

# NFPA 472 Hazardous Materials Technician 2008 Edition



## Requirements:

1. Required prerequisite of 472 Hazardous Materials Operations
2. Completed application form and fee of \$225 is covered.
3. Candidate will be required to complete the following Mandatory Skills
  - a. Skills 1, 2, 3, 4
  - b. 5a, or 5b or 5c or 5d as determined by the lead evaluator
  - c. 6a or 6b or 6c or 6d as determined by the lead evaluator.
  - d. 16a or 16b or 16c as determined by the lead evaluator
  - e. Skill 17
4. Candidate will also be required to complete one or more additional stations as determined by the lead evaluator.

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**SKILL STATION 1  
MULTI GAS AIR MONITORING**

<b>Skill #1 Multi gas air monitoring</b>	<b>Maximum Time Allowed: 10 min</b>			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>				
The Candidate shall demonstrate the use of a 4 gas monitor				
<b>Candidate Performance</b>	1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt	
	Yes	No	Yes	No
1. *Candidate has informed the evaluator that they have been trained in this skill.				
2. *Candidate identifies what sensors are in the monitor				
3. Candidate verbalizes what the monitor is calibrated to and explains correction factors				
4. *Candidate will turn on the monitor				
5. *Candidate completes a fresh air calibration				
6. Candidate identifies alarm settings for LEL (10%)				
7. Candidate identifies alarm setting for O2 (19.5-23%)				
8. Candidate identifies alarm setting for CO (35 ppm)				
9. Candidate identifies alarm setting for other sensor if any				
10. *Candidate demonstrate proper technique for monitoring a gas with a vapor density of 0.3 (high)				
11. *Candidate demonstrate proper technique for monitoring a gas with a vapor density of 5.0 (low)				
12. Candidate demonstrates proper technique for monitoring a gas with a vapor density 1.0 (throughout)				
13. Candidate verbalizes the function of each button				
14. *Candidate shuts the monitor down				
<b>Total non critical steps candidate must complete to pass:</b>	<b>2</b>		<b>Total</b>	

**\*Critical Step** – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

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<b>Skill # 1 Multi gas air monitoring</b>		
Objective(s): <b>7.2.1.3.5(1)(3)(4)</b>	NFPA Standard 472	2008 Edition
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>		
<p>1. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.</p> <p>2. The proctor must provide the candidate with the following items:</p> <ul style="list-style-type: none"><li>a. Monitor (candidate will need to bring their own)</li></ul>		
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>		
Proctor Candidate Comments		
I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.		
_____ Candidate Signature		_____ Date
Test <input type="checkbox"/>	Retest <input type="checkbox"/>	Date _____
Location _____		

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**SKILL STATION 2  
AIR MONITORING**

Skill #2 PID air monitoring		Maximum Time Allowed: <b>15 min</b>			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>					
The Candidate shall demonstrate the use of a Photoionization Detector gas monitor					
Candidate Performance	1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt		
	Yes	No	Yes	No	
15. *Candidate has informed the evaluator that they have been trained in this skill.					
16. *Candidate identifies the sensor in the monitor					
17. Candidate verbalizes what the monitor is calibrated to and explains correction factors					
18. *Candidate will turn on the monitor					
19. *Candidate completes a fresh air calibration (if applicable)					
20. Candidate identifies alarm settings for isobutylene calibration gas (50 ppm)					
21. *Candidate demonstrate proper technique for monitoring a gas with a vapor density of 0.3 (high)					
22. *Candidate demonstrate proper technique for monitoring a gas with a vapor density of 5.0 (low)					
23. *Candidate demonstrates proper technique for monitoring a gas with a vapor density 1.0 (throughout)					
24. Candidate verbalizes the function of each button					
25. *Candidate will shut the monitor off					
<b>Total non critical steps candidate must complete to pass:</b>	<b>2</b>	<b>Total</b>			

*\*Critical Step* – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

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<b>Skill #2 PID air monitoring</b>		
Objective(s): <b>7.2.1.3.5(1)(3)(4)</b>	NFPA Standard 472	2008 Edition
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>		
<p>3. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.</p> <p>4. The proctor must provide the candidate with the following items:</p> <ul style="list-style-type: none"><li>a. Monitor (candidate will need to bring their own)</li></ul>		
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>		
Proctor Candidate Comments		
I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.		
_____ Candidate Signature		_____ Date
Test <input type="checkbox"/>	Retest <input type="checkbox"/>	Date _____ Location _____

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**SKILL STATION 3  
GAS DETECTOR TUBE MONITORING**

<b>Skill #3 Gas Detector Tube Air Monitoring</b>		Maximum Time Allowed: <b>15 min</b>			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>					
The Candidate shall demonstrate the use of Detector Tubes for vapor or gas monitor					
Candidate Performance	1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt		
	Yes	No	Yes	No	
26. *Candidate has informed the evaluator that they have been trained in this skill.					
27. *Candidate identifies the principle of operation for detector tubes					
28. Candidate identifies the chemical name of a test gas or vapor					
29. *Candidate must select appropriate detector tube for test gas or vapor (candidate must select the correct detector tube from three detector tubes)					
30. *Candidate removes the instruction sheet from the detector tube package and identifies the following: (a) expected color change, (b) calibration range, and (c) number of pump strokes					
31. Candidate confirms piston pump or bellows pump is operating properly					
32. *Candidate demonstrates the use of a detector tube (breaking tube ends, correct insertion of tube into pump, correct use of bellows or piston pump)					
33. *Candidate demonstrate proper technique for monitoring a gas with a vapor density of 0.3 (high)					
34. *Candidate demonstrate proper technique for monitoring a gas with a vapor density of 5.0 (low)					
35. Candidate demonstrates proper technique for monitoring a gas with a vapor density 1.0 (throughout)					
36. Candidate verbalizes the concentration of the test gas or vapor					
<b>Total non critical steps candidate must complete to pass:</b>	<b>2</b>	<b>Total</b>			

**\*Critical Step** – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

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**Skill # 3 Gas Detector Tube air monitoring**

Objective(s): **7.2.1.3.5(1)(3)(4)**

NFPA Standard 472

2008 Edition

**INSTRUCTIONS TO THE PROCTOR/EVALUATOR**

5. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.
  
6. The proctor must provide the candidate with the following items:
  - a. Monitor (candidate will need to bring their own)
  - b. Tubes

**REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT**

Proctor Candidate Comments

I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.

\_\_\_\_\_  
Candidate Signature

\_\_\_\_\_  
Date

Test

Retest

Date

Location

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**SKILL STATION 4  
TEST Ph STRIP**

<b>Skill #4 Test pH Strip</b>		Maximum Time Allowed: <b>5 min.</b>			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>					
The Candidate shall demonstrate the proper use and testing of pH strips					
<b>Candidate Performance</b>		1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt	
		Yes	No	Yes	No
1. *Candidate has informed the evaluator that they have been trained in this skill.					
2. Candidate verbalizes a 1 on the pH scale is a strong acid, 7 is neutral, 14 strong base.					
3. Candidate removes one strip from the box.					
If testing pH of a liquid					
1. Candidate dips the strip in to the liquid product and removes immediately.					
2. *Candidate's anatomy does not contact the product.					
If testing for corrosive in air					
1. *Candidate wets test strip in clean water					
2. Candidate waves in air					
3. *Candidate compares the strip to the chart and verbalizes if the product is an acid or a base.					
<b>Total non critical steps candidate must complete to pass:</b>		<b>4</b>		<b>Total</b>	

*\*Critical Step* – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

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<b>Skill #4 Test pH Strip</b>			
Objective(s): 7.2.1.3(5)(6) <span style="float: right;">NFPA Standard 472 2008 Edition</span>			
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>			
<p>7. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.</p> <p>8. Evaluator or support staff must prepare a sample chemical to be used as a "control."</p> <p>9. The proctor must provide the candidate with the following items:</p> <ul style="list-style-type: none"><li>a. pH test strips</li><li>b. water</li><li>c. vinegar as the control</li></ul>			
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>			
Proctor Candidate Comments			
I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.			
_____ Candidate Signature	_____ Date		
Test <input type="checkbox"/>	Retest <input type="checkbox"/>	Date	Location

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**SKILL STATION 5  
DRUM LEAK: BUNG LEAK**

<b>Skill # 5A Drum Leak: Bung Leak</b>	<b>Maximum Time Allowed: 10 Min.</b>			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>				
Given a simulated leaking hazardous materials drum, assorted tools and equipment, and working as a team of two or three, the candidate dressed in level A (simulated flash protection if flammable product) shall demonstrate stopping a bung leak in a metal or plastic drum.				
<b>Candidate Performance</b>			1 <sup>st</sup> Attempt	
			Yes	No
			2 <sup>nd</sup> Attempt	
			Yes	No
1. *Candidate has informed the evaluator that they have been trained in this skill.				
2. *Candidate verbalizes hazards of the product.				
3. Entry and all control operations are conducted as a team and performed in a safe manner, approaching from up hill and up wind. Team avoids down hill and down wind positions and avoids contact with product when possible.				
4. Verbalizes any conditions that would indicate reactivity with container or other products or materials.				
5. *If product is flammable, insure vapor suppression activities are in place and effectively controlling vapors below 20% of LEL or if it is corrosive cannot use wooden plugs.				
6. Determines the location of the leak.				
7. Controls leak by positioning drum with leak in the vapor space.				
8. Properly tightens the bung, or selects and uses proper plugging or patching material that is compatible with the hazardous material.				
9. Checks drum to ensure leaks are stopped.				
<b>Total non critical steps candidate must complete to pass:</b>		<b>4</b>	<b>Total</b>	

**\*Critical Step** – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

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<b>Skill # 5A Drum Leak: Bung Leak</b>	
Objective(s): <b>7.4.3(3)(a)</b>	<b>NFPA Standard 472</b>
<b>2008 Edition</b>	
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>	
<ol style="list-style-type: none"><li>1. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.</li> <li>2. Evaluator or support staff shall prepare the drum prop and water supply for simulating leaks.</li> <li>3. Evaluator should indicate if the product is flammable or corrosive.</li> <li>4. The proctor must provide the candidate with the following items:<ol style="list-style-type: none"><li>a. Drum, bung wrench and patching material.</li><li>b. Level A suit with boots</li></ol></li></ol>	
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>	
Proctor Candidate Comments	
I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.	
_____ Candidate Signature	_____ Date
Test <input type="checkbox"/>	Retest <input type="checkbox"/>
Date	Location

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**SKILL STATION 5B  
DRUM LEAK: CHIME LEAK**

