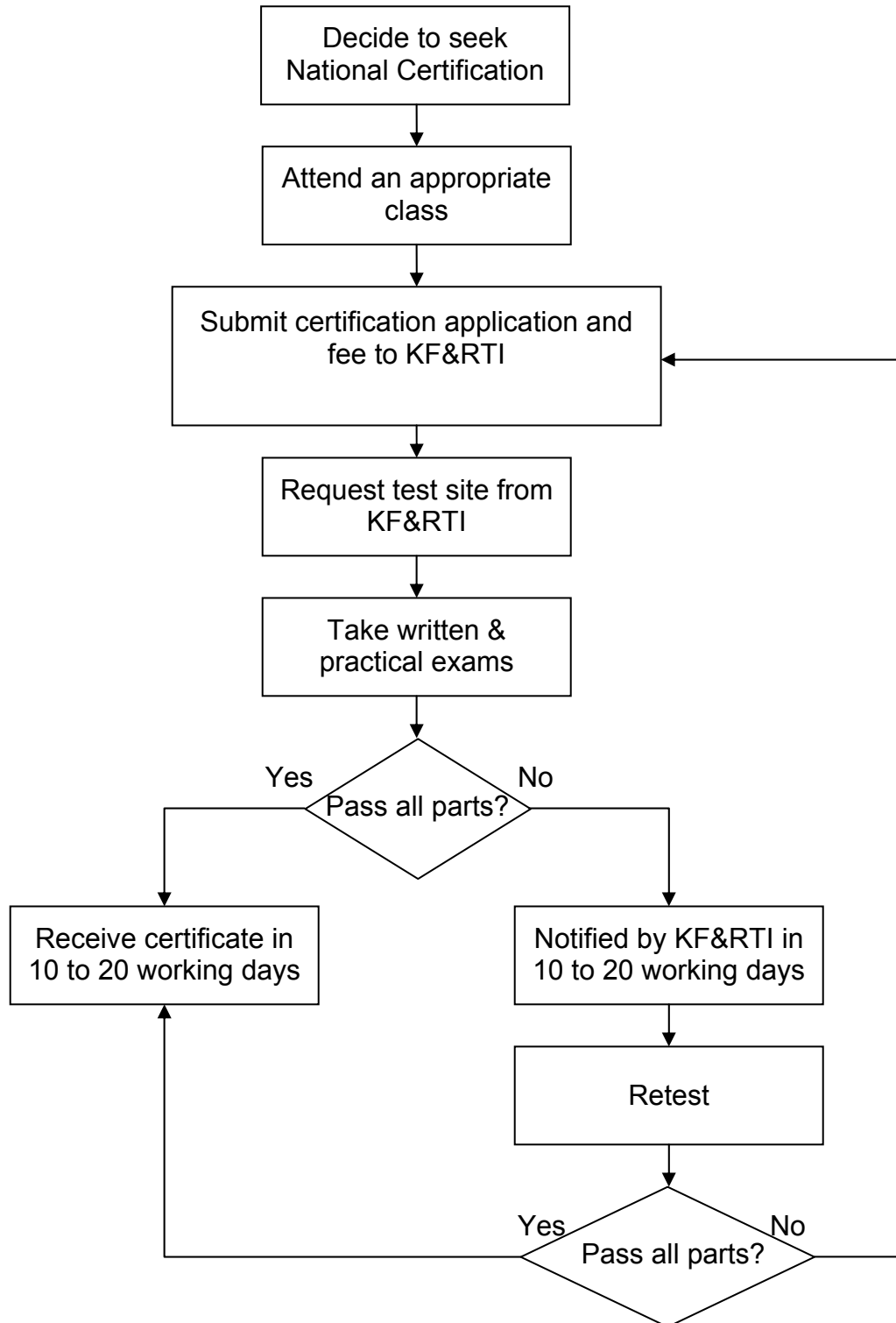
Candidates may be exposed to an IDLH environment during the course of testing.

All HazMat Technician certification candidates must present documented SCBA face piece testing in compliance with 29 CFR 1910.134.

Verification of face piece testing may be documented on the **HazMat Technician Local Verification & Mask Fit Test Form** provided at the end of this study guide (page 19).

Any candidates with beards or facial hair in the area of the SCBA face piece seal will not be allowed to participate in the practical skills exam for HazMat Technician. Candidates must be visibly clean shaven, without stubble, at the time of the test.

