



Hazardous Materials Technician Certification

Skill #15.1 Chlorine "A" Kit – Fusible Metal Plug	Maximum Time Allowed: 15 min.								
<u>INSTRUCTIONS TO THE CANDIDATE</u>									
Given a simulated leaking Chlorine "A" cylinder and working as a member of a team of two, 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.									
CANDIDATE PERFORMANCE	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;">1st Attempt</td> <td colspan="2" style="text-align: center;">2nd Attempt</td> </tr> <tr> <td style="text-align: center;">Yes</td> <td style="text-align: center;">No</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">No</td> </tr> </table>	1st Attempt		2nd Attempt		Yes	No	Yes	No
1st Attempt		2nd Attempt							
Yes	No	Yes	No						
◆ Candidate has informed the evaluator that they have been trained in this skill.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> </table>								
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.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> </table>								
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).	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> </table>								
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).	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> </table>								
Observes any conditions that would indicate reactivity with container or other product	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> </table>								
Remove valve protective housing from cylinder if in place.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> </table>								
Positions cylinder so that the valve is in the uppermost position.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> </table>								
Safely pin-points the location of the leak in the container. Detects the presence and location of non-visible leak using aqua ammonia vapor.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> </table>								
Insure the gasket seating surface on the fusible plug is clean and free from pitting.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> </table>								
Assemble all tools that will be required for this operation. Wrench 200-A Clamp 2-C Set Screw 2-D Block 2-A Gasket 2-BB	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> </table>								
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>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> </table>								
Place gasket (2-B) between the leaking fusible plug and clamping device block (2-A).	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> </table>								
Tighten set screw until the leak stops.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> </table>								
◆ 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>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> </table>								
Total steps candidate must complete to pass: 10	Total								

◆ **Critical Step** - Failure on this step mandates failure on the entire objective!

Candidates Name _____

1st Evaluator Signature _____ Date _____

2nd Evaluator Signature _____ Date _____



Hazardous Materials Technician Certification

Skill #15.1 Chlorine "A" Kit – Fusible Metal Plug

Objective(s): 7.1.2.2(3)(c),7.4.3.(1)(a) NFPA 472 Standard 2008 Edition

INSTRUCTIONS TO THE MONITOR/EVALUATOR

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.
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.
3. PPE should be a level A protective gear
4. Evaluator shall prepare the prop/air supply to simulate the appropriate leak.
5. Maximum pressure on the leaking device shall not exceed 175 psi (normal range 75-110 psi).
6. 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.
7. The proctor must provide the candidate with the following equipment:
 - a. **Chlorine A Kit.**

Proctor/Candidate Comments

I was informed of the task steps missed that resulted in the failure of this skill and the OSU-FST re-test policies.

Candidate Signature

Date