<b>Skill # 5B Drum Leak: Chime Leak</b>	<b>Maximum Time Allowed: 10 min.</b>			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>				
Given a simulated leaking hazardous materials drum, assorted tools and equipment, and working as a team of two or three, the candidate dressed in Level A (simulated flash protection if flammable product) shall demonstrate stopping a chime leak in a metal drum.				
<b>Candidate Performance</b>	1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt	
	Yes	No	Yes	No
1. *Candidate has informed the evaluator that they have been trained in this skill.				
2. *Candidate verbalizes hazards of the product.				
3. Entry and all control operations are conducted as a team and performed in a safe manner, approaching from up hill and up wind. Team avoids down hill and down wind positions and avoids contact with product when possible.				
4. Verbalizes any conditions that would indicate reactivity with container or other products or materials.				
5. *If product is flammable, insure vapor suppression activities are in place and effectively controlling vapors below 20% of LEL.				
6. Determines the location of the leak.				
7. Controls leak by positioning drum with leak in the vapor space.				
8. Properly tightens the chime retaining bolt, or selects and uses proper plugging or patching material that is compatible with the hazardous material.				
9. Checks drum to ensure leaks are stopped.				
<b>Total non critical steps candidate must complete to pass:</b>	<b>4</b>	<b>Total</b>		

**\*Critical Step** – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

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<b>Skill # 5B Drum Leak: Chime Leak</b>			
Objective(s): <b>7.4.3(3)(b)</b>	<b>NFPA Standard 472</b>		
<b>2008 Edition</b>			
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>			
<p>5. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.</p> <p>6. Evaluator or support staff shall prepare the drum prop and water supply for simulating leaks.</p> <p>7. Evaluator should indicate if the product is flammable or corrosive.</p> <p>8. The proctor must provide the candidate with the following items:</p> <ul style="list-style-type: none"><li>a. Drum, wrench and patching material.</li><li>b. Level A suit.</li></ul>			
<b><u>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</u></b>			
Proctor Candidate Comments			
I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.			
_____ Candidate Signature	_____ Date		
Test <input type="checkbox"/>	Retest <input type="checkbox"/>	Date	Location

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**SKILL STATION 5C  
DRUM LEAK: FORKLIFT PUNCTURE**

<b>Skill # 5C Drum Leak: Forklift Puncture</b>		Maximum Time Allowed: <b>10 Min.</b>				
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>						
Given a simulated leaking hazardous materials drum, assorted tools and equipment, and working as a team of two or three, the candidate dressed in Level A (simulated flash protection if flammable product) shall demonstrate stopping a forklift puncture leak from a metal drum.						
<b>Candidate Performance</b>			1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt	
			Yes	No	Yes	No
1. *Candidate has informed the evaluator that they have been trained in this skill.						
2. *Candidate verbalizes hazards of the product.						
3. Entry and all control operations are conducted as a team and performed in a safe manner, approaching from up hill and up wind. Team avoids down hill and down wind positions and avoids contact with product when possible.						
4. Verbalizes any conditions that would indicate reactivity with container or other products or materials.						
5. *If product is flammable, insure vapor suppression activities are in place and effectively controlling vapors below 20% of LEL or if corrosive wooden plugs cannot be used.						
6. Determines the location of the leak.						
7. Controls leak by positioning drum with leak in the vapor space.						
8. Selects and uses proper plugging or patching material that is compatible with the hazardous material.						
9. Checks drum to ensure leaks are stopped.						
10. Candidate determines product and its hazards.						
<b>Total non critical steps candidate must complete to pass:</b>		<b>5</b>	<b>Total</b>			

**\*Critical Step** – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

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<b>Skill # 5C Drum Leak: Forklift Puncture</b>		
Objective(s): <b>7.4.3(3)(c)</b>	<b>NFPA Standard 472</b>	<b>2008 Edition</b>
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>		
<p>9. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.</p> <p>10. Evaluator or support staff shall prepare the drum prop and water supply for simulating leaks.</p> <p>11. Evaluator should indicate if product is flammable or corrosive.</p> <p>12. The proctor must provide the candidate with the following items:</p> <ul style="list-style-type: none"><li>a. Drum, patching material and assorted hand tools.</li><li>b. Level A suit.</li></ul>		
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>		
Proctor Candidate Comments		
I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.		
_____ Candidate Signature		_____ Date
Test <input type="checkbox"/>	Retest <input type="checkbox"/>	Date _____
Location _____		

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**SKILL STATION 5D  
DRUM LEAK: NAIL PUNCTURE**

<b>Skill # 5D Drum Leak: Nail Puncture</b>	<b>Maximum Time Allowed: 10 Min.</b>			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>				
Given a simulated leaking hazardous materials drum, assorted tools and equipment, and working as a team of two or three, the candidate dressed in Level A (simulated flash protection if flammable product) shall demonstrate stopping a nail puncture leak in a metal or plastic drum.				
<b>Candidate Performance</b>			1 <sup>st</sup> Attempt	
			Yes	No
			2 <sup>nd</sup> Attempt	
			Yes	No
1. *Candidate has informed the evaluator that they have been trained in this skill.				
2. *Candidate verbalizes hazards of the product.				
3. Entry and all control operations are conducted as a team and performed in a safe manner, approaching from up hill and up wind. Team avoids down hill and down wind positions and avoids contact with product when possible.				
4. Verbalizes any conditions that would indicate reactivity with container or other products or materials.				
5. *If product is flammable, insure vapor suppression activities are in place and effectively controlling vapors below 20% of LEL or if corrosive wooden plugs cannot be used.				
6. Determines the location of the leak.				
7. Controls leak by positioning drum with leak in the vapor space.				
8. Selects and uses proper plugging or patching material that is compatible with the hazardous material.				
9. Checks drum to ensure leaks are stopped.				
<b>Total non critical steps candidate must complete to pass:</b>			<b>4</b>	<b>Total</b>

**\*Critical Step** – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

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<b>Skill # 5D Drum Leak: Nail Puncture</b>			
Objective(s): <b>7.4.3(3)(d)</b>	<b>NFPA Standard 472</b> <b>2008 Edition</b>		
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>			
<p>13. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.</p> <p>14. Evaluator or support staff shall prepare the drum prop and water supply for simulating leaks.</p> <p>15. Evaluator should indicate if the product is flammable or corrosive.</p> <p>16. The proctor must provide the candidate with the following items:</p> <ul style="list-style-type: none"><li>a. Drum, patching material and assorted hand tools.</li><li>b. Level A suit.</li></ul>			
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>			
Proctor Candidate Comments			
I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.			
_____ Candidate Signature	_____ Date		
Test <input type="checkbox"/>	Retest <input type="checkbox"/>	Date	Location

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**SKILL STATION 6A  
OVERPACK DRUM: ROLLING SLIDE-IN**

<b>Skill # 6A Overpack Drum: Rolling Slide-In</b>	<b>Maximum Time Allowed: 10 Min.</b>			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>				
<p>Given a simulated patched hazardous materials drum, 85 gallon or larger overpack drum, assorted tools and equipment, and working as a team of two or three, the candidate dressed in Level A (simulated flash protection if flammable product) shall place the patched drum into the overpack drum utilizing the “rolling slide-in” method.</p>				
<b>Candidate Performance</b>			1 <sup>st</sup> Attempt	
			Yes	No
			2 <sup>nd</sup> Attempt	
			Yes	No
1. *Candidate has informed the evaluator that they have been trained in this skill.				
2. *Candidate verbalizes hazards of the product.				
3. Entry and operations are conducted as a team and performed in a safe manner, approaching from up hill and up wind. Team avoids down hill and down wind positions and avoids contact with product when possible.				
4. *Avoids hands in pinch-point areas while maneuvering drum(s).				
5. Places damaged drum on its side using safe lifting techniques.				
6. With the damaged drum on its side, positions the overpack drum at approximately 30 degree angle to the base of the damaged drum.				
7. Ensures that the area in front of the drums is clear.				
8. Rolls both drums so that the damaged drum is inserted into the overpack drum.				
9. Overpack drum is lifted to an upright position, damaged drum is visually inspected to ensure it is not leaking, and the overpack drum’s lid is properly attached.				
10. Overpack drum is labeled with description of contents.				
<b>Total non critical steps candidate must complete to pass:</b>		<b>5</b>	<b>Total</b>	

**\*Critical Step** – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

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<b>Skill # 6A Overpack Drum: Rolling Slide-In</b>	
Objective(s): <b>7.4.3(4)(a)</b>	<b>NFPA Standard 472</b>
<b>2008 Edition</b>	
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>	
<p>17. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.</p> <p>18. Evaluator or support staff shall prepare the drum props.</p> <p>19. The proctor must provide the candidate with the following items:</p> <ul style="list-style-type: none"> <li>a. Drum, overpack drum, pipe and assorted hand tools.</li> <li>b. Level A suit.</li> </ul>	
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>	
Proctor Candidate Comments	
<p>I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.</p>	
_____	_____
Candidate Signature	Date
Test <input type="checkbox"/>	Retest <input type="checkbox"/>
Date	Location

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**SKILL STATION 6B  
OVERPACK DRUM: SLIDE-IN**

<b>Skill # 6B Overpack Drum: Slide-In</b>	<b>Maximum Time Allowed: 10 Min.</b>			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>				
Given a simulated patched hazardous materials drum, 85 gallon or larger overpack drum, assorted tools and equipment, and working as a team of two or three, the candidate dressed in Level A (simulated flash protection if flammable product) shall place the patched drum into the overpack drum utilizing the “slide-in” method.				
<b>Candidate Performance</b>	1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt	
	Yes	No	Yes	No
1. *Candidate has informed the evaluator that they have been trained in this skill.				
2. *Candidate verbalizes hazards of the product.				
3. Entry and operations are conducted as a team and performed in a safe manner – approaching from uphill and upwind. Team avoids downhill and downwind positions and avoids contact with product when possible.				
4. *Avoids hands in pinch-point areas while maneuvering drum(s).				
5. Places the damaged drum on its side and using a wooden wedge, candidate rolls the drum onto a piece of round pipe.				
6. With the damaged drum resting on its side, candidate positions the overpack drum so its top slides several inches under the damaged drum.				
7. At least one candidate holds the overpack drum in place while the other candidate(s) grasp the edged of the damaged drum and roll / slide it into the overpack drum. (The damaged drum will be rolling on the pipe.)				
8. Overpack drum is lifted to an upright position, damaged drum is visually inspected to ensure it is not leaking, and the overpack drum’s lid is properly attached.				
9. Overpack drum is labeled with description of contents.				
<b>Total non critical steps candidate must complete to pass:</b>	<b>4</b>	<b>Total</b>		

**\*Critical Step** – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

**Hazardous Materials Technician Certification**

<b>Skill # 6B Overpack Drum: Slide-In</b>	
Objective(s): <b>7.4.3(4)(b)</b>	<b>NFPA Standard 472</b>
	<b>2008 Edition</b>
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>	
<p>20. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.</p> <p>21. Evaluator or support staff shall prepare the drum props.</p> <p>22. The proctor must provide the candidate with the following items:</p> <ul style="list-style-type: none"> <li>a. Drum, overpack drum and assorted hand tools.</li> <li>b. Level A suit.</li> </ul>	
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>	
Proctor Candidate Comments	
<p>I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.</p>	
_____	_____
Candidate Signature	Date
Test <input type="checkbox"/>	Retest <input type="checkbox"/>
Date	Location