Certification Flow Chart for HazMat – Technician



HazMat – Technician Written Exam Study Guidesheet

Standard: NFPA 472, *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents*, 2008 edition.

References: IFSTA, *Hazardous Materials Managing the Incident*, 3d edition, © 2005.
DOT, *Emergency Response Guidebook*, 2008 edition.
NIOSH, *NIOSH Pocket Guide to Chemical Hazards*, August 2006 edition.

The reading and study references listed below represent published references from which certification exam questions are taken.

Section Subject & NFPA Objective Number	Reading/Study Reference
Hazardous materials technician tasks to be accomplished in addition to awareness and operations level competencies.	
7.1.2.2	IFSTA pp. 2 – 32
Surveying Hazardous Materials/WMD Incidents.	
7.2.1	IFSTA pp. 133 – 138, 198 – 200
Collecting and Interpreting Hazard and Response Information.	
7.2.2	IFSTA pp. 135 – 139, 265 – 348, 394 – 407
Describing the Condition of the Container Involved in the Incident.	
7.2.3	IFSTA pp. 202 – 236
Predicting Likely Behavior of Materials and Their Containers Where Multiple Materials Are Involved.	
7.2.4	IFSTA pp. 271 – 280, 319 – 335
Estimating the Likely Size of an Endangered Area.	
7.2.5	IFSTA pp. 151 – 188
Identifying Response Objectives.	
7.3.1	IFSTA pp. 139 – 141, 417 – 507
Identifying the Potential Response Options.	
7.3.2	IFSTA pp. 139 – 141, 417 – 507
Selecting Personal Protective Equipment.	
7.3.3	IFSTA pp. 137 – 138, 349 – 392
Selecting Decontamination Procedures.	
7.3.4	IFSTA pp. 141 – 143, 509 – 554
Developing a Plan of Action.	
7.3.5	IFSTA pp. 89, 107 – 108, 123 – 124, 135 – 136, 153, 271, 395
Performing Incident Command Duties.	
7.4.1	IFSTA pp. 87 – 128
Using Protective Clothing and Respiratory Protection.	
7.4.2	IFSTA pp. 364 – 389

Performing Control Functions Identified in Incident Action Plan.

7.4.3 IFSTA pp. 421 – 500

Identify the Common Methods for Product Transfer from Each Type of Cargo Tank (MC-306/DOT-406, MC-307/DOT-407, MC-312/DOT-412, MC-331, and MC-338).

7.4.4 IFSTA pp. 484 – 496

Performing Decontamination Operations Identified in the Incident Action Plan.

7.4.5 IFSTA pp. 509 – 554

Evaluating the Effectiveness of the Control Functions.

7.5.1 IFSTA pp. 417 – 508

Evaluating the Effectiveness of the Decontamination Process.

7.5.2 IFSTA pp. 526 – 527

Assisting in Debriefing.

7.6.1 IFSTA pp. 559 – 565

Assisting in the Incident Critique.

7.6.2 IFSTA pp. 566 – 569

Reporting and Documenting the Incident.

7.6.3 IFSTA pp. 563 – 565

Cumulative Reading Pages:

IFSTA: 2 – 32, 87 – 128, 133 – 143, 151 – 188, 198 – 200, 202 - -236, 265 – 392, 394 – 407, 417 – 554, 559 – 569.

HazMat – Technician Practical Skills Exam Study Guidesheet

Standard: NFPA 472, *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents*, 2008 edition.

References: IFSTA, *Hazardous Materials Managing the Incident*, 3d edition, © 2005.
DOT, *Emergency Response Guidebook*, 2008 edition.
NIOSH, *NIOSH Pocket Guide to Chemical Hazards*, August 2006 edition.

The reading and study references listed below represent published references from which certification exam skill sheets are derived.

Section Subject & NFPA Objective Number	Referenced Skill Sheets
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Hazardous materials technician tasks to be accomplished in addition to awareness and operations level competencies.

7.1.2 *Implement the planned response to favorably change the outcomes consistent with the organization's SOPs and site safety and control plan by completing the following tasks:*

- | | |
|--|---------|
| (a) Perform the duties of an assigned HazMat branch or group position within the local IMS. | KFRTI 1 |
| (b) Don, work in, and doff personal protective clothing, including, but not limited to, both liquid splash- and vapor-protective clothing with correct respiratory protection. | KFRTI 3 |
| (c) Perform the control functions identified in the IAP. | KFRTI 4 |
| (d) Perform the decontamination functions identified in the IAP. | KFRTI 5 |
| <i>Terminate the incident by completing the following tasks:</i> | |
| (a) Assist in the incident debriefing. | KFRTI 1 |
| (b) Assist in the incident critique. | KFRTI 1 |
| (c) Provide reports and documentation of the incident. | KFRTI 1 |

Surveying Hazardous Materials/WMD Incidents.