**Minnesota Fire Service Certification Board  
Hazardous Materials Technician Certification**

**SKILL STATION 6C  
OVERPACK DRUM: SLIP-OVER**

<b>Skill # 6C Overpack Drum: Slip-Over</b>	<b>Maximum Time Allowed: 10 Min.</b>			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>				
<p>Given a simulated patched hazardous materials drum, 85 gallon or larger overpack drum, assorted tools and equipment, and working as a team of two or three, the candidate dressed in Level A (simulated flash protection if flammable product) shall place the patched drum into the overpack drum utilizing the “slip-over” method.</p>				
<b>Candidate Performance</b>	1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt	
	Yes	No	Yes	No
1. *Candidate has informed the evaluator that they have been trained in this skill.				
2. *Candidate verbalizes hazards of the product.				
3. Entry and operations are conducted as a team and performed in a safe manner, approaching from up hill and up wind. Team avoids down hill and down wind positions and avoids contact with product when possible.				
4. *Avoids hands in pinch-point areas while maneuvering drum(s).				
5. Stands damaged drum to an upright position using safe lifting techniques.				
6. Turns overpack drum upside down and slides over the damaged drum.				
7. With the damaged drum inside the overpack drum, the overpack drum is carefully positioned on its side.				
8. Overpack drum is lifted to an upright position, damaged drum is visually inspected to ensure it is not leaking, and the overpack drum’s lid is properly attached.				
9. Overpack drum is labeled with description of contents.				
<b>Total non critical steps candidate must complete to pass:</b>	<b>4</b>	<b>Total</b>		

**\*Critical Step** – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

## Hazardous Materials Technician Certification

<b>Skill # 6C Overpack Drum: Slip-Over</b>			
Objective(s): <b>7.4.3(4)(c)</b>	<b>NFPA Standard 472</b>		
<b>2008 Edition</b>			
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>			
<p>23. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.</p> <p>24. Evaluator or support staff shall prepare the drum props.</p> <p>25. The proctor must provide the candidate with the following items:</p> <ul style="list-style-type: none"><li>a. Drum, overpack drum and assorted hand tools.</li><li>b. Level A suit.</li></ul>			
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>			
Proctor Candidate Comments			
I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.			
_____ Candidate Signature	_____ Date		
Test <input type="checkbox"/>	Retest <input type="checkbox"/>	Date	Location

**Minnesota Fire Service Certification Board  
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**SKILL STATION 9A**

**CHLORINE “A” KIT – FUSIBLE METAL PLUG**

<b>Skill #9a- Chlorine “A” Kit – Fusible Metal Plug</b>	<b>Maximum Time Allowed: 15 min.</b>			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>				
Given a simulated leaking Chlorine “A” cylinder and working as a member of a team of two or three, the candidate dressed in Level “A” personal protective equipment will safely control a leak using the “clamp” and other necessary equipment from the Chlorine “A” Kit provided.				
<b>Candidate Performance</b>	1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt	
	Yes	No	Yes	No
1. *Candidate has informed the evaluator that they have been trained in this skill.				
2. Entry and all control operations are conducted as a team and performed in a safe manner, approaching from up hill and up wind. Avoids down wind positions and contact with product when possible.				
3. If more than one cylinder is in the location, attempt to locate the leaking cylinder by visible chlorine vapor or by using vapor from an aqua ammonia (ammonium hydroxide) squeeze bottle to create a visible reaction (vapor cloud).				
4. If the container is connected to piping/process unit, close valves that connect the cylinder to the process and turn off the process after consulting with the process operator/owner (verbalize contacting the operator/owner before turning systems off).				
5. Verbalizes any conditions that would indicate reactivity with container or other product				
6. Remove valve protective housing from cylinder if in place.				
7. Position cylinder so that the valve is in the uppermost position.				
8. Safely pin- points the location of the leak in the container. Detects the presence and location of non-visible leak using aqua ammonia vapor.				
9. <i>If the leak is in the fusible material and the clamp device is used, the valve stem handle <u>must be removed</u></i>				
10. Insure the gasket seating surface on the fusible plug is clean and free from pitting.				
11. Assemble all tools that will be required for this operation.				
12. Wrench 200-A      Clamp 2-C              Set Screw 2-D              Block 2-A				
13. Gasket 2-BB				
14. Loosen set screw (2-D) in the clamping device (2-C) and place the device				

over the leaking valve. <i>(If the valve outlet cap is in place do not remove it)</i>				
15. Place gasket (2-B) between the leaking fusible plug and clamping device block (2-A).				
16. Tighten set screw until the leak stops.				
17. * Check for leakage using ammonium hydroxide vapor and tighten the set screw further if necessary. <i>(If the leak is not controlled with proper use of this process the candidate must recognize the "A" Kit "Hood Assembly" must be used)</i>				
<b>Total non critical steps candidate must complete to pass:</b>	<b>10</b>	<b>Total</b>		

**\*Critical Step** – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

<b>Skill # 9a- Chlorine "A" Kit – Fusible Metal Plug</b>
Objective(s): 7.1.2.2(3)(c),7.4.3.(1)(a) NFPA Standard 472 2008 Edition
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>
<ol style="list-style-type: none"> <li>1. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.</li> <li>2. Evaluator or support staff shall assemble the Chlorine "A" cylinder prop, air supply for simulating cylinder leaks, and a complete Chlorine "A" Emergency Repair Kit.</li> <li>3. Evaluator shall prepare the prop/air supply to simulate the appropriate leak.</li> <li>4. Maximum pressure on the leaking device shall not exceed 175 psi (normal range 75-110 psi).</li> <li>5. The evaluator and all personnel in the immediate area must wear eye protection. Hearing protection may be necessary with specific props/leaks and operating pressures.</li> <li>6. The proctor must provide the candidate with the following equipment:</li> </ol>

a. <i>Chlorine A Kit.</i>	
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>	
Proctor Candidate Comments	
I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.	
_____	_____
Candidate Signature	Date
Test <input type="checkbox"/>	Retest <input type="checkbox"/> Date _____ Location _____

Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

**Minnesota Fire Service Certification Board  
Hazardous Materials Technician Certification**

**SKILL STATION 9B**

**CHLORINE “A” KIT – FUSIBLE PLUG THREADS**

<b>Skill #9b- Chlorine “A” Kit – Fusible Plug Threads</b>	Maximum Time Allowed: 15 min.		
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>			
Given a simulated leaking Chlorine “A” cylinder and working as a team of two or three, the candidate dressed in Level “A” personal protective equipment will control a leak using the “clamp” and other necessary equipment from the Chlorine “A” Kit provided.			
<b>Candidate Performance</b>		1 <sup>st</sup> Attempt	2 <sup>nd</sup> Attempt
		Yes	No
1. *Candidate has informed the evaluator that they have been trained in this skill.			
2. Entry and all control operations are conducted as a team and performed in a safe manner, approaching from up hill and up wind. Avoids down wind positions and contact with product when possible.			

3. If more than one cylinder is in the location, attempt to locate the leaking cylinder by visible chlorine vapor or by using vapor from an aqua ammonia (ammonium hydroxide) squeeze bottle to create a visible reaction (vapor cloud).				
4. If the container is connected to piping/process unit, close valves that connect the cylinder to the process and turn off the process after consulting with the process operator/owner (verbalize contacting the operator/owner before turning systems off).				
5. Verbalizes any conditions that would indicate reactivity with container or other product				
6. Remove valve protective housing from cylinder if in place.				
7. Positions cylinder so that the valve is in the uppermost position.				
8. Safely pin-points the location of the leak in the container. Detects the presence and location of non-visible leak using aqua ammonia vapor.				
9. <b><i>If the leak is in the fusible plug threads, the clamp device must be used. The valve stem handle must be removed first</i></b>				
10. Tighten fusible plug slowly, using steady pressure with Wrench 203.				
11. If leak is not controlled by tightening the plug, assemble all tools that will be required for this operation. Hacksaw A-2, File A- 14, Set Screw 2-D, Block 2-A, Wrench 200-A, Gasket 2-BB, Clamp 2-C				
12. Saw off fusible plug flush with valve body, file the surface smooth and apply Device 2 as follows:				
13. Saws off fusible plug flush with valve body and files surface smooth with valve body.				
14. Loosen set screw (2 -D) in the clamping device (2-C) and place the device over the leaking valve. <i>(If the valve outlet cap is in place do not remove it)</i>				
15. Place gasket (2-B) between the leaking fusible plug and clamping device block (2-A).				
16. Tighten set screw until the leak stops.				
17. * Check for leakage using ammonium hydroxide vapor and tighten the set screw further if necessary. (If the leak is not controlled with proper use of this process the candidate must recognize the "A" Kit "Hood Assembly" must be used)				
<b>Total non critical steps candidate must complete to pass:</b>	<b>11</b>	<b>Total</b>		

**\*Critical Step** – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

## Hazardous Materials Technician Certification

<b>Skill # 9b- Chlorine “A” Kit – Fusible Plug Threads</b>		
Objective(s): 7.1.2.2(3)(c), <b>7.4.3.(1)(b)</b>	NFPA Standard 472	2008 Edition
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>		
<p>7. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.</p> <p>8. Evaluator or support staff shall assemble the Chlorine “A” cylinder prop, air supply for simulating cylinder leaks, and a complete Chlorine “A” Emergency Repair Kit.</p> <p>9. Evaluator shall prepare the prop/air supply to simulate the appropriate leak.</p> <p>10. Maximum pressure on the leaking device shall not exceed 175 psi (normal range 75-110 psi).</p> <p>11. The evaluator and all personnel in the immediate area must wear eye protection. Hearing protection may be necessary with specific props/leaks and operating pressures.</p> <p>12. The proctor must provide the candidate with the following equipment:</p> <p style="padding-left: 40px;">a. <i>Chlorine A Kit.</i></p>		
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>		
Proctor Candidate Comments		
I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.		
_____ Candidate Signature	_____ Date	
Test <input type="checkbox"/>	Retest <input type="checkbox"/>	Date _____
Location _____		

**Minnesota Fire Service Certification Board  
Hazardous Materials Technician Certification**

**SKILL STATION 9C**

**CHLORINE “A” KIT – SIDE WALL**

Skill #9c- Chlorine “A” Kit – Side Wall	Maximum Time Allowed: 15 min			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>				
Given a simulated leaking Chlorine “A” cylinder and working as a team of two or three, the candidate dressed in Level “A” personal protective equipment will safely control the leak using the “patch” and other necessary equipment from the Chlorine “A” Kit provided.				
Candidate Performance	1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt	
	Yes	No	Yes	No
1. *Candidate has informed the evaluator that they have been trained in this skill.				
2. Entry and all control operations are conducted as a team and performed in a safe manner, approaching from up hill and up wind. Avoids down wind positions and contact with product when possible.				
3. If more than one cylinder is in the location, attempt to locate the leaking cylinder by visible chlorine vapor or by using vapor from an aqua ammonia (ammonium hydroxide) squeeze bottle to create a visible reaction (vapor cloud).				
4. If the container is connected to piping/process unit, close valves that connect the cylinder to the process and turn off the process after consulting with the process operator/owner (verbalize contacting the operator/owner before turning systems off).				
5. Verbalizes any conditions that would indicate reactivity with container or other product				
6. Safely pin- points the location of the leak in the container. Detects the presence and location of non-visible leak using aqua ammonia vapor.				
<b>7. If the leak is in the cylinder side wall, the team should perform the following steps:</b>				
8. Positions cylinder so that the leak is in the uppermost position. Insures cylinder wall around leak is sound before proceeding with repair.				
9. Assemble all tools that will be required for this operation. 10. Cap Screw 8-C Yoke 8-B Chain 8-A Patch 8-D Gasket 8-EV 11. Wrench 201 Scraper A-8				
12. Adjust Cap Screw in Yoke until point of screw extends only slightly below the Yoke.				
13. Slips one end of Chain under cylinder and pulls in through until it reaches the approximate area of the leak.				
14. Insures Chain is straight and not twisted.				
15. Center Cap Screw and Yoke in Patch depression.				
16. Hooks free ends of Chain to the ears on each side of Yoke, keeping Chain as short as possible.				
17. Uses Scraper to remove loose or uneven paint, if present. Places Gasket and Patch over leak.				
18. Tightens Cap Screw to control leak.				

19. *Immediately stops tightening the Cap Screw if there is any evidence of the cylinder wall weakening.				
20. * Check for leakage using ammonium hydroxide vapor and further tightens the Cap Screw as necessary.				
<b>Total non critical steps candidate must complete to pass:</b>	<b>13</b>	<b>Total</b>		

*\*Critical Step* – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

## Hazardous Materials Technician Certification

<b>Skill # 9c- Chlorine “A” Kit – Side Wall</b>			
Objective(s): <b>7.1.2.2(3)(c),7.4.3.(1)(c)</b>	NFPA Standard 472                      2008 Edition		
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>			
<p><b>13.</b> The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.</p> <p><b>14.</b> Evaluator or support staff shall assemble the Chlorine “A” cylinder prop, air supply for simulating cylinder leaks, and a complete Chlorine “A” Emergency Repair Kit.</p> <p><b>15.</b> Evaluator shall prepare the prop/air supply to simulate the appropriate leak.</p> <p><b>16.</b> Maximum pressure on the leaking device shall not exceed 175 psi (normal range 75-110 psi).</p> <p><b>17.</b> The evaluator and all personnel in the immediate area must wear eye protection. Hearing protection may be necessary with specific props/leaks and operating pressures.</p> <p><b>18.</b> The proctor must provide the candidate with the following equipment:</p> <p style="padding-left: 40px;">a. <i>Chlorine A Kit.</i></p>			
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>			
Proctor Candidate Comments			
I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.			
_____ Candidate Signature	_____ Date		
Test <input type="checkbox"/>	Retest <input type="checkbox"/>	Date	Location

**Minnesota Fire Service Certification Board  
Hazardous Materials Technician Certification**

**SKILL STATION 9D**

**CHLORINE “A” KIT – VALVE BLOWOUT**

Skill # 9d- Chlorine “A” Kit – Valve Blowout	Maximum Time Allowed: 15 min.			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>				
Given simulated leaking Chlorine “A” cylinder and working as a team of two or three, the candidate dressed in Level “A” personal protective equipment will safely control the leak using the proper sequence of steps and necessary equipment from the Chlorine “A” Kit provided.				
<b>Candidate Performance</b>			1 <sup>st</sup> Attempt	
			2 <sup>nd</sup> Attempt	
			Yes	No
1. *Candidate has informed the evaluator that they have been trained in this skill.				
2. Entry and all control operations are conducted as a team and performed in a safe manner, approaching from up hill and up wind. Avoids down wind positions and contact with product when possible.				
3. If more than one cylinder is in the location, attempt to locate the leaking cylinder by visible chlorine vapor or by using vapor from an aqua ammonia (ammonium hydroxide) squeeze bottle to create a visible reaction (vapor cloud).				
4. If the container is connected to piping/process unit, close valves that connect the cylinder to the process and turn off the process after consulting with the process operator/owner (verbalize contacting the operator/owner before turning systems off).				
5. Verbalizes any conditions that would indicate reactivity with container or other product				
6. Remove valve protective housing from cylinder if in place.				
7. Positions cylinder so that the valve is in the uppermost position.				
8. Safely pin-points the location of the leak in the container. Detects the presence and location of non-visible leak using aqua ammonia vapor.				
<b><i>If the team experiences a valve blow while working with the cylinder they should perform the following steps:</i></b>				
1. Positions cylinder so that the valve opening is in the uppermost position and immediately drives large Drift Pin into valve opening.				
<b>Applies Device 1 (Hood Assembly) as follows:</b>				
2. Prepare Base Assembly to insure proper position and stability of base segments.				
3. Secures Ramp between two base segments.				
4. * Rolls upright cylinder up Ramp and centers into position on Base Assembly. <b>Avoids bumping drift pin and placing any team member’s body inline with the pin and cylinder opening.</b>				
5. Cleans loose or uneven paint from shoulder of cylinder using Scraper.				
6. Inspects and places gasket on Hood.				
7. Insures Vent Valve is secure in the Hood and the Vent Valve is uncapped and open.				
8. Adjust Cap Screws in Yoke so that the points of the screws extend only slightly below the Yoke.				
9. Places Yoke in position on top of Hood, with screws positioned in the dimples on				

the Hood. Insure Chains are straight and not twisted. Hook Chains over ears of Yoke using appropriate link to avoid slack in Chains.				
10. Hand tighten Cap Screws using even and equal force. Closes Vent Valve slowly and checks for leaks.				
11. If leak persists, opens Vent Valve and uses Wrench to further tighten Cap Screws until leak is controlled.				
12. * Avoids over tightening Cap Screws and damaging gasket.				
13. * Checks foot ring on bottom of cylinder as tension is added to the assembly to chains are not breaking the ring.				
14. * Closes Vent Valve and checks for leakage using ammonium hydroxide vapor and tighten the set screw further if necessary.				
<b>Total non critical steps candidate must complete to pass:</b>	<b>17</b>	<b>Total</b>		

*\*Critical Step* – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

## Hazardous Materials Technician Certification

Skill # 9d- Chlorine "A" Kit – Valve Blowout		
Objective(s): <b>7.1.2.2(3)(c),7.4.3.(1)(d)</b>	NFPA Standard 472	2008 Edition
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>		
<ol style="list-style-type: none"><li>1. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.</li><li>2. Evaluator or support staff shall assemble the Chlorine "A" cylinder prop, air supply for simulating cylinder leaks, and a complete Chlorine "A" Emergency Repair Kit.</li><li>3. Evaluator shall prepare the prop/air supply to simulate the appropriate leak.</li><li>4. The evaluator and all personnel in the immediate area must wear eye protection. Hearing protection may be necessary with specific props/leaks and operating pressures.</li><li>5. The proctor must provide the candidate with the following equipment:<ol style="list-style-type: none"><li>a. <i>Chlorine A Kit.</i></li></ol></li></ol>		
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>		
Proctor Candidate Comments		
I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.		
_____ Candidate Signature	_____ Date	
Test <input type="checkbox"/>	Retest <input type="checkbox"/>	Date _____ Location _____

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**SKILL STATION 9E**

**CHLORINE “A” KIT – VALVE GLAND**

Skill # <b>9e- Chlorine “A” Kit – Valve Gland</b>	Maximum Time Allowed: 15 min			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>				
Given a simulated leaking Chlorine “A” cylinder and working as a team of two or three, the candidate dressed in Level “A” personal protective equipment will safely control the leak using the proper sequence of steps and necessary equipment from the Chlorine “A” Kit provided.				
<b>Candidate Performance</b>	1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt	
	Yes	No	Yes	No
1. *Candidate has informed the evaluator that they have been trained in this skill.				
2. Entry and all control operations are conducted as a team and performed in a safe manner, approaching from up hill and up wind. Avoids down wind positions and contact with product when possible.				
3. If more than one cylinder is in the location, attempt to locate the leaking cylinder by visible chlorine vapor or by using vapor from an aqua ammonia (ammonium hydroxide) squeeze bottle to create a visible reaction (vapor cloud) .				
4. If the container is connected to piping/process unit, close valves that connect the cylinder to the process and turn off the process after consulting with the process operator/owner (verbalize contacting the operator/owner before turning systems off).				
5. Verbalizes any conditions that would indicate reactivity with container or other product				
6. Remove valve protective housing from cylinder if in place.				
7. Positions cylinder so that the valve is in the uppermost position.				
8. Safely pin-points the location of the leak in the container. Detects the presence and location of non-visible leak using aqua ammonia vapor.				
<b><i>If the Valve Gland is leaking the team should perform the following steps:</i></b>				
1. Insures valve stem is closed. May use valve stem handle or Wrench 200A				
2. Tightens packing nut, using Wrench 200A to tighten packing nut firmly but without over-tightening.				
<b><i>If leak persist, applies Device 1 (Hood Assembly) as follows:</i></b>				
1. Prepare Base Assembly to insure proper position and stability of base segments.				
2. Secures Ramp between two base segments.				
3. ♦ Rolls upright cylinder up Ramp and centers into position on Base Assembly. <b><i>Avoids bumping drift pin and placing any team member’s body inline with the pin and cylinder opening.</i></b>				
4. Cleans loose or uneven paint from shoulder of cylinder using Scraper.				
5. Inspects and places gasket on Hood.				
6. Insures Vent Valve is secure in the Hood and the Vent Valve is uncapped and open.				
7. Adjust Cap Screws in Yoke so that the points of the screws extend only slightly below the yoke				
8. Places Yoke in position on top of Hood, with screws positioned in the dimples on				

the Hood. Insure Chains are straight and not twisted. Hook Chains over ears of Yoke using appropriate link to avoid slack in Chains.				
9. Hand tighten Cap Screws using even and equal force. Closes Vent Valve slowly and checks for leaks.				
10. If leak persists, opens Vent Valve and uses Wrench to further tighten Cap Screws until leak is controlled.				
11. * Avoids over tightening Cap Screws and damaging gasket.				
12. * Checks foot ring on bottom of cylinder as tension is added to the assembly to chains are not breaking the ring.				
13. * Closes Vent Valve and checks for leakage using ammonium hydroxide vapor and tighten the set screw further if necessary.				
<b>Total non critical steps candidate must complete to pass:</b>	<b>18</b>	<b>Total</b>		

*\*Critical Step* – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

## Hazardous Materials Technician Certification

Skill # 9e- Chlorine "A" Kit – Valve Gland		
Objective(s): <b>7.1.2.2(3)(c),7.4.3.(1)(e),7.4.3(2)(c)</b>	NFPA Standard 472	2008 Edition
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>		
<p>6. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.</p> <p>7. Evaluator or support staff shall assemble the Chlorine "A" cylinder prop, air supply for simulating cylinder leaks, and a complete Chlorine "A" Emergency Repair Kit.</p> <p>8. Evaluator shall prepare the prop/air supply to simulate the appropriate leak.</p> <p>9. The evaluator and all personnel in the immediate area must wear eye protection. Hearing protection may be necessary with specific props/leaks and operating pressures.</p> <p>10. The proctor must provide the candidate with the following equipment:</p> <p style="padding-left: 40px;">a. <i>Chlorine A Kit.</i></p>		
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>		
Proctor Candidate Comments		
I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.		
_____ Candidate Signature		_____ Date
Test <input type="checkbox"/>	Retest <input type="checkbox"/>	Date _____ Location _____