7.2.1 *Demonstrate the correct techniques to identify hazards (corrosivity, flammability, oxidation potential, oxygen deficiency, radioactivity, toxicity, and pathogenicity):*

- | | |
|---|---------|
| (1) Carbon monoxide meter. | KFRTI 2 |
| (2) Colorimetric tubes. | KFRTI 2 |
| (3) Combustible gas indicator. | KFRTI 2 |
| (4) Oxygen meter. | KFRTI 2 |
| (5) Passive dosimeters. | KFRTI 2 |
| (6) pH indicators & pH meters. | KFRTI 2 |
| (7) Photoionization & flame ionization detectors. | KFRTI 2 |
| (8) Radiation detection instruments. | KFRTI 2 |
| (9) Reagents. | KFRTI 2 |
| (10) Test strips. | KFRTI 2 |
| (11) WMD detectors (chemical & biological). | KFRTI 2 |
| (12) Other equipment provided by the AHJ. | KFRTI 2 |
| <i>Demonstrate field maintenance & testing procedures for items (1) through (12) above.</i> | KFRTI 2 |
| <i>Demonstrate methods for collecting samples of the following:</i> | |
| (1) Gas. | KFRTI 2 |
| (2) Liquid. | KFRTI 2 |
| (3) Solid. | KFRTI 2 |

Using Protective Clothing and Respiratory Protection.

- 7.4.2 Demonstrate the ability to don, work in, and doff SCBA in addition to any other respiratory protection provided by the AHJ. KFRTI 3
- Demonstrate the ability to don, work in, and doff liquid splash-protective, vapor protective, and chemical-protective clothing in addition to any other specialized protective equipment provided by the AHJ. KFRTI 3

Performing Control Functions Identified in Incident Action Plan.

- 7.4.3 *Select the material or equipment and demonstrate the method(s) to contain leaks from the following locations:*
- (a) Fusible plug. KFRTI 4
 - (b) Fusible plug threads. KFRTI 4
 - (c) Side wall of cylinder. KFRTI 4
 - (d) Valve blowout. KFRTI 4
 - (e) Valve gland. KFRTI 4
 - (f) Valve inlet threads. KFRTI 4
 - (g) Valve seat. KFRTI 4
 - (h) Valve stem assembly blowout. KFRTI 4
- Demonstrate the ability to perform the following to the fittings on a pressure container:*
- (a) Close valves that are open. KFRTI 4
 - (b) Replace missing plugs. KFRTI 4
 - (c) Tighten loose plugs. KFRTI 4
- Demonstrate the ability to contain the following types of leaks from a 55 gallon drum:*
- (a) Bung leak. KFRTI 4
 - (b) Chime leak. KFRTI 4
 - (c) Forklift puncture. KFRTI 4
 - (d) Nail puncture. KFRTI 4
- Demonstrate the ability to place a 55 gallon drum into the overpack drum using the following methods:*
- (a) Rolling slide-in. KFRTI 4
 - (b) Slide-in. KFRTI 4
 - (c) Slip-over. KFRTI 4
- Demonstrate the ability to install a dome cover clamp onto the dome of an MC-306/DOT-406 cargo tank. KFRTI 4

Performing Decontamination Operations Identified in the Incident Action Plan.

- 7.4.5 *Demonstrate the ability to set up and implement the following types of decontamination operations:*
- (1) Technical decontamination operations in support of entry operations. KFRTI 5
 - (2) Technical decontamination operations involving ambulatory and non-ambulatory victims. KFRTI 5
 - (3) Mass decontamination operations involving ambulatory and non-ambulatory victims. KFRTI 5

Reporting and Documenting the Incident.

- 7.6.3 Demonstrate the completion of the reports required by the emergency response plan or SOPs. KFRTI 1

Skill Set: Implement the Response & Document the Incident

OBJECTIVE: NFPA 472-2008, Chapter 7, Sections 7.1.2 & 7.6.3.