**Minnesota Fire Service Certification Board  
Hazardous Materials Technician Certification**

**SKILL STATION 9F**

**CHLORINE “A” KIT – VALVE INLET THREADS**

<b>Skill # 9f- Chlorine “A” Kit – Valve Inlet Threads</b>	<b>Maximum Time Allowed: 15 min</b>			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>				
Given a simulated leaking Chlorine “A” cylinder and working as a member of a team of two or three, the candidate dressed in Level “A” personal protective equipment will safely control the leak using the proper sequence of steps and necessary equipment from the Chlorine “A” Kit provided.				
<b>Candidate Performance</b>	1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt	
	Yes	No	Yes	No
1. *Candidate has informed the evaluator that they have been trained in this skill.				
2. Entry and all control operations are conducted as a team and performed in a safe manner, approaching from up hill and up wind. Avoids down wind positions and contact with product when possible.				
3. If more than one cylinder is in the location, attempt to locate the leaking cylinder by visible chlorine vapor or by using vapor from an aqua ammonia (ammonium hydroxide) squeeze bottle to create a visible reaction (vapor cloud) .				
4. If the container is connected to piping/process unit, close valves that connect the cylinder to the process and turn off the process after consulting with the process operator/owner (verbalize contacting the operator/owner before turning systems off).				
5. Verbalizes any conditions that would indicate reactivity with container or other product				
6. Remove valve protective housing from cylinder if in place.				
7. Positions cylinder so the valve is in the uppermost position.				
8. Safely pin-points the location of the leak in the container. Detects the presence and location of non-visible leak using aqua ammonia vapor.				
<b><i>If the Valve Inlet Threads are leaking the team should perform the following steps:</i></b>				
1. Using Wrench 201, tightens valve into cylinder slowly using steady, even pressure.				
<b><i>If leak persists, applies Device 1 (Hood Assembly) as follows:</i></b>				
2. Prepare Base Assembly to insure proper position and stability of base segments.				
3. Secures Ramp between two base segments.				
4. * Rolls upright cylinder up Ramp and centers into position on Base Assembly. <b><i>Avoids</i></b> bumping drift pin and placing any team member’s body inline with the pin and cylinder opening.				
5. Cleans loose or uneven paint from shoulder of cylinder using Scraper.				
6. Inspects and places gasket on Hood.				
7. Insures Vent Valve is secure in the Hood and the Vent Valve is uncapped and open.				
8. Adjust Cap Screws in Yoke so that the points of the screws extend only slightly below the yoke.				
9. Places Yoke in position on top of Hood, with screws positioned in the dimples on the Hood. Insure Chains are straight and not twisted. Hook Chains over ears of Yoke using appropriate link to avoid slack in Chains.				
10. Hand tighten Cap Screws using even and equal force. Closes Vent Valve slowly and				

checks for leaks.				
11. If leak persists, opens Vent Valve and uses Wrench to further tighten Cap Screws until leak is controlled.				
12. * Avoids over tightening Cap Screws and damaging gasket.				
<ul style="list-style-type: none"> <li>• Checks the foot ring on the bottom of the cylinder as tension is added to the assembly to the chains are not breaking the ring.</li> </ul>				
13. * Closes Vent Valve and checks for leakage using ammonium hydroxide vapor and tighten the set screw further if necessary.				
<b>Total non critical steps candidate must complete to pass:</b>	<b>17</b>	<b>Total</b>		

*\*Critical Step* – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

## Hazardous Materials Technician Certification

<b>Skill # 9f- Chlorine "A" Kit – Valve Inlet Threads</b>			
Objective(s): <b>7.1.2.2(3)(c), 7.1.2.2(3)(c), 7.4.3(2)(c)</b>	NFPA Standard 472 2008 Edition		
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>			
<p><b>11.</b> The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.</p> <p><b>12.</b> Evaluator or support staff shall assemble the Chlorine "A" cylinder prop, air supply for simulating cylinder leaks, and a complete Chlorine "A" Emergency Repair Kit.</p> <p><b>13.</b> Evaluator shall prepare the prop/air supply to simulate the appropriate leak.</p> <p><b>14.</b> The evaluator and all personnel in the immediate area must wear eye protection. Hearing protection may be necessary with specific props/leaks and operating pressures.</p> <p><b>15.</b> The proctor must provide the candidate with the following equipment:</p> <p style="padding-left: 40px;">a. <i>Chlorine A Kit.</i></p>			
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>			
Proctor Candidate Comments			
I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.			
_____ Candidate Signature	_____ Date		
Test <input type="checkbox"/>	Retest <input type="checkbox"/>	Date	Location

**Minnesota Fire Service Certification Board  
Hazardous Materials Technician Certification**

**SKILL STATION 9G**

**CHLORINE “A” KIT – VALVE SEAT**

Skill #9g- Chlorine “A” Kit – Valve Seat	Maximum Time Allowed: 15 min			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>				
Given a simulated leaking Chlorine “A” cylinder and working as a team of two or three, the candidate dressed in Level “A” personal protective equipment will safely control the leak using the proper sequence of steps and necessary equipment from the Chlorine “A” Kit provided.				
<b>Candidate Performance</b>	1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt	
	Yes	No	Yes	No
1. *Candidate has informed the evaluator that they have been trained in this skill.				
2. Entry and all control operations are conducted as a team and performed in a safe manner, approaching from up hill and up wind. Avoids down wind positions and contact with product when possible.				
3. If more than one cylinder is in the location, attempt to locate the leaking cylinder by visible chlorine vapor or by using vapor from an aqua ammonia (ammonium hydroxide) squeeze bottle to create a visible reaction (vapor cloud) .				
4. If the container is connected to piping/process unit, close valves that connect the cylinder to the process and turn off the process after consulting with the process operator/owner (verbalize contacting the operator/owner before turning systems off).				
5. Verbalizes any conditions that would indicate reactivity with container or other product				
6. Remove valve protective housing from cylinder if in place.				
7. Positions cylinder so the valve is in the upper most position.				
8. Safely pin-points the location of the leak in the container. Detects the presence and location of non-visible leak using aqua ammonia vapor.				
<b><i>If the Valve Seat is leaking the team should perform the following steps:</i></b>				
<p>1. Option A: If the cylinder is disconnected from the process and can be reconnected, reconnect and gently open and close the valve stem to dislodge foreign matter from the seat, using the valve handle or Wrench 200A.</p> <p>Option B: If the cylinder cannot be reconnected to a process, apply outlet cap and gasket</p> <p>Option C: Disconnect the cylinder from the process and apply outlet cap and gasket with using Wrench 200A.</p>				
<b><i>If leak persists, applies Device 1 (Hood Assembly) as follows:</i></b>				
2. Prepare Base Assembly to insure proper position and stability of base segments.				
3. Secures Ramp between two base segments.				
4. Rolls upright cylinder up Ramp and centers into position on Base Assembly.				
5. Cleans loose or uneven paint from shoulder of cylinder using Scraper.				
6. Inspects and places gasket on Hood.				
7. Insures Vent Valve is secure in the Hood and the Vent Valve is uncapped and open.				
8. Adjust Cap Screws in Yoke so that the points of the screws extend only slightly				

below the yoke.				
9. Places Yoke in position on top of Hood, with screws positioned in the dimples on the Hood. Insure Chains are straight and not twisted. Hook Chains over ears of Yoke using appropriate link to avoid slack in Chains.				
10. Hand tighten Cap Screws using even and equal force. Closes Vent Valve slowly and checks for leaks.				
11. If leak persists, opens Vent Valve and uses Wrench to further tighten Cap Screws until leak is controlled.				
12. * Avoids over tightening Cap Screws and damaging gasket.				
<ul style="list-style-type: none"> <li>• Checks the foot ring on the bottom of the cylinder as tension is added to the assembly to the chains are not breaking the ring.</li> </ul>				
13. * Closes Vent Valve and checks for leakage using ammonium hydroxide vapor and tighten the set screw further if necessary.				
<b>Total non critical steps candidate must complete to pass:</b>	<b>17</b>	<b>Total</b>		

*\*Critical Step* – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

## Hazardous Materials Technician Certification

Skill # <b>9g- Chlorine “A” Kit – Valve Seat</b>	
Objective(s): 7.1.2.2(3)(c), 7.4.3.(1)(g) and 7.4.3.(2)(a)(b) NFPA Standard 472	2008 Edition

### INSTRUCTIONS TO THE PROCTOR/EVALUATOR

16. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.
17. Evaluator or support staff shall assemble the Chlorine “A” cylinder prop, air supply for simulating cylinder leaks, and a complete Chlorine “A” Emergency Repair Kit.
18. Evaluator shall prepare the prop/air supply to simulate the appropriate leak.
19. The evaluator and all personnel in the immediate area must wear eye protection. Hearing protection may be necessary with specific props/leaks and operating pressures.
20. The proctor must provide the candidate with the following equipment:
  - a. *Chlorine A Kit.*

### **REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT**

Proctor Candidate Comments

I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.