REFERENCE: IFSTA, Hazardous Materials Managing the Incident, 3d edition, © 2005.
KNOWLEDGE: pp. 2 – 32 & 563 – 565.

Candidate Equipment Required: Blank reports and pencil.

Evaluator Equipment Required: Scenario, ICS Form 208HM (Site Safety Plan), Incident Action Plan.

Read To Candidate

At this station, you will be required to implement the response while functioning as the HazMat Branch or Group Leader. You will be provided with a scenario or situation; an Incident Action Plan; and an ICS Form 208HM (Site Safety Plan). You will also be required to debrief the HazMat response to the incident as well as critique the response, given the scenario.

This is **not** a timed event, but you should complete the assignment as expeditiously as possible.

To pass this station, you must **successfully complete 100% of the steps**.

1 st Attempt		2 nd Attempt		Skill Steps
P	F	P	F	

Sections 7.1.2.2 & 7.6.3 – Implement the Response & Documenting the Incident

- | | | | | |
|-----|-----|-----|-----|---|
| ___ | ___ | ___ | ___ | 1. Perform the duties of an assigned HazMat branch or group position within the local incident management system (IMS). |
| ___ | ___ | ___ | ___ | 2. Assist in the incident debriefing. |
| ___ | ___ | ___ | ___ | 3. Assist in the incident critique. |
| ___ | ___ | ___ | ___ | 4. Complete reports and documentation of the incident. |

Candidate's Name: _____ **Station:** P ___ F ___

Evaluator's Signature: _____ **Date:** _____

If the candidate FAILS this station after both attempts, provide comments on the back of this sheet and turn it in to the Exam Site Coordinator.

Skill Set: Surveying Hazardous Materials/WMD Incidents

OBJECTIVE: NFPA 472-2008, Chapter 7, Sections 7.2.1.

REFERENCE: IFSTA, Hazardous Materials Managing the Incident, 3d edition, © 2005.
KNOWLEDGE: pp. 133 – 138, 198 – 200.

Candidate Equipment Required: Chemical protective clothing; SCBA; appropriate monitoring equipment, test strips, and reagents.

Evaluator Equipment Required: Sample hazardous materials.

Read To Candidate

At this station, you will be given three hazardous materials/WMD, one of which is a solid, one is a liquid, and one a gas. You will select and use the appropriate monitoring equipment, test strips, and reagents and demonstrate the correct techniques to identify the hazards in terms of corrosivity, flammability, oxidation potential, oxygen deficiency, radioactivity, toxicity, and pathogenicity.

You will next demonstrate your ability to carry out field maintenance on the equipment as well as the testing procedures associated with the equipment.

Finally, you will demonstrate the correct methods for collecting samples of a gas, a liquid, and a solid.

This is **not** a timed event, but you should complete the assignment as expeditiously as possible.

To pass this station, you must **successfully complete 100% of the steps**.

1st Attempt 2nd Attempt
P F P F

Skill Steps

Section 7.2.1.3.5 – Identify the Hazards.

- | | | | | |
|-----|-----|-----|-----|--|
| ___ | ___ | ___ | ___ | 1. Carbon monoxide meter. |
| ___ | ___ | ___ | ___ | 2. Colorimetric tubes. |
| ___ | ___ | ___ | ___ | 3. Combustible gas indicator. |
| ___ | ___ | ___ | ___ | 4. Oxygen meter. |
| ___ | ___ | ___ | ___ | 5. Passive dosimeters. |
| ___ | ___ | ___ | ___ | 6. pH indicators and pH meters. |
| ___ | ___ | ___ | ___ | 7. Photoionization and flame ionization detectors. |
| ___ | ___ | ___ | ___ | 8. Radiation detection instruments. |
| ___ | ___ | ___ | ___ | 9. Reagents. |
| ___ | ___ | ___ | ___ | 10. Test strips. |
| ___ | ___ | ___ | ___ | 11. WMD detectors (chemical and biological). |
| ___ | ___ | ___ | ___ | 12. Other equipment provided by the AHJ. |

(CONTINUED)

Section 7.2.1.3.6 – Demonstrate Field Maintenance and Testing Procedures.

- ___ ___ ___ ___ 13. Field maintenance.
- ___ ___ ___ ___ 14. Testing procedures.

Section 7.2.1.5 – Demonstrate Methods for Collecting Samples.

- ___ ___ ___ ___ 15. Gas.
- ___ ___ ___ ___ 16. Liquid.
- ___ ___ ___ ___ 17. Solid.

Candidate's Name: _____ **Station: P** ___ **F** ___

Evaluator's Signature: _____ **Date:** _____

If the candidate FAILS this station after both attempts, provide comments on the back of this sheet and turn it in to the Exam Site Coordinator.

NFFA 472-2008, HazMat - Technician

KFRTI Skills Evaluation Item 3

Skill Set: Using Protective Clothing and Respiratory Protection

OBJECTIVE: NFFA 472-2008, Chapter 7, Sections 7.1.2 and 7.4.2.

REFERENCE: IFSTA, Hazardous Materials Managing the Incident, 3d edition, © 2005.
KNOWLEDGE: pp. 2 – 32 & 364 – 389.

Candidate Equipment Required: PPE ensemble (Level A or Level B), SCBA or SAR.

Evaluator Equipment Required: None.

Read To Candidate

At this station, you will be required to don personal protective ensemble (PPE) in Level A or Level B protection. You will be assisted by a helper in donning and doffing your protective ensemble. You must tell your helper what you want done.

After having completed the donning of your protective ensemble, you will go on air and perform the task(s) required at another Skill Station. Those tasks will be graded separately from this Skill Station. Upon completion of that Skill Station, you will return to this Skill Station to demonstrate the doffing of your protective ensemble.

This is **not** a timed event, but you should complete the assignment as expeditiously as possible.

To pass this station, you must **successfully complete 100% of the steps**.

1st Attempt 2nd Attempt
P F P F

Skill Steps

Section 7.1.2 & 7.4.2 – Using Protective Clothing and Respiratory Protection.

- ___ ___ ___ ___ 1. Demonstrate the ability to don, work in, and doff SCBA in addition to any other respiratory protection provided by the AHJ.
- ___ ___ ___ ___ 2. Demonstrate the ability to don, work in, and doff liquid splash-protective, vapor protective, and chemical-protective clothing in addition to any other specialized protective equipment provided by the AHJ.

Candidate's Name: _____ **Station:** P ___ F ___

Evaluator's Signature: _____ **Date:** _____

If the candidate FAILS this station after both attempts, provide comments on the back of this sheet and turn it in to the Exam Site Coordinator.

Skill Set: Performing Control Functions Identified in Incident Action Plan

OBJECTIVE: NFPA 472-2008, Chapter 7, Section 7.1.2 & 7.4.3.

REFERENCE: IFSTA, Hazardous Materials Managing the Incident, 3d edition, © 2005.
KNOWLEDGE: pp. 2 – 32 & 421 – 500.

Candidate Equipment Required: PPE ensemble (Level A or Level B), SCBA or SAR.

Evaluator Equipment Required: Plugging & patching materials & equipment; simulated leaking pressure vessel prop; tools & equipment for closing valves, and replacing or tightening plugs; equipment & materials for containing leaks; 55 gallon drum prop; MC-306/DOT-406 cargo tank simulator (with water as product); non-sparking hammer; and dome cover clamp.

Read To Candidate

At this station, you will be provided with a simulated leak from a pressure vessel. Working as a member of a two-person team, you will be required to select appropriate equipment and materials and then demonstrate methods for safely containing the leak. You will demonstrate your skills given **three (3) of the eight** types of leaks in Section A below. **I will tell which three you will accomplish.**

You will next demonstrate your skills in dealing with leaking fittings on the pressure vessel. You will be tested on **two (2) of the three** options in Section B below. **I will tell you which two you will accomplish.**

After that, you will demonstrate your skills in dealing with a leaking 55-gallon drum containing an unknown product. You will demonstrate your skills on **two (2) of the four** leak situations in Section C below. **I will tell you which two you will accomplish.**

Finally, from Section D below, you will demonstrate your skills in: **(the evaluator will select one of the following options)**

... using an overpack drum by demonstrating the rolling slide-in method, the slide-in method, and the slip-over method.

– OR –

... installing a dome cover clamp on a leaking MC-306/DOT-406 cargo tank dome simulator.

This is **not** a timed event, but you should complete the assignment as expeditiously as possible.