\_\_\_\_\_  
Candidate Signature

\_\_\_\_\_  
Date

Test  Retest  Date \_\_\_\_\_ Location \_\_\_\_\_

**Minnesota Fire Service Certification Board  
Hazardous Materials Technician Certification**

**SKILL STATION 11**

**CHLORINE “B” KIT – VALVE STEM BLOWOUT**

<b>Skill # 11- Chlorine “B” Kit – Valve Stem Blowout</b>	Maximum Time Allowed: 15 min.			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>				
Given a simulated leaking Chlorine “B” ton container and working as a member of a team of two or three, the candidate dressed in Level “A” personal protective equipment will safely control the leak using the proper sequence of steps and necessary equipment from the Chlorine “B” Kit provided.				
<b>Candidate Performance</b>	1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt	
	Yes	No	Yes	No
1. *Candidate has informed the evaluator that they have been trained in this skill.				
2. Entry and all control operations are conducted as a team and performed in a safe manner, approaching from up hill and up wind. Avoids down wind positions and contact with product when possible.				
3. If more than one ton container is in the location, attempt to locate the leaking cylinder by visible chlorine vapor or by using vapor from an aqua ammonia (ammonium hydroxide) squeeze bottle to create a visible reaction (vapor cloud).				
4. If the container is connected to piping/process unit, close valves that connect the ton container to the process and turn off the process after consulting with the process operator/owner (verbalize contacting the operator/owner before turning systems off).				
5. Verbalizes any conditions that would indicate reactivity with container or other product				
6. Remove valve protective hood from ton container if in place.				
7. Safely pin-points the location of the leak in the container. Detects the presence and location of non-visible leak using aqua ammonia vapor.				
8. Positions ton container so that the valve is in the uppermost position.				
<b><i>If the team experiences a valve blow while working with the ton container they should perform the following steps:</i></b>				
1. * Positions ton container so that the valve opening is in the uppermost position and immediately drives large Drift Pin into valve opening.				
<b>Applies Device 12 (Hood Assembly) as follows:</b>				
2. Removes outlet cap from Vent Valve (12V) on Hood and opens Valve.				
3. Loosens Adjusting Screws and retracts Jack Screws sufficiently to allow insertion of Adjustable Bar Assembly behind chime of container.				
4. Places Adjustable Bar Assembly in vertical position to make adjustments.				
5. Cleans loose or uneven paint from head of ton container around leaking valve using Scraper.				
6. Inspects and places Gasket on Hood, places Hood over leaking valve. <i>(for containers with ridge between the valves, uses molded Gasket with depression placed over ridge)</i>				
7. Adjust lower Jack Screw to center one Cap Screw over Hood and adjust upper Jack Screw so that Adjustable Bar Assembly fits tightly inside chime. Uses Wrench to				

tighten Adjusting Screws.				
8. Uses Wrench to tighten Cap Screw forcing Hood and Gasket against head of container.				
9. ( <i>Doesn't over tighten Cap Screw, tightens on enough to stop leak</i> )				
10. *Closes Vent Valve slowly and checks for leaks using ammonium hydroxide vapor. If leak persists, opens Vent Valve and uses Wrench to further tighten Cap Screws until leak is controlled.				
<b>Total non critical steps candidate must complete to pass:</b>	<b>12</b>	<b>Total</b>		

*\*Critical Step* – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

## Hazardous Materials Technician Certification

<b>Skill # 11- Chlorine “B” Kit – Valve Stem Blowout</b>		
Objective(s): <b>7.1.2.2(3)(c),6.4.3.(1)(h)</b>	NFPA Standard 472	2008 Edition
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>		
<p><b>19.</b> The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.</p> <p><b>20.</b> Evaluator or support staff shall assemble the Chlorine “B” ton container prop, air supply for simulating ton container leaks, and a complete Chlorine “B” Emergency Repair Kit.</p> <p><b>21.</b> Evaluator shall prepare the prop/air supply to simulate the appropriate leak.</p> <p><b>22.</b> The evaluator and all personnel in the immediate area must wear eye protection. Hearing protection may be necessary with specific props/leaks and operating pressures.</p> <p><b>23.</b> The proctor must provide the candidate with the following equipment:</p> <p style="padding-left: 40px;">a. <i>Chlorine B Kit.</i></p>		
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>		
Proctor Candidate Comments		
I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.		
_____ Candidate Signature		_____ Date
Test <input type="checkbox"/>	Retest <input type="checkbox"/>	Date _____ Location _____

**Minnesota Fire Service Certification Board  
Hazardous Materials Technician Certification**

**SKILL STATION 14**

**PIPE PATCH**

<b>Skill # 14 Pipe Patch</b>		Maximum Time Allowed: <b>15 min</b>			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>					
Given a simulated leaking pipe and working as a member of a team of two or three, the candidate dressed in Level "A" personal protective equipment will safely control the leak using the proper sequence of steps and necessary equipment pipe leak Kit provided.					
<b>Candidate Performance</b>		1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt	
		<b>Yes</b>	<b>No</b>	<b>Yes</b>	<b>No</b>
1. *Candidate has informed the evaluator that they have been trained in this skill.					
2. *Candidate verbalizes hazards of the product.					
3. Entry and all control operations are conducted as a team and performed in a safe manner, approaching from up hill and up wind. Avoids down wind positions and contact with product when possible.					
4. Controls leak by actuating a valve if possible					
5. Places patch over leak					
6. Ensures leak has been completely stopped					
<b>Total non critical steps candidate must complete to pass:</b>		<b>3</b>	<b>Total</b>		

*\*Critical Step* – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

## Hazardous Materials Technician Certification

<b>Skill # 14 Pipe Patch</b>		
Objective(s): 7.4.3	NFPA Standard 472	2008 Edition
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>		
<p>10. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.</p> <p>11. The proctor must provide the candidate with the following items:</p> <ul style="list-style-type: none"><li>a. Level A suit</li><li>b. Patch kit</li><li>c. Leaking pipe prop</li></ul>		
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>		
Proctor Candidate Comments		
I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.		
_____ Candidate Signature	_____ Date	
Test <input type="checkbox"/>	Retest <input type="checkbox"/>	Date _____ Location _____

**Minnesota Fire Service Certification Board  
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**SKILL STATION 15**

**DOME COVER CLAMP**

Skill # 15 Dome Cover Clamp	Maximum Time Allowed: 10 min			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>				
The Candidate shall demonstrate proper placement of a dome cover clamp on a MC-306 carrying a flammable liquid.				
<b>Candidate Performance</b>	1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt	
	Yes	No	Yes	No
1. *Candidate has informed the evaluator that they have been trained in this skill.				
2. Entry and all control operations are conducted in a safe manner, approaching from up hill and up wind. Avoids down wind positions and contact with product when possible.				
3. If more than one dome lid is leaking is, verbalizes the order of installation that places the candidate in the safest position.				
4. Verbalizes vapor suppression activities are in place and effectively controlling vapors below 20% of the LEL.				
5. Presses on the dome lid's closure device to ensure that it is completely latched.				
6. Slides the dome cover clamp around/unto the outer dome ring. Dome clamp legs are positioned evenly on the dome.				
7. Position the clamp so that adjustable screw leg is positioned over the center of the dome lid's closure device.				
8. If dome clamp is equipped with adjustable length legs, tighten the legs against the outer edge of the dome ring and tighten set screws. <b>If fixed legs</b> slide over dome cover.				
9. Tightens dome clamp center screw until the leak stops or the dome closure device is pressed firmly against the top of the lid.				
10. Checks to ensure that the flow of leaking product has stopped. Readjusts the clamp if necessary.				
<b>Total non critical steps candidate must complete to pass:</b>	<b>6</b>		<b>Total</b>	

**\*Critical Step** – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

## Hazardous Materials Technician Certification

Skill # 15 Dome Cover Clamp		
Objective(s): 7.4.3(8)	NFPA Standard 472	2008 Edition
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>		
<p>12. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.</p> <p>13. Evaluator or support staff shall the MC-306 prop and water supply for simulating leaks.</p> <p>14. Maximum pressure on the leaking device shall not exceed 20 psi.</p> <p>15. The proctor must provide the candidate with the following items:</p> <ul style="list-style-type: none"><li>a. Dome Cover Clamp</li><li>b. MC-306 or comparable prop</li></ul>		
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>		
Proctor Candidate Comments		
I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.		
_____ Candidate Signature	_____ Date	
Test <input type="checkbox"/>	Retest <input type="checkbox"/>	Date _____
Location _____		

**Minnesota Fire Service Certification Board  
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**SKILL STATION 16A**

**PERSONAL PROTECTIVE EQUIPMENT – LEVEL A**

Skill # 16(a)– Personal Protective Equipment (PPE – Level A)	Maximum Time Allowed: 15 Min.			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>				
The Candidate shall Don level A PPE with the help of an assistant.				
<b>Candidate Performance</b>	1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt	
	Yes	No	Yes	No
*Candidate has informed the evaluator that they have been trained in this skill.				
<b>Self Contained Breathing Apparatus (SCBA)</b>				
1. Checks SCBA for damage, wear and proper operation				
2. *Checks for full tank gauge reading “Full”				
3. Checks low air alarm for operation				
4. Checks PASS device for proper operations				
5. Compares tank gauge with regulator to ensure proper operation				
6. Checks straps to ensure all straps are fully extended				
7. Candidate uses acceptable procedure for donning SCBA				
8. Dons face piece and checks face piece for seal (pressure test)				
9. Candidate demonstrates how to turn on SCBA and attach regulator to face piece				
<b>Level A PPE</b>				
1. Candidate identifies the level A PPE from the other levels of PPE available.				
2. *Candidate properly uses chemical resistance charts, identifies breakthrough time for a selected chemical				
3. Candidate inspects suit prior to donning looking for defects, cracks, tears, holes, discoloration, seams and stitches, etc.				
4. Conducts Pre entry medical monitoring and briefing.				
5. While seated, places feet into suit and gathers the suit around waist				
6. Pulls on chemical boots over the top of the suit. Pulls the suit boot covers over the top of the boots.				
7. Dons SCBA with face piece and turns SCBA on				
8. Puts on inner gloves if required				
9. Secures head protection				
10. Dons the outer chemical gloves				
11. Attaches regulator to face piece and closes suit with assistance				
12. Reviews hand signals.				
13. Removes suit with assistance without contaminating inner shell.				

14. Place or Dispose of suit, SCBA, inner glove/boot liners in proper containers in decontamination corridor.				
15. Removes Air supply, turns off SCBA and removes from candidate				
16. Candidate demonstrates how to clean SCBA, change cylinder and return unit to service.				
<b>Total non critical steps candidate must complete to pass:</b>		<b>Total</b>		

**\*Critical Step** – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

## Hazardous Materials Technician Certification

Skill # 16a PPE level A		
Objective(s): 6.2.4.1(3)	NFPA Standard 472	2008 Edition
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>		
<p>16. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.</p> <p>17. The proctor must provide the candidate with the following items:</p> <ul style="list-style-type: none"><li>• Self Contained Breathing Apparatus (SCBA)</li><li>• Level A - PPE suit with gloves and boots, hard hat</li><li>• Compatibility chart for Level A PPE</li></ul>		
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>		
Proctor Candidate Comments		
<p>I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.</p> <p>_____</p>		
Candidate Signature		Date
Test <input type="checkbox"/>	Retest <input type="checkbox"/>	Date _____
		Location _____

**Minnesota Fire Service Certification Board  
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**SKILL STATION 16B**

**PERSONAL PROTECTIVE EQUIPMENT – LEVEL B**

Skill # 16(b)– Personal Protective Equipment (PPE – Level B)	Maximum Time Allowed: 15 Min.			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>				
The Candidate shall Don level B PPE with help of an assistant.				
<b>Candidate Performance</b>	1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt	
	Yes	No	Yes	No
*Candidate has informed the evaluator that they have been trained in this skill.				
<b>Self Contained Breathing Apparatus (SCBA)</b>				
1. Check SCBA for damage, wear and proper operation				
2. *Check for full tank gauge reading “Full”				
3. Check low air alarm for operation				
4. Check PASS device for proper operations				
5. Compare tank gauge with regulator to ensure proper operation				
6. Check straps to ensure all straps are fully extended				
7. Candidate uses acceptable procedure for donning SCBA				
8. Don face piece and check face piece for seal (pressure test)				
9. Candidate demonstrates how to turn on SCBA and attach regulator to face piece				
<b>Level B PPE</b>				
1. Candidate identifies the Level B PPE from the other levels of PPE available.				
2. *Candidate properly uses chemical resistance charts, identifies breakthrough time for a selected chemical				
3. Candidate inspects suit prior to donning looking for defects, cracks, tears, holes, discoloration, seams and stitches, etc.				
4. Conducts Pre entry medical monitoring and briefing.				
5. While seated, places feet into suit and gathers the suit around waist				
6. Pulls on chemical boots over the top of the suit. Pulls the suit boot covers over the top of the boots.				
7. Puts on inner gloves if required				
8. Assistant helps with completing donning of suit by placing arms in suit and pulling suit over the shoulders. Assistant closes up the suit and seals flap.				
9. Dons SCBA with face piece and turns SCBA on				
10. Secures head protection				
11. Attaches regulator to face piece and closes suit with assistance				
12. Candidate demonstrates the proper way of doffing level A suit				
13. Removes suit with assistance without contaminating inner shell.				

14. Place or Dispose of suit, SCBA, inner glove/boot liners in proper containers in decontamination corridor.				
15. Removes Air supply, turns off SCBA and removes from candidate				
16. Candidate demonstrates how to clean SCBA, change cylinder and return unit to service.				
<b>Total non critical steps candidate must complete to pass:</b>		<b>Total</b>		

*\*Critical Step* – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

## Hazardous Materials Technician Certification

Skill # 16b PPE level B			
Objective(s): 6.2.4.1(3)      NFPA Standard 472      2008 Edition			
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>			
<p>18. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.</p> <p>19. The proctor must provide the candidate with the following items:</p> <ul style="list-style-type: none"><li>• Self Contained Breathing Apparatus (SCBA)</li><li>• Level B - PPE suit with gloves and boots, hard hat.</li><li>• Unknown chemical compatible with Level B PPE's</li></ul>			
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>			
Proctor Candidate Comments			
I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.			
_____ Candidate Signature	_____ Date		
Test <input type="checkbox"/>	Retest <input type="checkbox"/>	Date	Location

**Minnesota Fire Service Certification Board  
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**SKILL STATION 16C**

**PERSONAL PROTECTIVE EQUIPMENT – LEVEL C**

Skill # 16(c)– Personal Protective Equipment (PPE – Level C)		Maximum Time Allowed: 15 Min.			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>					
The Candidate shall Don level C PPE with the help of an assistant..					
<b>Candidate Performance</b>		1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt	
		Yes	No	Yes	No
*Candidate has informed the evaluator that they have been trained in this skill.					
<b>Level C PPE</b>					
1. Candidate identifies level C PPE from the other levels of PPE available.					
2. Candidate inspects suit for: tears, holes, discoloration, seams/stitches, suite integrity, etc.					
3. Inspects boot and glove attachments (if present)					
4. Conducts Pre entry medical monitoring and briefing.					
5. While seated, places feet into suit and gathers the suit around waist					
6. Pulls on chemical boots over the top of the suit. Pulls the suit boot covers over the top of the boots.					
7. Dons inner gloves					
8. Assistant helps with completing donning of suit by placing arms in suit and pulling suit over the shoulders. Assistant closes up the suit and seals flap.					
9. Secures the boots with tape to prevent liquid contamination.					
10. Dons APR or PAPR, makes connections, and breathes air					
11. Pulls the hood over the head and APR if applicable.					
12. Secures head protection.					
13. Pulls on outer gloves, secure gloves with tape.					
14. Reviews hand signals.					
<b>Self Air Purifying Respirator (APR)</b>					
1. *Candidate determines the proper cartridge and exposure limit for a known chemical					
2. Candidate demonstrates the proper technique for donning and doffing the APR					
<b>Self Contained Breathing Apparatus (SCBA)</b>					
1. Checks SCBA for damage, wear and proper operation					
2. *Checks for full tank gauge reading “Full”					
3. Checks low air alarm for operation					
4. Checks PASS device for proper operations					
5. Compares tank gauge with regulator to ensure proper operation					
6. Checks straps to ensure all straps are fully extended					
7. Candidate uses acceptable procedure for donning SCBA					
8. Dons face piece and checks face piece for seal (pressure test)					
9. Candidate demonstrates how to turn on SCBA and attach regulator to face piece					
<b>Total non critical steps candidate must complete to pass:</b>				<b>Total</b>	

\***Critical Step** – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

## Hazardous Materials Technician Certification

Skill # 16c PPE level C		
Objective(s): 6.2.4.1(3)	NFPA Standard 472	2008 Edition
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>		
<p>20. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.</p>		
<p>21. The proctor must provide the candidate with the following items:</p> <ul style="list-style-type: none"><li>• Self Contained Breathing Apparatus (SCBA)</li><li>• Air Purifying Respirator (APR)</li><li>• Level C- PPE Suit ,hard hat, gloves, boots</li><li>• Unknown chemical compatible with Level C &amp; D PPE's</li></ul>		
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>		
Proctor Candidate Comments		
I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.		
_____ Candidate Signature		_____ Date
Test <input type="checkbox"/>	Retest <input type="checkbox"/>	Date _____ Location _____

**Minnesota Fire Service Certification Board  
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**SKILL STATION 17**

**TECHNICAL DECONTAMINATION DUTIES**

**Candidate Number** \_\_\_\_\_

**Evaluator:** \_\_\_\_\_

**Reference: NFPA 1021 2009 Edition: 7.4.5**

Given a scenario involving a hazardous materials/WMD incident and the emergency response plan or standard operating procedures, the operations level responder assigned to technical decontamination operations shall demonstrate the technical decontamination duties assigned in the incident action plan and shall meet the following requirements.

The responder assigned to technical decontamination operations shall demonstrate the ability to set up and implement the following types of decontamination operations:

**Skill:** Establish decontamination process based upon scenario assigned by evaluator.

Did the candidate, as instructed, demonstrate competency in the following:

**Deduction Points**

Describe procedures for technical decontamination of personnel wearing CPE	_____ 20
Identify appropriate PPE for decontamination team to wear	_____ 10
Sets up technical decontamination stations (include scrubbing)	_____ 15
Make provision for dropping off tools, etc that are not to be decontaminated	_____ 15
Conducts and documents pre entry and post entry EMS surveys	_____ 10
Provides rest and rehabilitation facility for decontaminated responders	_____ 10
Decontaminates decontamination team	_____ 10
Documents names of all exposed personnel and any exposure symptoms	_____ 10

Total Points Possible 100

**Total Deductions** \_\_\_\_\_

**Score** \_\_\_\_\_

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**SKILL STATION 20A**

**RADIATION DETECTION CANBERRA ULTRARADIAC MONITOR**

Skill # 20 Radiation Detection-Canberra UltraRadiac monitor	Maximum Time Allowed: 10 min			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>				
The Candidate, working as an individual and using a Canberra UltraRadiac radiological monitor, shall demonstrate the ability to operate and use the monitor.				
<b>Candidate Performance</b>	1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt	
	Yes	No	Yes	No
1. *Candidate has informed the evaluator that they have been trained in this skill.				
2. Verbalizes what type of radiation energy this monitor works for.				
3. Open the battery compartment and install charged batteries in their appropriate position, close and lock the compartment door.				
4. Turn the unit on by pressing the “ON/OFF” key until “000” is displayed on the screen.				
5. Ensure the “RATE” display appears on the screen.				
6. If a “b” or blinking “BAT” appears in the top-left corner of the screen, turn off the unit and replace the batteries.				
7. * Ensure the audio and visual alarms are enabled by noting “AUD” and “VIS” are listed under “ALARM” on the left side of the screen.				
8. Switch to the “DOSE” screen and zero the dose count by pressing and holding the “CLR/TEST” key while holding the “DOSE” key down.				
9. Switch to the “RATE” screen and observe and record the background rate. Insure the reading is slowly blinking, indicating the “RATE” Mode is active.				
10. * Identify the level/units that are being displayed by the “RATE” screen (microroentgens, milliroentgens, roentgens).				
11. * Test the unit while in the “RATE” Mode by pressing and holding the “CLR/TEST” key to ensure proper operation. Flashing 9 indicates the test passed, 0 failed.				
<i>Evaluator will direct the candidate to determine the amount of time they may remain in the area (Stay Time) according to the readings currently available from the unit.</i>				
1. * Depress and hold the “ALARM” key and obtain the minutes the wearer may remain in the area of radiation <b>at the current dose rate</b> . A reading of “999” is the instruments maximum reading and indicates the wearer may remain in the area for 16.5 hours				
2. Enable the Source Finder Mode – while in Rate mode press & hold the Rate button until a 1 displays (Source Mode) press & hold the Rate button until a 0 displays (Source Mode).				
<i>Evaluator will ask the candidate to identify the default alarm setting for “High Rate” and “High Dose”.</i>				
1. High Rate Alarm default is set at 100mR/hr.				

2. High Dose Alarm default is set at 3 R.				
3. * Record the “DOSE”, turn the unit off and remove the batteries.				
Evaluator directs the candidate to properly shut down and clean the unit.				
1. Carefully cleans all external surfaces using a damp cloth (water only).				
2. Carefully dries all external surfaces using a soft dry cloth.				
<b>Total non critical steps candidate must complete to pass:</b>	<b>10</b>	<b>Total</b>		

*\*Critical Step* – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

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Skill # 20 Radiation Detection – Canberra UltraRadiac Monitor		
Objective(s): 7.2.1.3.5(8)	NFPA Standard 472	2008 Edition
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>		
<p>1) When asked, the candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.</p> <p>2) Evaluator must have an above average working knowledge of this monitor before evaluating a candidate.</p> <p>3) Evaluator or support staff must prepare a sample source to be used as a “control.”</p> <p>4) The proctor must provide the candidate with the following items:</p> <ul style="list-style-type: none"><li>a. Canberra UltraRadiac</li><li>b. Monitor Cleaning kit</li></ul>		
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>		
Proctor Candidate Comments		
I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.		
_____ Candidate Signature		_____ Date
Test <input type="checkbox"/>	Retest <input type="checkbox"/>	Date _____
Location _____		

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**SKILL STATION 20B**

**RADIATION MONITORING**

Skill # 20B Radiation monitoring		Maximum Time Allowed: 10 Min.			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>					
The Candidate shall demonstrate the ability to operate the Thermo FH 40G Dose Rate radiation Measuring unit. The site safety officer has created a plan and you have been fully briefed as to the proper PPE and action plan.					
<b>Candidate Performance</b>		1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt	
		Yes	No	Yes	No
1. *Candidate has informed the evaluator that they have been trained in this skill.					
2. Candidate will be able to describe the basic function of the monitor and which type of radiation each probe monitors					
3. Candidate will turn on the unit and perform the calibration procedure prior to starting the monitoring (if necessary)					
4. *Candidate shall be able to properly change the probes for the detector and describe which type of radiation each is used to measure					
5. Candidate shall properly monitor an area determined by the Evaluator and attempt to locate an energy source					
6. *Candidate shall explain the concept behind Time/Distance/Shielding					
7. Candidate shall demonstrate how to shut down the monitor and return it ready for service					
<b>Total steps candidate must complete to pass not including critical steps:</b>		<b>3</b>	<b>Total</b>		