To pass this station, you must **successfully complete 100% of the steps.**

1st Attempt 2nd Attempt
P F P F

Skill Steps

Section A: Select the material or equipment and demonstrate the method(s) to contain leaks from the following locations:

- ___ ___ ___ ___ 1. Fusible plug.
- ___ ___ ___ ___ 2. Fusible plug threads.
- ___ ___ ___ ___ 3. Side wall of cylinder.
- ___ ___ ___ ___ 4. Valve blowout.
- ___ ___ ___ ___ 5. Valve gland.
- ___ ___ ___ ___ 6. Valve inlet threads.
- ___ ___ ___ ___ 7. Valve seat.
- ___ ___ ___ ___ 8. Valve stem assembly blowout.

(CONTINUED)

Section B: Demonstrate the ability to perform the following to the fittings on a pressure container:

- ___ ___ ___ ___ 9. Close valves that are open.
- ___ ___ ___ ___ 10. Replace missing plugs.
- ___ ___ ___ ___ 11. Tighten loose plugs.

Section C: Demonstrate the ability to contain the following types of leaks from a 55 gallon drum:

- ___ ___ ___ ___ 12. Bung leak.
- ___ ___ ___ ___ 13. Chime leak.
- ___ ___ ___ ___ 14. Forklift puncture.
- ___ ___ ___ ___ 15. Nail puncture.

Section D: Demonstrate the ability to place a 55 gallon drum into the overpack drum using the following methods:

- ___ ___ ___ ___ 16. Rolling slide-in.
- ___ ___ ___ ___ 17. Slide-in.
- ___ ___ ___ ___ 18. Slip-over.

- ___ ___ ___ ___ 19. Demonstrate the ability to install a dome cover clamp onto the dome of an MC-306/DOT-406 cargo tank.

Candidate's Name: _____ **Station: P** ___ **F** ___

Evaluator's Signature: _____ **Date:** _____

If the candidate FAILS this station after both attempts, provide comments on the back of this sheet and turn it in to the Exam Site Coordinator.

Skill Set: Performing Decontamination Operations Identified in the Incident Action Plan

OBJECTIVE: NFPA 472-2008, Chapter 7, Sections 7.1.2 & 7.4.5.

REFERENCE: IFSTA, Hazardous Materials Managing the Incident, 3d edition, © 2005.
KNOWLEDGE: pp. 2 – 32 & 509 – 554.

Candidate Equipment Required: PPE ensemble (Level A or Level B), SCBA or SAR.

Evaluator Equipment Required: Decontamination equipment and materials as appropriate, and a water source.

Read To Candidate

At this station, you will be given a scenario that requires you to set up a decontamination corridor in support of:

- Technical decontamination in support of entry operations.
- Technical decontamination involving both ambulatory and non-ambulatory victims.
- Mass decontamination involving both ambulatory and non-ambulatory victims.

You will work as a member of a two-person team tasked with setting up and operating the appropriate decontamination corridor. You will be provided with personnel acting as victims. You will not remove their clothing as part of decontamination, but you must verbalize it when appropriate. If the victims are wearing PPE, you must demonstrate appropriate procedures for removing the wearers' PPE.

This is **not** a timed event, but you should complete the assignment as expeditiously as possible.

To pass this station, you must **successfully complete 100% of the steps**.

1st Attempt 2nd Attempt
P F P F

Skill Steps

- | | | | | |
|-----|-----|-----|-----|--|
| ___ | ___ | ___ | ___ | 1. Technical decontamination operations in support of entry operations. |
| ___ | ___ | ___ | ___ | 2. Technical decontamination operations involving ambulatory and non-ambulatory victims. |
| ___ | ___ | ___ | ___ | 3. Mass decontamination operations involving ambulatory and non-ambulatory victims. |

Candidate's Name: _____ **Station:** P ___ F ___

Evaluator's Signature: _____ **Date:** _____

If the candidate FAILS this station after both attempts, provide comments on the back of this sheet and turn it in to the Exam Site Coordinator.

SITE SAFETY AND CONTROL PLAN ICS 208 HM	1. Incident Name:	2. Date Prepared:	3. Operational Period: Time:									
Section I. Site Information												
4. Incident Location:												
Section II. Organization												
5. Incident Commander:	6. HM Group Supervisor:	7. Tech. Specialist - HM Reference:										
8. Safety Officer:	9. Entry Leader:	10. Site Access Control Leader:										
11. Asst. Safety Officer - HM:	12. Decontamination Leader:	13. Safe Refuge Area Mgr:										
14. Environmental Health:	15.	16.										
17. Entry Team: (Buddy System)		18. Decontamination Element:										
Name:	PPE Level	Name:	PPE Level									
Entry 1		Decon 1										
Entry 2		Decon 2										
Entry 3		Decon 3										
Entry 4		Decon 4										
Section III. Hazard/Risk Analysis												
19. Material:	Container type	Qty.	Phys. State	pH	IDLH	F.P.	I.T.	V.P.	V.D.	S.G.	LEL	UEL
Comment:												
Section IV. Hazard Monitoring												
20. LEL Instrument(s):						21. O ₂ Instrument(s):						
22. Toxicity/PPM Instrument(s):						23. Radiological Instrument(s):						
Comment:												
Section V. Decontamination Procedures												
24. Standard Decontamination Procedures:										YES:	NO:	
Comment:												
Section VI. Site Communications												
25. Command Frequency:				26. Tactical Frequency:				27. Entry Frequency:				
Section VII. Medical Assistance												
28. Medical Monitoring:		YES:	NO:	29. Medical Treatment and Transport In-place:				YES:	NO:			
Comment:												

**INSTRUCTIONS FOR COMPLETING THE SITE SAFETY AND CONTROL PLAN
 ICS 208 HM**

A Site Safety and Control Plan must be completed by the Hazardous Materials Group Supervisor and reviewed by all within the Hazardous Materials Group prior to operations commencing within the Exclusion Zone.

Item Number	Item Title	Instructions
1.	Incident Name/Number	Print name and/or incident number.
2.	Date and Time	Enter date and time prepared.
3.	Operational Period	Enter the time interval for which the form applies.
4.	Incident Location	Enter the address and or map coordinates of the incident.
5 - 16.	Organization	Enter names of all individuals assigned to ICS positions. (Entries 5 & 8 mandatory). Use Boxes 15 and 16 for other functions: i.e. Medical Monitoring.
17 - 18.	Entry Team/Decon Element	Enter names and level of PPE of Entry & Decon personnel. (Entries 1 - 4 mandatory buddy system and back-up.)
19.	Material	Enter names and pertinent information of all known chemical products. Enter UNK if material is not known. Include any which apply to chemical properties. (Definitions: ph = Potential for Hydrogen (Corrosivity), IDLH = Immediately Dangerous to Life and Health, F.P. = Flash Point, I.T. = Ignition Temperature, V.P. = Vapor Pressure, V.D. = Vapor Density, S.G. = Specific Gravity, LEL = Lower Explosive Limit, UEL = Upper Explosive Limit)
20 - 23.	Hazard Monitoring	List the instruments which will be used to monitor for chemical.
24.	Decontamination Procedures	Check NO if modifications are made to standard decontamination procedures and make appropriate Comments including type of solutions.
25 - 27.	Site Communications	Enter the radio frequency(ies) which apply.
28 - 29.	Medical Assistance	Enter comments if NO is checked.
30.	Site Map	Sketch or attach a site map which defines all locations and layouts of operational zones. (Check boxes are mandatory to be identified.)
31.	Entry Objectives	List all objectives to be performed by the Entry Team in the Exclusion Zone and any parameters which will alter or stop entry operations.
32 - 33.	SOP s, Safe Work Practices, and Emergency Procedures	List in Comments if any modifications to SOP s and any emergency procedures which will be affected if an emergency occurs while personnel are within the Exclusion Zone.
34 - 36.	Safety Briefing	Have the appropriate individual place their signature in the box once the Site Safety and Control Plan is reviewed. Note the time in box 34 when the safety briefing has been completed.



HazMat - Technician Local Verification & Mask Fit Form

NFPA 472 – 2008

Candidate's Name: _____ Date of Birth: _____

Local Verification Requirements

29 CFR 1910.134, Mask Fit Documentation:

The candidate has been successfully fitted to his or her Self-Contained Breathing Apparatus (SCBA) Mask in compliance with 29 CFR 1910.134 within the last twelve (12) calendar months.

I have reviewed the candidate's file and affirm that the candidate identified above has met the requirements listed above. All requirements have been successfully conducted and completed per local department protocol. All information listed above can be validated by a written and/or hard copy of the documents maintained by the department.

Typed or Legibly Printed Name of Fire Chief or Training Officer

Signature of Fire Chief or Training Officer

Date: _____ Department: _____

Fire Department Phone Number: (_____) _____ - _____

Mail Completed Form To: Kansas Fire & Rescue Training Institute, KU Continuing Education, 1515 St Andrews Drive, Lawrence, KS 66047

01/10 KF&RTI