*\*Critical Step* – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

**Hazardous Materials Technician Certification**

Skill # 20B			
Objective(s):	NFPA Standard 472 2008 Edition		
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>			
22. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.			
23. The proctor must provide the candidate with the following items: <ul style="list-style-type: none"><li>• Thermo FH 40G monitor with Pancake Probe, Cintilatore (Blue Sausage) and wand<ul style="list-style-type: none"><li>• Pancake Probe = Alpha, Beta and Gamma</li><li>• Wand (small cintilator) = Gamma</li><li>• Blue Sausage (large cintilator) = Gamma</li></ul></li><li>• Radiological Source – Coleman lantern mantels</li></ul>			
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>			
Proctor Candidate Comments			
I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.			
_____ Candidate Signature	_____ Date		
Test <input type="checkbox"/>	Retest <input type="checkbox"/>	Date	Location

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**SKILL STATION 21**

**PASSIVE DOSIMETERS – AT MODEL 138**

Skill # 21 – Passive dosimeters – AT model 138	Maximum Time Allowed: 10 min			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>				
The Candidate shall demonstrate the proper use of a personal dosimeter.				
<b>Candidate Performance</b>	1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt	
	Yes	No	Yes	No
1. *Candidate has informed the evaluator that they have been trained in this skill.				
2. Holds dosimeter up to light source and verbalizes what the scale is reading, milliroentgens 0-200				
3. Verbalizes what type of radiation energy this monitor reads.				
Demonstrates zeroing out dosimeter by the following steps:				
1. Holds the charger upright. Lifts the clamp and pulls it back to the approximate length of the dosimeter. Places the dosimeter in the clamp with the recessed end (opposite the lens) over the charging contact. This allows for the electrical contact between the dosimeter and the charger.				
2. While squeezing the trigger and push the clamp against the lens end of the dosimeter and release the trigger. Important: If the clamp is not pushed against the lens end of the dosimeter before releasing the trigger, electrical contact may not be adequate to charge the dosimeter. Do not push too hard. You may damage the dosimeter.				
3. Checks that the position of the dosimeter provides a good view of the scale through the lens.				
4. With the dosimeter locked in place, looks through the dosimeter at a light source such as a light bulb, window or a small flashlight to view the scale				
5. Squeezes and releases the charging lever until the fiber appears on the scale. The fiber appears from the right of the scale and moves towards zero. Once the fiber is seen, partially squeezes of the charging lever will be enough to control its movement.				
6. If the fiber has traveled to the left of zero but is still visible, push the discharge button until the fiber is on zero.				
7. Removes the dosimeter, by squeezing the trigger, lifting the dosimeter to just above the end of the clamp. Pulls dosimeter straight back to disengage it from the charging contact.				
<b>Total non critical steps candidate must complete to pass:</b>	<b>6</b>	<b>Total</b>		

*\*Critical Step* – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

## Hazardous Materials Technician Certification

Skill # 21 Passive dosimeters – AT model 138		
Objective(s): 7.2.1.3.5(5)	NFPA Standard 472	2008 Edition
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>		
24. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.		
25. The proctor must provide the candidate with the following items: <ul style="list-style-type: none"><li>a. AT model 138 Dosimeter</li><li>b. charger</li></ul>		
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>		
Proctor Candidate Comments		
I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.		
_____ Candidate Signature	_____ Date	
Test <input type="checkbox"/>	Retest <input type="checkbox"/>	Date _____ Location _____

**Minnesota Fire Service Certification Board  
Hazardous Materials Technician Certification**

**SKILL STATION 22**

**REAGENTS**

Skill # 22 – Reagents		Maximum Time Allowed: 10 min			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>					
The Candidate shall demonstrate					
<b>Candidate Performance</b>				1 <sup>st</sup> Attempt	
				2 <sup>nd</sup> Attempt	
				Yes	No
*Candidate has informed the evaluator that they have been trained in this skill.					
<b>Total steps candidate must complete to pass:</b>					
				<b>Total</b>	

\*Critical Step – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

## Hazardous Materials Technician Certification

Skill # 22 Reagents		
Objective(s): 7.2.1.3.5(9)	NFPA Standard 472	2008 Edition
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>		
26. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.		
27. The proctor must provide the candidate with the following items: a. dosimeter		
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>		
Proctor Candidate Comments		
I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.		
_____ Candidate Signature	_____ Date	
Test <input type="checkbox"/>	Retest <input type="checkbox"/>	Date _____ Location _____

**Minnesota Fire Service Certification Board  
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**SKILL STATION 23**

**WMD M8 PAPER**

Skill # 23 – WMD M8 paper	Maximum Time Allowed: 10 min			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>				
The Candidate shall demonstrate the proper use of M8 paper.				
<b>Candidate Performance</b>			1 <sup>st</sup> Attempt	
			Yes	No
			2 <sup>nd</sup> Attempt	
			Yes	No
1. *Candidate has informed the evaluator that they have been trained in this skill.				
2. Candidate removes one strip from the pad.				
3. Verbalizes what chemicals yellow indicates (G Nerve agents-sarin, tabun, soman).				
4. Verbalizes what chemicals green indicates (V Nerve agent).				
5. Verbalizes what chemicals Red indicates ( H agents/blister – mustard).				
6. Verbalizes placement of paper can not be in dirt or greases, solvents.				
7. Verbalizes what causes false positives.				
8. Blots paper in liquid does not rub it or places paper in area to be monitored for aerosolized.				
9. *Candidate’s anatomy does not contact the product.				
10. Verbalizes if test is positive for a CWA or nothing detected.				
<b>Total non critical steps candidate must complete to pass:</b>			<b>6</b>	<b>Total</b>

**\*Critical Step** – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

## Hazardous Materials Technician Certification

Skill # 23 WMD M8 paper		
Objective(s): 7.2.1.3.5(11)	NFPA Standard 472	2008 Edition
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>		
28. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.		
29. The proctor must provide the candidate with the following items: <ul style="list-style-type: none"><li>a. M8 paper</li><li>b. Acetone or brake cleaner</li></ul>		
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>		
Proctor Candidate Comments		
I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.		
_____ Candidate Signature	_____ Date	
Test <input type="checkbox"/>	Retest <input type="checkbox"/>	Date _____ Location _____

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**SKILL STATION 24**

**WMD M9 PAPER**

Skill # 24 – WMD M9 paper		Maximum Time Allowed: 10 min			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>					
The Candidate shall demonstrate the proper use of M9 paper.					
<b>Candidate Performance</b>				1 <sup>st</sup> Attempt	
				2 <sup>nd</sup> Attempt	
				Yes	No
				Yes	No
1. *Candidate has informed the evaluator that they have been trained in this skill.					
2. Verbalizes the paper will turn pink, red, reddish brown or red-purple when exposed to a nerve or blister agent.					
3. Candidate removes M9 paper from package.					
4. Demonstrates where M9 paper is used – right handed, paper goes on upper right arm, lower right leg, and left wrist. Left handed, paper goes on upper Left arm, lower left leg, and right wrist.					
5. Blots paper in liquid does not rub it or places paper in area to be monitored for aerosolized.					
6. *Candidate’s anatomy does not contact the product.					
7. Verbalizes if test is positive for a CWA or nothing detected.					
<b>Total non critical steps candidate must complete to pass:</b>				<b>3</b>	<b>Total</b>

**\*Critical Step** – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

**Hazardous Materials Technician Certification**

Skill # 24 WMD M9 paper		
Objective(s): 7.2.1.3.5(11)	NFPA Standard 472	2008 Edition
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>		
<p>30. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.</p> <p>31. The proctor must provide the candidate with the following items:</p> <ul style="list-style-type: none"><li>a. M9 paper</li></ul>		
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>		
Proctor Candidate Comments		
I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.		
_____ Candidate Signature		_____ Date
Test <input type="checkbox"/>	Retest <input type="checkbox"/>	Date _____ Location _____

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**SKILL STATION 24**

**WMD APD2000**

Skill # 25 – WMD APD2000	Maximum Time Allowed: 10 min			
<b><u>INSTRUCTIONS TO THE CANDIDATE</u></b>				
The Candidate shall demonstrate the use of an APD2000				
<b>Candidate Performance</b>	1 <sup>st</sup> Attempt		2 <sup>nd</sup> Attempt	
	Yes	No	Yes	No
1. *Candidate has informed the evaluator that they have been trained in this skill.				
2. Candidate installs 6 C batteries				
3. Candidate removes nozzle protective cap and stores on battery cap retainer.				
4. *Candidate installs filtered nozzle standoff without touching the nozzle or the nozzle standoff by peeling cover from package until one filter is exposed and presses it on the nozzle.				
5. Powers on the unit by holding the POWER button until APD2000 appears on display.				
6. Waits for unit to complete self test (approximately 3 minutes).				
7. When display shows READY CW, candidate presses and releases MODE button until READY TEST appears on display.				
8. Candidate presses H end of confidence sample to nozzle for no longer than 1 second.				
9. Candidate verifies that horn sounds and display shows ALARM TEST.				
10. When display returns to READY TEST, candidate repeats the previous 2 steps using G end of confidence sample.				
11. When display returns to READY TEST, candidate presses and releases MODE button until READY CW or READY CWVX appears on display.				
12. Candidate demonstrates toggling between the different agents using the MODE button.				
13. Candidate verbalizes the function of the CLEAR button. Internal purging function.				
14. Candidate demonstrates shutting down the unit by holding POWER button until POWER DOWN appears on display.				
15. Candidate removes the nozzle standoff and disposes of.				
16. Candidate puts protective cap over nozzle.				
17. Candidate removes batteries from handle.				
<b>Total non critical steps candidate must complete to pass:</b>	<b>13</b>	<b>Total</b>		

**\*Critical Step** – Failure on this step results in failure of the entire skill.

Candidate Name \_\_\_\_\_

1<sup>st</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

2<sup>nd</sup> Evaluator Signature \_\_\_\_\_ Date \_\_\_\_\_

**Hazardous Materials Technician Certification**

Skill # 25 WMD APD2000	
Objective(s): 7.2.1.3.5(11) 2008 Edition	NFPA Standard 472
<b><u>INSTRUCTIONS TO THE PROCTOR/EVALUATOR</u></b>	
<p>32. The candidate must indicate that they have been instructed how to perform this skill. A negative answer is an immediate failure. No second attempt is allowed. This step doesn't count for the total number of steps the candidate must complete.</p> <p>33. The proctor must provide the candidate with the following items:</p> <ul style="list-style-type: none"> <li>a. APD2000</li> <li>b. 6 C batteries</li> </ul>	
<b>REFER TO EVALUATION EQUIPMENT LIST FOR SPECIFIC TOOLS AND EQUIPMENT</b>	
Proctor Candidate Comments	
<p>I was informed of the task steps missed that resulted in the failure of this skill and the MFSCB retest policies.</p> <p>_____</p> <p>_____</p>	
Candidate Signature	Date
Test <input type="checkbox"/>	Retest <input type="checkbox"/>
Date	Location